LAUSD UNIFIED

Procurement Services Division

Invitation for Bid (IFB)





Formal IFB Procurement

Verdugo Hills HS

New Scoreboards for Softball & Baseball

Bid No. 2710060

Facilities Construction Branch

Contracting Officer: Ronnie Bossier

Email Address: ronnie.bossier@lausd.net

Release Date: October 13, 2026

BIDDING DOCUMENTS
FOR THE
LOS ANGELES UNIFIED SCHOOL DISTRICT

VOLUME 1 of 1

NEW SCOREBOARDS FOR SOFTBALL & BASEBALL

AT

VERDUGO HILLS HIGH SCHOOL
10625 Plainview Ave, Tujunga, CA 91042
In the Los Angeles Unified School District

Prepared by OWNER:

LOS ANGELES UNIFIED SCHOOL DISTRICT
FACILITIES SERVICES DIVISION
333 South Beaudry Avenue, 23rd Floor
Los Angeles, California 90017

For OWNER:

LOS ANGELES UNIFIED SCHOOL DISTRICT
Los Angeles, California
September 22, 2026

OWNER PROJECT NO.: 10375279

2710060
w/ PLANS

Shelia D Taylor

Digitally signed by Shelia D Taylor
DN: C=US, E=cp-shelia.taylor@lausd.net, O=LAUSD, OU=PEX Team North, CN=Shelia D Taylor
Date: 2026.09.22 09:31:19-07'00'

Shelia Taylor, OWNER'S AUTHORIZED REPRESENTATIVE (OAR)

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INVITATION TO BID

Subject to all conditions prescribed by OWNER, sealed bids for a lump sum, fixed price contract are invited for the following Work:

VERDUGO HILLS HIGH SCHOOL

10375279 / 234467 / 2710060

LOS ANGELES UNIFIED SCHOOL DISTRICT AS OWNER

EDUCATIONAL SERVICE CENTER – LOCAL DISTRICT NORTHEAST

DESCRIPTION OF WORK: THIS PROJECT PROVIDES FOR NEW SCOREBOARDS FOR SOFTBALL & BASEBALL.

OWNER is committed to sustainable or "high performance" design and construction in all of its schools because high-performance schools enhance student and teacher performance, reduce operating costs, and protect the environment. To implement this commitment, the Owner endorses the high-performance school strategies defined in the Collaborative for High-Performance School (CHPS) Best Practices Manuals (available at www.chps.net), and requires that all qualified projects achieve, at a minimum, a "CHPS School" rating. The Owner shall be responsible for monitoring compliance with the CHPS criteria necessary to achieve this objective.

The Los Angeles Unified School District's electronic bid submittal process has changed. Bidders are now required to utilize the Ariba Business (Supplier) Network to submit a bid package electronically.

Bidders will need their company's user ID and password to access the Ariba Business (Supplier) Network at https://portal.us.bn.cloud.ariba.com/dashboard/public/appext/comsapsbncdiscoveryui#/RfxEvent/preview/1110027570?anId=ANONYMOUS. If an existing LAUSD vendor is unaware of the user ID and password associated with their Ariba Business (Supplier) Network account, they should contact the Vendor Services Unit for assistance via email at psg-vsu@lausd.net or via telephone at (562) 654-9404. A prospective bidder that is not already an LAUSD supplier/vendor must complete the registration process for an LAUSD Ariba Supplier number. Further details on registration and obtaining login credentials should be reviewed on the following webpage under the section titled, "Become a Prequalified Contractor today!": https://procurement.lausd.org/apps/pages/Prequalification.

A bidder will need to access the Ariba Business (Supplier) Network and submit the bid package for the transaction number identified below by the Bid Due Date. Virtual drop-in sessions have been scheduled for Tuesdays and Thursdays, 11 am to 12 pm, to provide instructions on accessing and responding to LAUSD solicitations in the Ariba Business (Supplier) Network. You should join a session via the following link: https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZmI4MjU3ZTYtZmYxNC00MjZhLTk0MGQtNDljNTg3YmNlMzQ4%40thread.v2/0?context=%7b%22Tid%22%3a%22042a40a1-b128-4ac4-8648-016ffa121487%22%2c%22Oid%22%3a%22ec989ceb-0c29-4836-86b7-03f004059bc2%22%7d. A job aid on accessing and responding to LAUSD solicitations in the system is attached to Section 00 2113 - Instructions to Bidders. If unsuccessful in

uploading the file, a bidder should e-mail ronnie.bossier@lausd.net at least two (2) days prior to the Bid Due Date for assistance.

The vendor is solely responsible for ensuring timely submission of its electronic solicitation response. A vendor should allow itself adequate time for bid submittal and possible technical support as bids will not be accepted after the deadline.

The vendor must complete its bid entry and upload all required documents before the end of the bid submission period. The District is not responsible for contractor system problems/errors.

To ensure that your bid is submitted properly and on time, *please submit well before the Bid Due Date/Time,* at least two (2) days in advance as suggested above.

The applicable reference number for this project in the Ariba Business (Supplier) Network is Ariba Sourcing project # Doc2421090481.

Bidding Documents will be available to bidder after the first date of advertisement and can be obtained at:

CRISP IMAGING
Los Angeles Office (Downtown)
1235 E. 6th St.
Los Angeles, CA 90021
Business Hours:
Monday through Friday
7:00 a.m. to 6:00 p.m.
Telephone: (213) 741-9560

Additional office locations are listed at https://www.crispimg.com/locations/ .

Bidders may also view and order Bidding Documents through the website by clicking on the "Planroom" button, click "Public Jobs".

Bid will only be accepted from a pre-qualified bidder pursuant to the OWNER prequalification process. To apply for prequalification or renewal, contractors should now go to lausd.qualitybidders.com to submit the prequalification questionnaires.

Bidders should note that the OWNER's prequalification requirements include mechanical, electrical, and plumbing contractors (i.e., contractors licensed pursuant to Sections 7056–7059 of the Business and Professions Code, specifically holding A, B, C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, or C-46 licenses pursuant to regulations of the Contractors' State License Board) that contract directly with a bidder to perform any such component work on the Project ("MEP subcontractors"). Bidders that intend to contract with any MEP subcontractors to perform any such component work on the Project shall only select MEP subcontractors that have been prequalified by the OWNER at least five (5) business days before the date fixed for the public opening of bids. Non-MEP subcontractors do not need to be prequalified to perform non-MEP component work on the Project. Bidders and MEP subcontractors shall not be eligible to bid or perform work on the Project if they (a) have not submitted completed prequalification questionnaires and financial statements to the OWNER at least ten (10) business days before the date fixed for the public opening of bids, and (b) have not been prequalified by the OWNER at least five (5) business days before the date fixed for the public opening of bids. The OWNER's lists of prequalified contractors can be found online at https://procurement.lausd.org/apps/pages/Prequalification under "List of Prequalified Contractors." The lists are updated on an ongoing basis. If an MEP subcontractor does not appear on the list, bidder should verify with the subcontractor to determine if subcontractor has received a notice from OWNER that confirms its prequalification by the above deadline. Unless prohibited by the OWNER, bidders licensed pursuant to Section 7057 of the Business and Professions Code, specifically holding general building contractor B licenses pursuant to regulations of the Contractors' State License Board, may self-perform any work on the Project to the extent permitted by law. Bids that fail to adhere to these requirements will be deemed non-responsive by the OWNER.

Bidder should note the disclaimer in Section 00 2113, 1.09 E, concerning the use of District prequalified subcontractors.

Bidder is advised that no contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relation pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations (DIR) and the Los Angeles Unified School District's DIR-approved Labor Compliance Program.

BID DUE DATE: Bid will only be accepted before **2:00 PM, November 2, 2026.**

Deadline for MEP subcontractors to be prequalified by the OWNER: **October 26, 2026.** Bidder must only list MEP subcontractors that are prequalified by the OWNER as of this date. OWNER will attempt to ensure that all prequalified MEP subcontractors are placed on the OWNER's List of Prequalified MEP Subcontractors in a timely manner. However, if an MEP subcontractor does not appear on the list, bidder should verify with the subcontractor to determine if subcontractor has received a notice from OWNER that confirms its prequalification by the deadline. Bids that fail to adhere to this requirement will be deemed non-responsive by the OWNER.

Bidder is responsible for the cost of bid package. Cost for bid package is non-refundable. Bid package is non-returnable.

Bid security in the amount of ten (10) percent of the lump sum base bid, excluding bid items, as set forth in Section 01 2300, shall accompany each bid. Surety issuing the bid bond shall meet the requirements set forth in Article 5.17 of the General Conditions. A **mandatory** pre-bid meeting and pre-bid job walk will be held in accordance with Section 00 2513. The bidder is responsible for ensuring that they have complete Bidding Documents including all Addenda provided by the OWNER, prior to the bid due date.

If additive or deductive bid items are not set forth in the Bidding Documents, the lowest bid shall be determined by the lowest, responsive base bid price on the proposed Contract.

Pursuant to Labor Code Section 1771.7, this Project will be subject to the Owner approved Labor Compliance Program (Final Approval, December 7, 1996). For questions or assistance concerning the Labor Compliance Program, contact the Labor Compliance Department at (213) 241-4665 or lcp@lausd.net, or go to https://facilities.lausd.org/apps/pages/lcp on the internet. Any Contractor to whom a contract for the Work is awarded by the Owner shall comply with the provisions of the California Labor Code, as well as the Owner Labor Compliance Program for the Project, including, without limitation, the obligation to pay the general prevailing rates of wages in the locality in which the Work is to be performed in accordance with, without limitation, Sections 1771, 1773.1, 1774, 1775 and 1776 of the California Labor Code and the obligation to comply with Section 1777.5 of the California Labor Code governing employment of apprentices. Copies of the prevailing rates of per diem wages are available to any interested party at www.laschools.org/new-site/labor-compliance/dir or www.dir.ca.gov/oprl.

The successful bidder will be required to pay prevailing wages in accordance with law and is required to have the following State of California Contractor license current at the time of bid submission:

In accordance with the provisions of Public Contract Code Section 3300, OWNER has determined that the following license classification is required to perform this project: **B – General Building Contractor**

A prime CONTRACTOR with a **B** license that will be self-performing any of the following specialty trades must also hold the required specialty license:

C-10 – Electrical
C-36 – Plumbing

To perform abatement and demolition work, including removal of roofing materials, bidders must select a subcontractor from the Owner's List of Asbestos Abatement Subcontractors as per Section 00 3126. The only license required to perform abatement and demolition work, including removal of roofing materials, is C-22. A dual license of C-22 and C-39 is not a requirement.

Bidder is required to participate in an OWNER Controlled Insurance Program (OCIP) as set forth in Section 00 7316 and Article 5 of the General Conditions.

Bidder is subject to the Small Business Enterprises participation requirements as set forth in Section 00 7339.

PURSUANT TO PUBLIC CONTRACT CODE SECTION 2002, THE SBE POLICY OF THE LOS ANGELES UNIFIED SCHOOL DISTRICT BOARD OF EDUCATION INCLUDES A BID PREFERENCE PROVISION FOR CERTIFIED SBE CONTRACTORS AND MICRO-BUSINESSES (MEANING GROSS ANNUAL RECEIPTS ARE $5,000,000 OR LESS; OR THE SMALL BUSINESS IS A MANUFACTURER WITH 25 OR FEWER EMPLOYEES) ON LOW BID CONSTRUCTION CONTRACTS VALUED UP TO ONE MILLION DOLLARS ($1,000,000.00) BASED ON THE OWNER'S PRE-BID ESTIMATE. THE PREFERENCE FOR CERTIFIED SBE CONTRACTORS IS THREE PERCENT (3%) OF THE LOWEST RESPONSIBLE BIDDER MEETING SPECIFICATIONS. THE PREFERENCE FOR CERTIFIED MICRO-BUSINESS CONTRACTORS IS FIVE PERCENT (5%) OF THE LOWEST RESPONSIBLE BIDDER MEETING SPECIFICATIONS. THESE PREFERENCES ARE USED ONLY TO DETERMINE THE WINNING BID AND DO NOT CHANGE THE ACTUAL BID OR CONTRACT AWARD AMOUNTS. ELIGIBLE BIDDERS SEEKING ONE OF THESE PREFERENCES MUST INCLUDE A COPY OF THEIR CURRENT AND VALID SBE OR MICRO-BUSINESS CERTIFICATE WITH EACH BID SUBMITTAL. ONLY ONE PREFERENCE TYPE CAN BE UTILIZED PER BID. (REFER TO INSTRUCTIONS TO BIDDERS SECTION 00 2113 1.01 B.7).

ONLY CERTIFICATION FROM LAUSD OR AS INDICATED FOR THE AGENCIES BELOW WILL BE ACCEPTED AT THE TIME OF BID. HOWEVER, IF CERTIFICATION FROM ONE OF THE AGENCIES BELOW IS PROVIDED, BIDDER MUST ALSO SUBMIT AN LAUSD CERTIFICATE PRIOR TO ISSUANCE OF THE NOTICE OF INTENT TO AWARD.

- **State of California – Department of General Services (SBE, Micro-business, DVBE)**
- **Metropolitan Water District of Southern California (SBE)**
- **City of Los Angeles (SBE)**
- **Los Angeles Metro (SBE)**
- **Los Angeles County (SBE)**

It is the responsibility of the Prime contractor to ensure that its subcontractors/suppliers register to become LAUSD certified prior to award. Please have all subcontractors/suppliers utilize the following link to access the online registration:

https://facilities.lausd.org/apps/pages/small-business

WORKER CERTIFICATION - Only Workers skilled in the various trades required on this Contract shall be employed upon the Work. In addition to all other requirements stated in the Bidding Documents, all craftsmen must adhere to the following requirement(s): Journeyman plumbers must possess a plumbing certificate issued by the Los Angeles County and City of Los Angeles, Building and Safety Divisions. All HVAC technicians must possess an EPA-608 Certification. Electricians working for a contractor with a C-10 license must possess a California State Electrician certification. Electricians that are certified can be verified via the State database at www.dir.ca.gov/DAS/ElectricalTrade.htm. Elevator companies must possess a Certified Qualified Conveyance Company License (CQCC). Journeymen will be required to have their Certified Competent Conveyance Mechanics License (CCCM) from the State of California and Journeymen working within the City limits of Los Angeles will be required to have their Journeymen Elevator Mechanic's License. The State of California (Elevator, Ride and Tram Unit) will inspect all County Elevator Modernizations and Alterations.

Bidder is subject to the Project Stabilization Agreement (PSA) as set forth in Document 00 4500 and Section 00 7349

Pursuant to Public Contract Code Section 7201, OWNER has determined that the retention withheld on progress payments for this project will be 5% based on the complexity of the project.

The District's contract bond estimate is **$435,000.00**.

The Contract Time is **224** days.

CONTRACTOR should consult the General Conditions, Supplementary Conditions, and General Requirements regarding Milestones and Liquidated Damages. CONTRACTOR has those options regarding retention as set forth in Public Contract Code Section 22300.

CONTRACTOR is advised that fraud is investigated by the Office of the Inspector General. The Inspector General of the Los Angeles Unified School District has statutory authority to audit and investigate persons and companies that do business with the District. Identified criminal acts including fraud, kickbacks, theft, and conspiracy are pursued to the greatest extent of the law, in conjunction with Federal, State, and Local law enforcement partner agencies.

Examples of offenses and corresponding maximum sentences are:

- 15 U.S.C. §1 Conspiracy to Restrain Trade - 10 years
- 18 U.S.C. §1341 Mail Fraud - 20 years
- 18 U.S.C. §1344 Bank Fraud - 30 years
- 18 U.S.C. §1349 Conspiracy to Commit Wire Fraud - 20 years
- 18 U.S.C. §1956 Money Laundering - 20 years
- California Penal Code §487 Grand Theft – 3 years

Offenses carry potential fines of up to $1,000,000.

Call the OIG Hotline at **(213) 241-7778** or visit **https://oig.lausd.org/**

END OF SECTION

SECTION 00 2113

INSTRUCTIONS TO BIDDERS

1.01 GENERAL

A. This Section provides bidder instructions on bidding conditions, requirements, and procedures and stipulates the classification of licenses bidder must possess in order to bid on the Project.

B. Bidder shall complete and submit the following documents as part of its bid. Failure to submit the documents with solid borders shall render the bid non-responsive. **The documents shall be submitted electronically as set forth herein and Document 00 1116 - Invitation to Bid.** The documents for actual use by the bidder can be found in Section 00 4001 – Required Bid Forms, except for item #8 which is to be submitted by a contractor seeking the SBE or Micro-business preference.

1. Document 00 4100 - Bid and Acceptance Form (signature required)
   (Lump Sum, Unit Price, Multiple Sites/Multiple Funding)
2. Addendum of Provisions Required of Federally Funded Contracts – FEMA Awards (signatures required)
3. Document 00 4313 - Bid Security Form (signatures required)
4. Document 00 4336 - Subletting and Subcontracting Fair Practices Act List
5. Document 00 4500 - Certification Requirements (signature required)
6. Exhibit A - LAUSD Board Resolution Questions
7. Document 00 4519 - Non-Collusion Affidavit (signature required)
8. Copy of current and valid SBE or Micro-business certificate (for eligible bidders seeking the SBE or Micro-business preference)

C. Bidder shall submit Small Business Enterprises compliance requirements and additional supplemental subcontractor information within five (5) days from the date of OWNER request. The document for actual use by the bidder will be provided to the bidder by the OWNER. Failure to submit within five (5) days may render the bid non-responsive.

1.02 RELATED SECTIONS

A. Section 00 2513 - Pre-Bid Meeting (Mandatory)

B. Section 00 3000 - Available Information

C. Section 00 3148 - Project Directory

D. Section 00 4001 - Required Bid Forms

E. Section 00 6113 - Payment Bond (Labor and Material) (CC § 9550, 9554)

F. Section 00 6114 - Performance Bond

G. Section 00 7000 - General Conditions

H. Section 00 7300 - Supplementary Conditions

I. Section 00 7316 - Owner Controlled Insurance Program (OCIP)

J. Section 00 7339 - Small Business Enterprises (SBE)

K. Section 00 7349 - Project Stabilization Agreement (PSA)

L. Section 00 9110 - Pre-Bid Clarification

1.03 LICENSE REQUIREMENTS

A. At the time of bid submission and throughout performance of the Work, bidder shall ensure bidder and all subcontractors, regardless of tier, possess the appropriate license issued by the California Contractors State License Board for the Work to be performed under the Contract.

B. OWNER will verify bidder license before the Notice of Award.

1.04 OBTAINING BIDDING DOCUMENTS

A. Bidding Documents, including envelopes for submission of bids, may be ordered and obtained from:

Crisp Imaging
1235 E. 6th Street
Los Angeles, CA 90021
Business Hours:
Monday through Friday
7:00 a.m. to 6:00 p.m.
Telephone: (213) 741-9560

Additional office locations are listed at the end of Section 00 3148.

B. Bidder shall utilize a complete set of Bidding Documents in preparing a bid.

C. The failure or omission of bidder to receive any Bidding Document, form, instrument, Addendum, or other document shall not relieve bidder from any obligations with respect to the bid and/or Contract.

1.05 EXAMINATION OF PROJECT SITE, WORK AND BIDDING DOCUMENTS

A. Bidder shall thoroughly examine and be familiar with the Bidding Documents.

B. Bidder shall, prior to submission of bid, inspect and examine the Project site of the Work and sites adjacent to the Work, compare them with any other Work being bid or presently under construction which relates to the Project for which the bid is submitted, examine the grounds and all improvements and must satisfy by examination, testing and/or other means the bidder may prefer in order to determine the actual conditions and requirements under which the Work must be performed. Refer to Section 00 3000 – Available Information.

C. If upon inspection and examination by bidder there is any existing improvement, condition, matter or thing, or condition or requirement of the Work which bidder does not completely understand, bidder shall inquire as set forth in Section 00 2113 – Instructions to Bidders and Section 00 9110 – Pre-Bid Clarification.

D. The failure or omission of bidder to examine any Bidding Document, form, instrument, Addenda, or other document or to visit the Project site and be acquainted with existing conditions shall not relieve bidder from any obligations with respect to the bid and/or Contract.

1.06 HAZARDOUS MATERIALS ON OWNER PROPERTY

A. California Code of Regulations, Title 8, Section 5194 requires bidder be notified of hazardous materials they may encounter while on OWNER property.

B. In order to comply with these regulations, reference is made to Section 00 3000 – Available Information for identification of, but not limited to, the chemical inventory and all historical hazardous materials reports for the Project site.

C. If the scope of Work for the Project includes hazardous materials abatement, OWNER representatives may prepare, and/or cause to be prepared, specific reports to be used and relied on for

the Project. If such reports have been prepared for the Project, the reports will be included as Attachments to Division 02, Existing Conditions.

D. If the scope of Work for the Project includes asbestos abatement exceeding specifications allowable for bidder to perform as set forth in Section 02 8213 – Asbestos Abatement and Asbestos Related Disturbance, the bidder or subcontractor performing the work shall be listed on the OWNER's List of Pre-qualified Asbestos Abatement Subcontractors as set forth in Section 00 3126.

E. It is a bidder's obligation to review all hazardous materials documents, whether identified in Section 00 3000 – Available Information or included as Attachments to Division 02, Existing Conditions, before submitting the bid to ensure employee protection and to ensure that all costs for performing the Work are included in the bid.

F. Refer to Section 00 7000 – General Conditions for additional requirements affecting the Work of the Project.

1.07 PREVAILING WAGE RATES

A. Bidder will be required to comply with, but not limited to, the provisions of Section 00 4500 – Certification Requirements in its entirety.

1.08 ADDENDA

A. Clarification or any other notice of a change in the Bidding Documents will be issued only by the OWNER office of Facilities Construction Contracts and only in the form of a written Addendum, transmitted by fax or e-mail to all who are known by the issuing office to have received a complete set of Bidding Documents. Any other purported Addenda are void and unenforceable.

B. Bidder is responsible for ascertaining the disposition of all addenda issued regardless of OWNER notification and to acknowledge all addenda in the submitted sealed bid prior to the bid opening.

C. Copies of Addendum will be made available for inspection wherever Bidding Documents are on file for inspection.

D. Each Addendum will be numbered, dated and identified with the Project number.

E. Oral statements or any instructions in any form, other than Addendum as described above, shall be void and unenforceable.

F. Addendum issued by the Owner office of Facilities Construction Contracts and not noted as being acknowledged by bidder as required in Document 00 4100 – Bid and Acceptance Form, may result in the bid being deemed non-responsive.

1.09 COMPLETION OF BID FORMS

A. All documents listed in subparagraph 1.01(B) of this Section shall be completed in their entirety.

B. Blanks: All blanks shall be completed by filling in the requested information; the bid may be deemed non-responsive if this requirement is not met.

C. Erasures: The submitted bid shall not contain any erasures, delineation or other corrections unless each such correction is authenticated by affixing in the margin immediately opposite the correction the signature or signatures of the person or persons signing the bid.

D. Modifications: Changes in, or additions to the bid form, recapitulations of the Work bid upon, alternative proposals, or any other modifications of the form which is not specifically called for in the Bidding Documents may result in the bid being deemed non-responsive.

E. Subcontractors: Bidder shall follow all instructions herein regarding the listing of subcontractors as set forth in Document 00 4336 – Subletting and Subcontracting Fair Practices Act List. The OWNER's prequalification requirements include mechanical, electrical, and plumbing contractors (i.e., contractors licensed pursuant to Sections 7056–7059 of the Business and Professions Code, specifically holding A, B, C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, or C-46 licenses pursuant to regulations of the Contractors' State License Board) that contract directly with a bidder to perform any such component work on the Project ("MEP subcontractors"). Bidders that intend to contract with any MEP subcontractors to perform any such component work on the Project shall only select MEP subcontractors that have been prequalified by the OWNER at least five (5) business days before the date fixed for the public opening of bids. Non-MEP subcontractors do not need to be prequalified to perform non-MEP component work on the Project. Bidders and MEP subcontractors shall not be eligible to bid or perform work on the Project if they (a) have not submitted completed prequalification questionnaires and financial statements to the OWNER at least ten (10) business days before the date fixed for the public opening of bids, and (b) have not been prequalified by the OWNER at least five (5) business days before the date fixed for the public opening of bids. The OWNER's lists of prequalified contractors can be found online at https://procurement.lausd.org/apps/pages/Prequalification under "List of Prequalified Contractors." The lists are updated on an ongoing basis. If an MEP subcontractor does not appear on the list, bidder should verify with the subcontractor to determine if subcontractor has received a notice from OWNER that confirms its prequalification by the above deadline. Unless prohibited by the OWNER, bidders licensed pursuant to Section 7057 of the Business and Professions Code, specifically holding general building contractor B licenses pursuant to regulations of the Contractors' State License Board, may self-perform any work on the Project to the extent permitted by law. Bids that fail to adhere to these requirements will be deemed non-responsive by the OWNER.

DISTRICT DISCLAIMER OF LIABILITY: The District requires prequalification of subcontractors in certain specialty trades. The District provides all prospective bidders with a list of prequalified subcontractors. Bidder is required to list a prequalified subcontractor for each specified trade as set forth in the Bid Documents, or else its bid will be rejected by the District as non-responsive.

The District only represents that each specialty subcontractor identified on the list of prequalified subcontractors has satisfied the District's prequalification requirements. The District makes no representations, express or implied, regarding the ability of any prequalified subcontractor to perform work or fulfill its obligations to bidder with respect to this Project or any other project. Contractor shall be solely responsible to the District for the performance of any prequalified subcontractor.

Bidder, in submitting a bid for this Project, acknowledges the District makes no warranties, express or implied, concerning the abilities of any prequalified subcontractor, and bidder agrees to hold the District harmless from any claims, demands, or causes of action arising out of, or alleged to have arisen out of, any act or failure to act by a prequalified subcontractor.

F. Small Business Enterprises: Bidder shall follow instructions herein regarding the listing of Small Business Enterprises as set forth in Document 00 7339 – Small Business Enterprises.

G. Name and nature of bidder legal entity: bidder shall complete the bid form according to the following:

1. The firm name or name style of the bidder shall agree with bidder license issued by the California Contractors State License Board.

2. Bid shall be signed by bidder or an individual on behalf of the bidder and only a handwritten signature shall be acceptable.

3. Successful bidder may be required to furnish a letter setting forth the organizational structure of bidder and further describing the firm members and those persons authorized to sign legal documents.

H. Bidder shall make no stipulations on the bid form nor qualify the bid in any manner.

I. Bidder, by not submitting a price for any bid item or unit price, agrees subject bid item or unit price is included in the base bid amount submitted to the OWNER. Bidder failure to submit a price for any bid item or unit price will result in the bid being deemed non-responsive. If bid items are called for and no change in the lump sum base bid is required, enter "No Change".

1.10 BID GUARANTEE

A. Bidder shall attach to the bid a bid guarantee, if required herein, in the form of a certified or cashier's check or a bid bond. If bidder intends to submit a bid bond, bidder shall utilize the Bid Security Form, Document 00 4313, which shall be secured by a California-admitted surety company satisfactory to OWNER.

B. The bid guarantee shall be applied toward, but shall not be considered a limitation upon, any damage, which may be sustained by OWNER if the bidder fails to abide by any provisions of the Notice of Intent to Award.

C. In the case of an irregular bid bond, OWNER will contact the surety to confirm the validity of the bid bond.

D. Attorneys-in-Fact who sign bid bonds must file with each bond a certified and effective dated copy of their powers of attorney.

E. An annual bid and performance bond on file in the offices of OWNER is not acceptable as a guarantee of this bid.

F. Bid shall be guaranteed for a period of sixty (60) days from the date of submission, or as extended by mutual agreement.

1.11 BIDDER REPRESENTATIONS

Bidder, by submitting a bid, warrants and represents:

A. Bidder has read, comprehends and submits bid in full accordance with provisions of the Bidding Documents.

B. Bidder has visited the Project site and is completely familiar with the conditions under which the Work is to be performed and the local conditions as related to the requirements of the Bidding Documents.

C. Bid is based upon the scope, materials, equipment, and systems required by the Bidding Documents without exception.

D. Bidder has the expertise and financial capacity to perform and complete all obligations under the Bidding Documents.

E. The individual executing the bid forms is duly authorized and empowered to execute the bid forms on behalf of the bidder.

F. Bidder is aware of and will comply with all applicable code requirements in the performance of the Work.

G. All expenses incurred by bidder in preparing the bid shall be borne solely by bidder.

1.12 SUBMISSION OF BID FORMS

A. **Submit all required documents listed in paragraph 1.01 (B) of this Section for the electronic bid as described herein and Document 00 1116 - Invitation to Bid. A job aid on submitting the bid electronically is attached to this document.**

B. Submit all supplemental documents as set forth in paragraph 1.01 (C) of this Section within five (5) business days of OWNER's request.

C. OWNER invites bid on Document 00 4100 – Bid and Acceptance Form, to be submitted by the time and in the manner indicated in Document 00 4100.

D. A bid arriving on or after the specified time is deemed non-responsive and will not be accepted.

E. Bidder assumes all responsibility for timely delivery of the bid at the location designated for receipt of bids.

F. Oral, telephonic, facsimile, or telegraphic bids are invalid and will not be accepted.

G. The submission of a bid shall be taken as prima facie evidence of compliance with Section 00 2113 - Instructions to Bidders.

1.13 MODIFICATION OR WITHDRAWAL OF BID

A. Prior to bid deadline, a submitted bid package may be modified or withdrawn from the electronic system.

B. A withdrawn bid may be resubmitted up to the bid deadline, provided it then fully complies with the bidding requirements.

C. Bid security shall be ten (10) percent of the amount of the base bid.

D. If bidder claims to have made a mistake in its bid pursuant to Public Contract Code Sections 5100 et seq., OWNER must receive a written request for release from bid within five (5) business days after the opening of the bid. In this written request, bidder must indicate the date of the bid, the Project name, ask to be released from bid, and certify under penalty of perjury:

1. That a mistake was made,
2. Provide details of how the mistake occurred,
3. That the mistake made the bid materially different than intended (include original unaltered bid estimate sheets), and
4. That the mistake was made in filling out the bid, and was not due to error in judgment, or to carelessness in inspecting the site of the project, or in reading the plans or specifications.

1.14 BID RESULTS

A. OWNER will post the bid results at or about 48 hours of the bid due date and time at the following location: https://www.laschools.org/new-site/contractor-resources/documents/.

1.15 REJECTION OF BID

A. OWNER has the right to reject any and all bids.

B. OWNER has the right to deem any bid not accompanied by all items required by the Bidding Documents, or a bid which is in any other way deemed materially incomplete or irregular, as a non-responsive bid.

1.16 BID PROTEST

A. All District procurements shall be conducted in a manner which assures that all prospective contractors/consultants are afforded fair and equal consideration, and the award of District contracts preserves and protects the integrity of the procurement process. To that end, any interested party who desires to raise concerns regarding a District award shall have the right to have its complaint considered and resolved administratively by the District in an expeditious manner. "Interested party," as used herein, means an actual or prospective Proposer whose direct economic interest would be affected by the award of a contract or by the failure to award a contract.

B. All protests shall be filed, handled, and resolved in a manner consistent with the District's protest procedures. The District will respond to each substantive issue raised in the protest. Protests relating to the content of this solicitation must be filed within ten (10) business days after the release of the solicitation. Failure to file a timely protest is a failure to exhaust an administrative remedy and shall act as a waiver of the right to challenge the solicitation and process even if a protest regarding a recommendation for contract award is filed.

C. Protests relating to a recommendation for contract award must be filed by an "interested party" within five (5) business days after release of the solicitation results. Failure to file a timely protest is a failure to exhaust an administrative remedy and shall act as a waiver of the right to challenge the recommendation for contract award.

D. All protests shall be filed via email to **protest@lausd.net** and in writing with the District's Chief Procurement Officer (CPO) or designee. Emailed protests must contain in the "Subject" line the advertised solicitation name and number with the name of the Contracting Officer.

E. Written protests shall be filed with the **Chief Procurement Officer, Los Angeles Unified School District, 333 S. Beaudry Avenue – 28th Floor, Los Angeles, CA 90017**. Include identification of the proposed solicitation name and number on the outside of the envelope/package with the Contracting Officer's name.

F. The protest shall, at a minimum, contain the following:

1. The name and address of the interested party and its relationship to the solicitation;
2. Identification of the solicitation name and number with Contracting Officer's name (include the school name, project number, and project description, as applicable);
3. Substantive description of the nature of the protest;
4. All documentation supporting the allegations of the protest;
5. Statement of the specific relief requested;
6. Identification of the provision(s) of the solicitation, regulations, or laws upon which the protest is based; and
7. Signature of an authorized executive with the authority to bind the company.

G. The Chief Procurement Officer or designee shall make a determination on the protest normally within (10) business days after the receipt. The Chief Procurement Officer or designee has the authority to make a final determination and the decision shall constitute the protestor's final administrative remedy.

1.17 AWARD

A. OWNER has the right to waive immaterial irregularities in a bid and to accept the lowest responsive bid and responsible bidder.

B. OWNER may ask bidder to submit a bid breakdown, additional information, and clarifications prior to award. Failure of bidder to timely submit the requested information may render a bid non-responsive.

C. OWNER will transmit a Notice of Intent to Award or reject all bids. Within ten (10) days after receipt of the Notice of Intent to Award, bidder shall submit to OWNER the following:

1. One (1) executed original of the payment bond.

2. One (1) executed original of the performance bond.

3. Confirmation that bidder has submitted the required paperwork to enroll in Owner Controlled Insurance Program (OCIP) as set forth in Article 5 of the General Conditions.

D. If bidder submits all items as required by the Notice of Intent to Award within the specified time, and if all such items comply with the requirements of the Bidding Documents and are acceptable to OWNER, OWNER will execute the Contract and issue a Notice of Award with copy of the executed Contract to the CONTRACTOR.

1.18 CONTRACT DOCUMENTS

A. After execution of the Contract by OWNER, OWNER shall provide to CONTRACTOR, at OWNER expense, three (3) copies of the Contract Documents. Any further copies of the Contract Documents are at the sole expense of the CONTRACTOR.

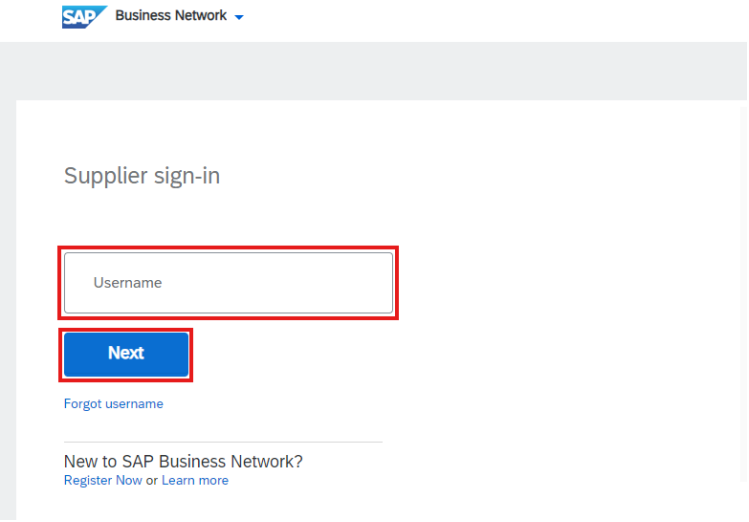
1.19 ELECTRONIC BID SUBMITTAL

A. <u>In accordance with Document 00 1116 – Invitation to Bid, bidder is advised to use the job aid attached as a guide to assist in the electronic bid submittal.</u>

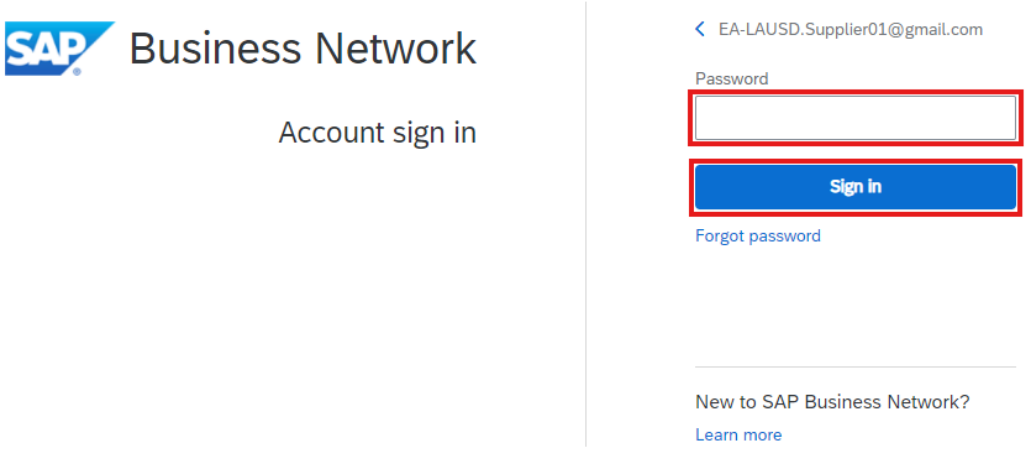
END OF SECTION

Log on to Ariba Supplier Network

1. Enter your Ariba **Supplier sign-in**
2. Click **Next**

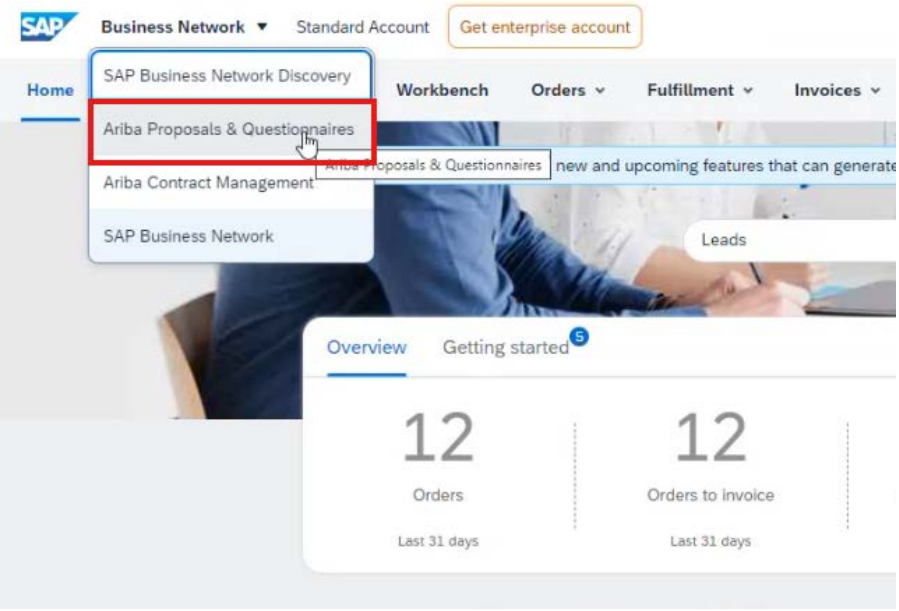


3. Enter your Ariba User **Password**
4. Click **Sign In**

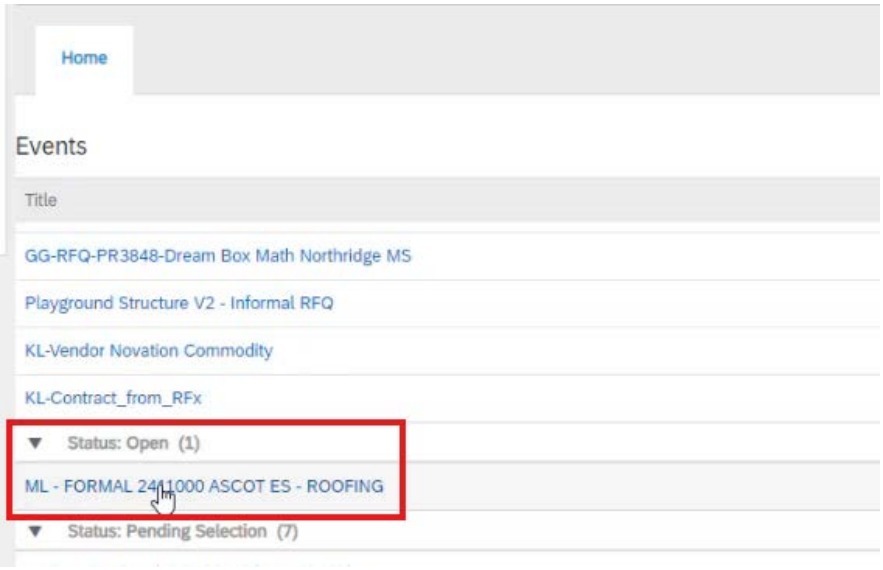


Finding Bid Opportunities

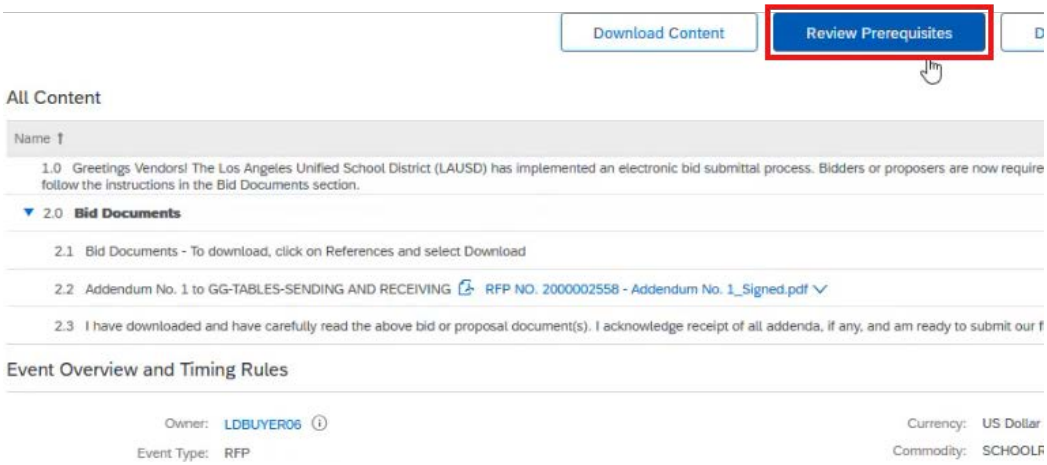
5. Under **Business Network** click on **Ariba Proposals & Questionnaires**



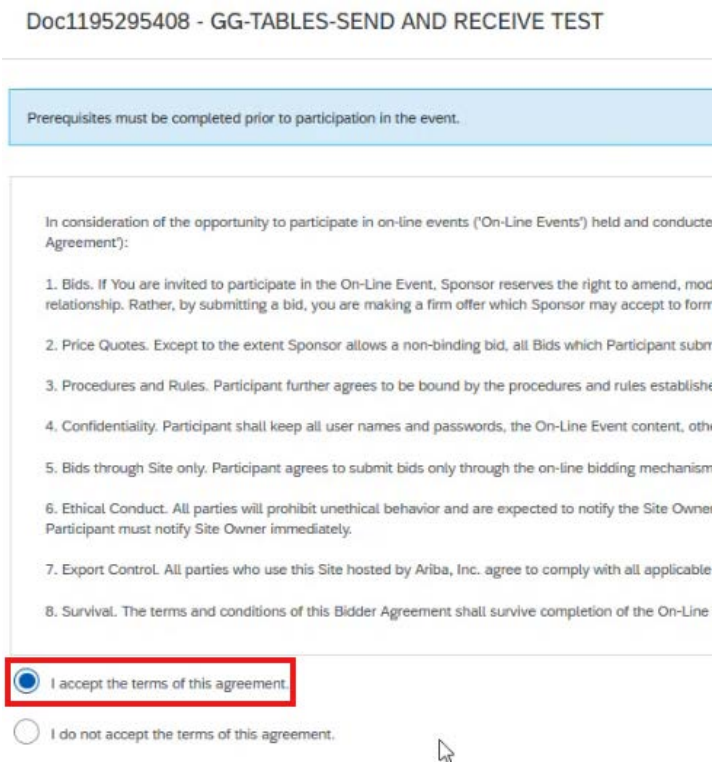
6. Under **Events** scroll down to **Status:Open** and click on the event



7. Read through content regarding the project. To view Prerequisites, click **Review Prerequisites**



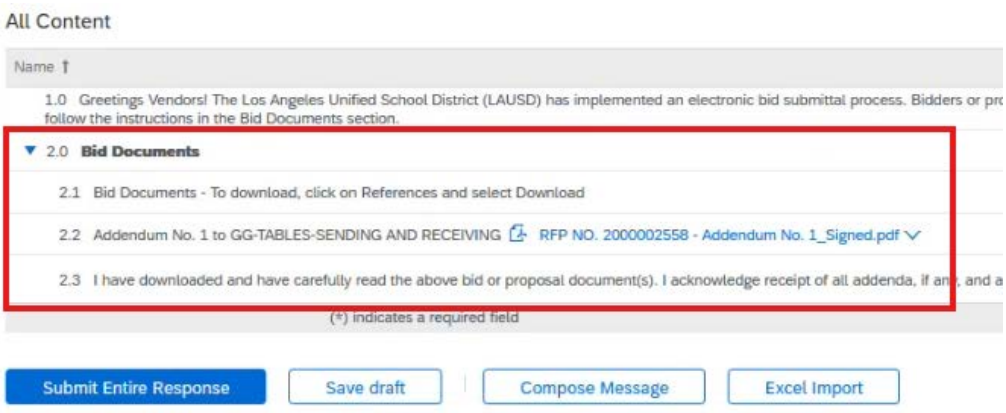
8. Accept Ariba Terms and Conditions to participate. *



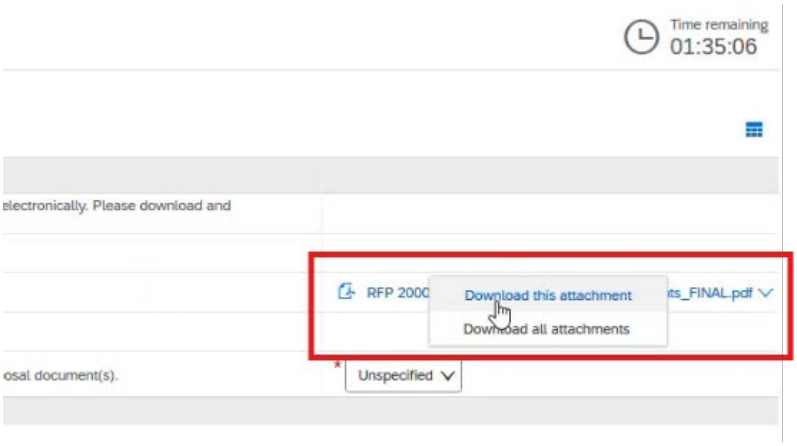
*If you do not agree to the Terms and Conditions, you will not be able to propose your bid

Download and Review the Bid Document

9. Go to Section 2.0 **Bid Documents**

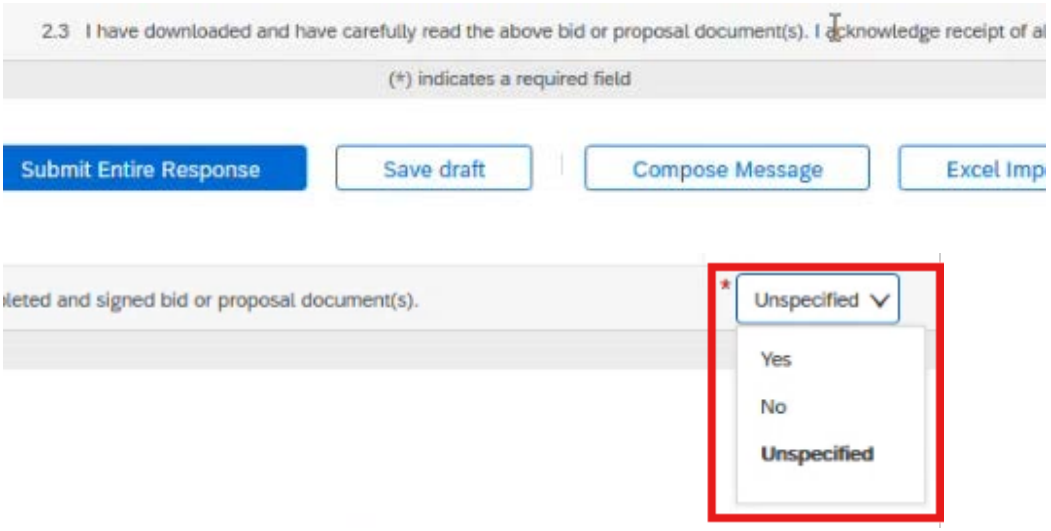


10. To download the file click the blue file name then click **Download this attachment**

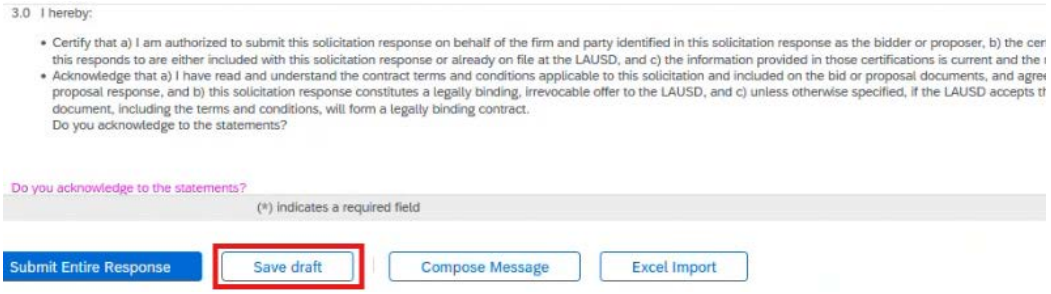


Responding/Submitting Bid Documents

11. After reviewing documents, go to section **2.3** and acknowledge receipt of documents



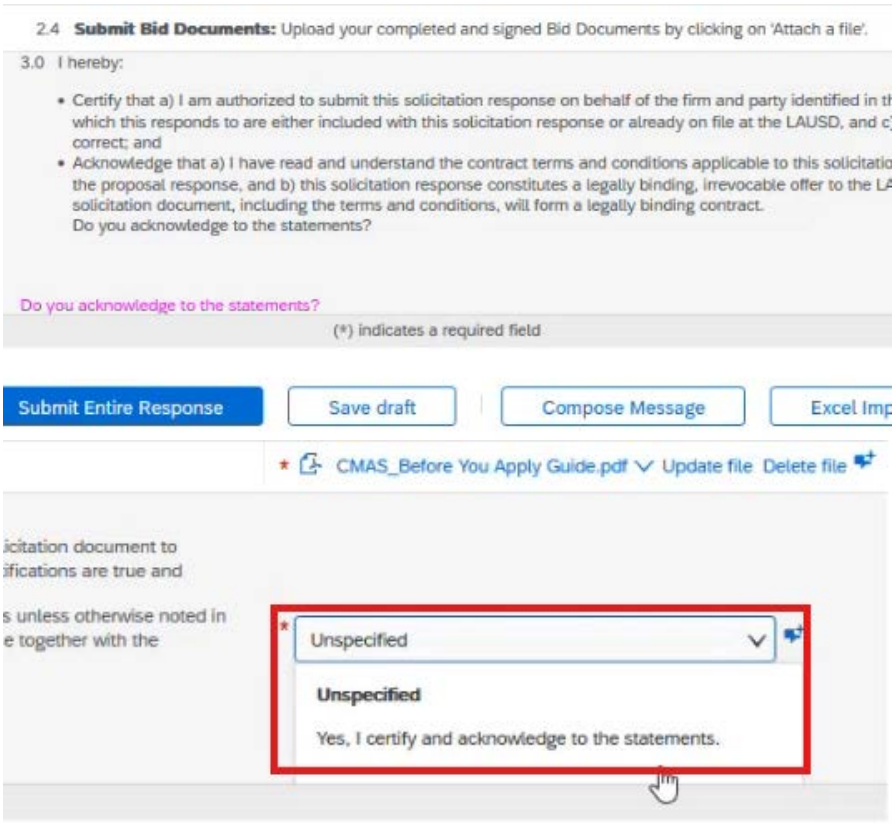
12. Once acknowledge, line items to respond appear. If not ready to respond, can **Save draft**



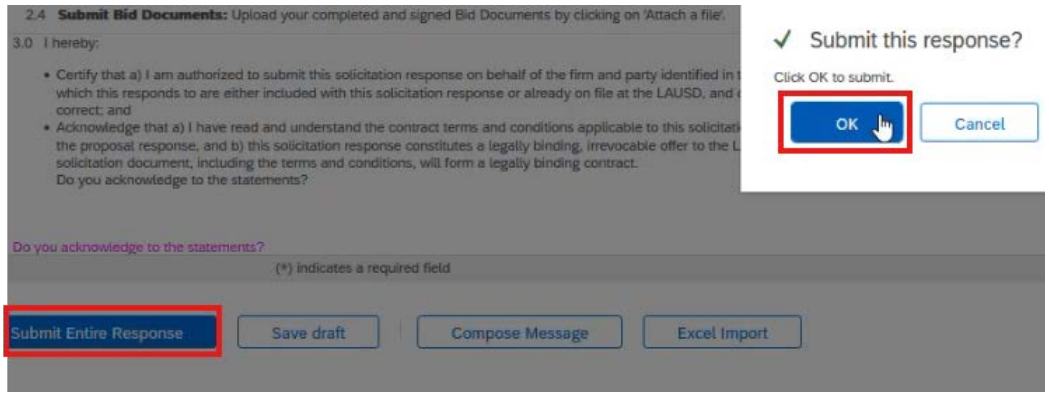
13. When ready to respond, go to section 2.4 **Submit Bid Documents** and attach file/bid documents



14. After attaching file/bid documents go to section **3.0** and certify you are authorized to submit the solicitation response



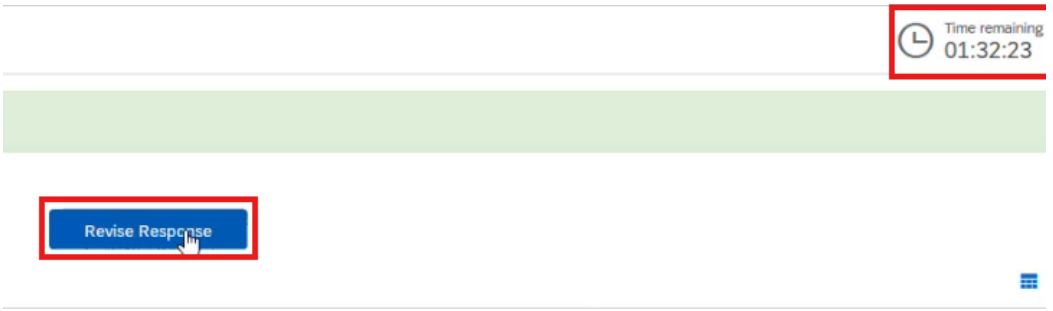
15. Once acknowlged, click on **Submit Entire Response.** A pop up will appear and confirming your selection. Click **OK.** You will see a green banner confirming your submission.





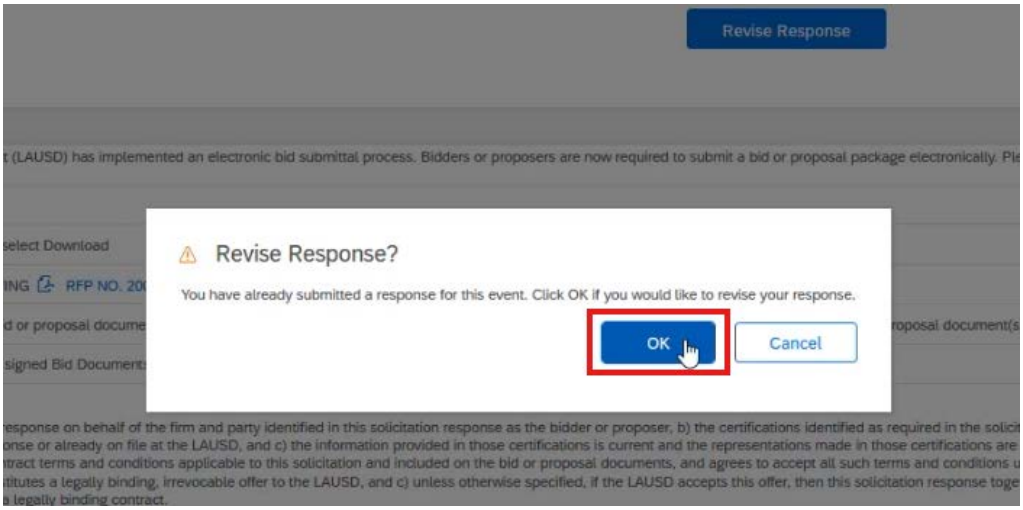
Revising a response

1. To revise a response, check how much time is remaining and click the **Revise Response** button.*

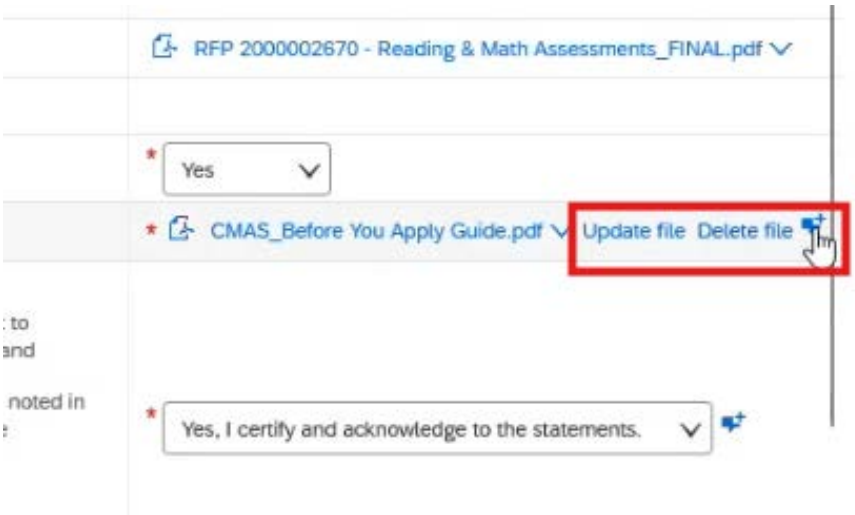


*As long as the revised response is within the time frame it can be revised multiple times.

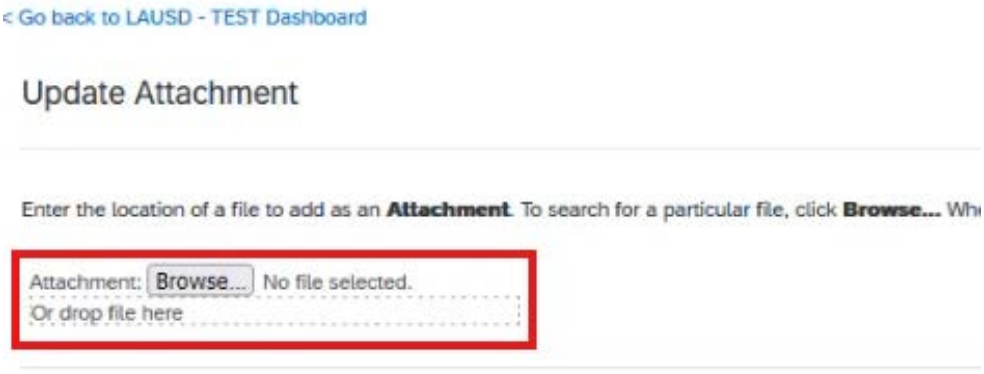
2. Confirm you want to revise the response and click **OK**.



3. From here you will now be able to update or delete the response files submitted. Click either **Update file** or **Delete File**.



4. This will route to another view where you can attach or drag the updated document file. Click **OK** when finished.

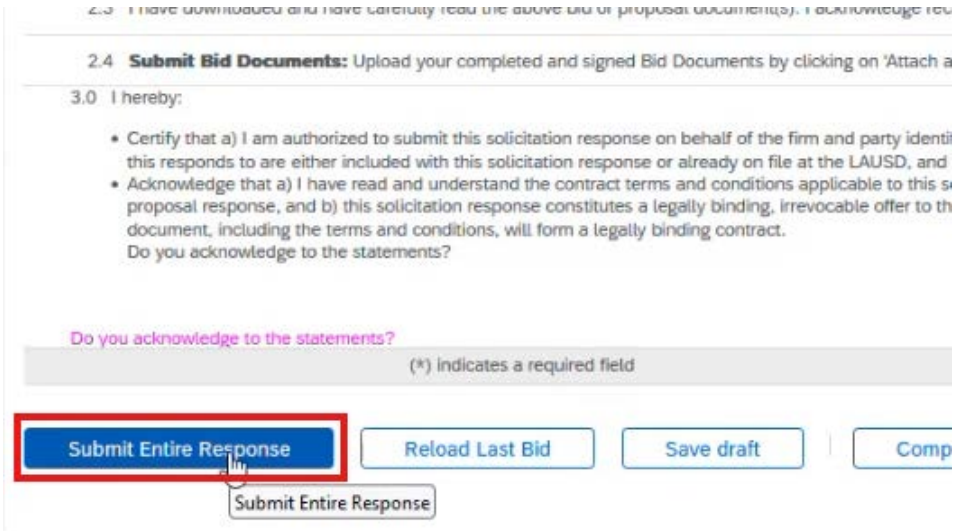


NOTE: You **CANNOT** attach multiple files. Existing file will be replaced. If you want to replace the existing file, the new file **will need to contain a different file name.**

IF you need to attach multiple files, put them in a folder, create a zip folder then attach the file.

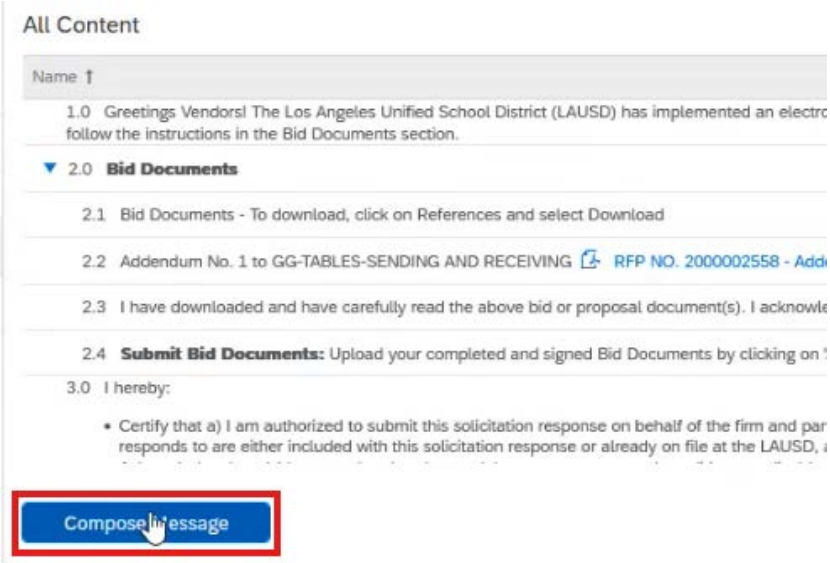
Max File size:100MB

5. Once you have attached the new file, Click on **Submit Entire Response** and confirm **OK**.

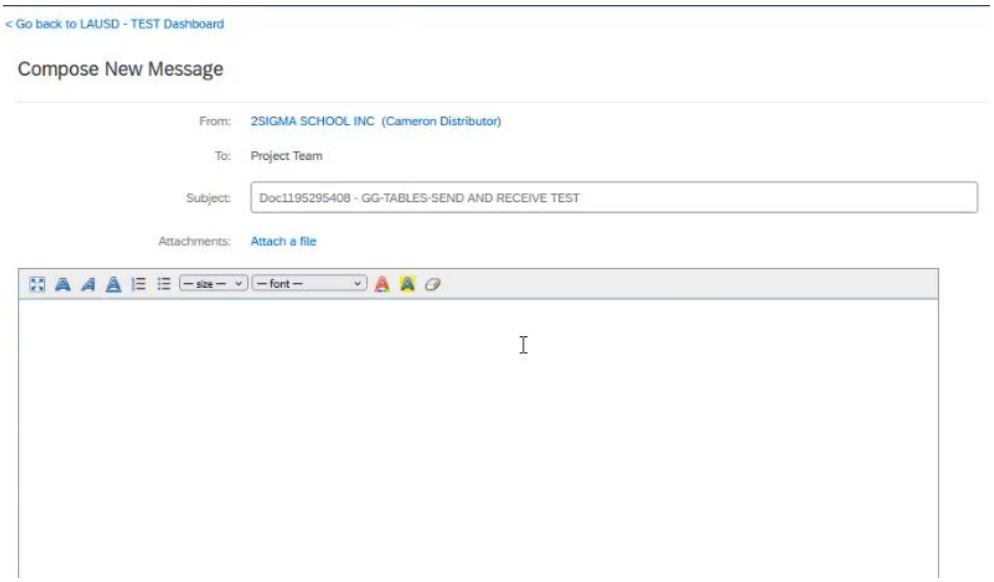


Composing a Message and viewing a Response

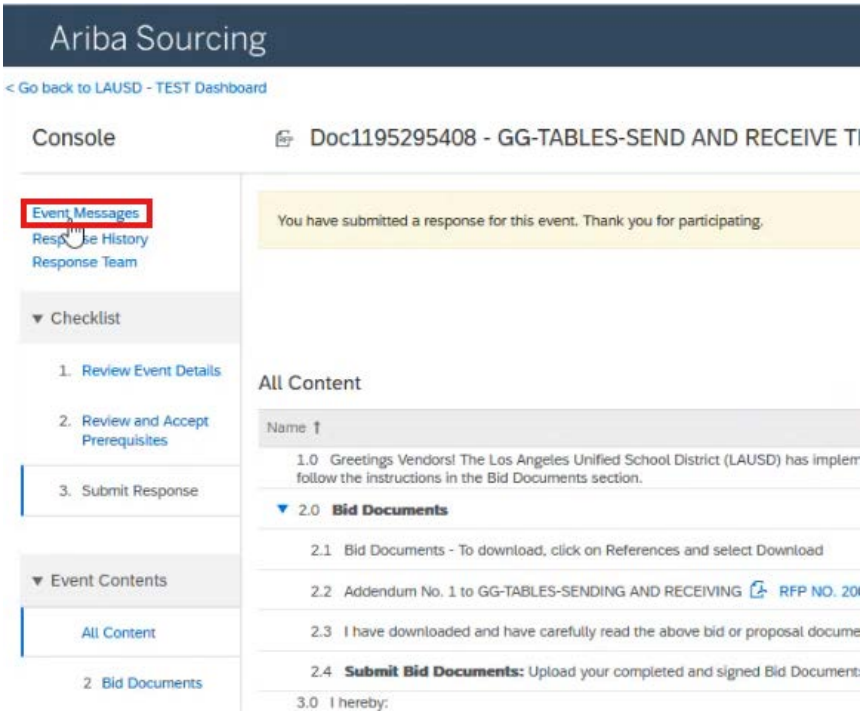
1. To compose a message to the project owner click on **Compose Message** in the event page.



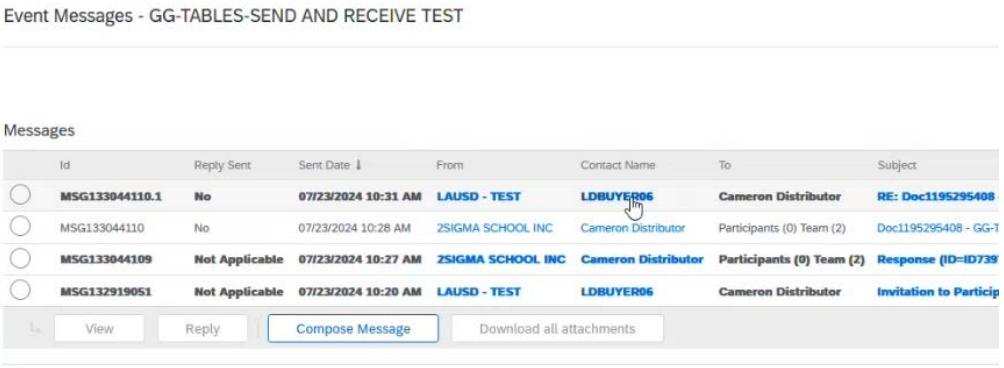
2. This will route to another page where you can compose your message and attach a file (if needed). Hit **Send** when finish.



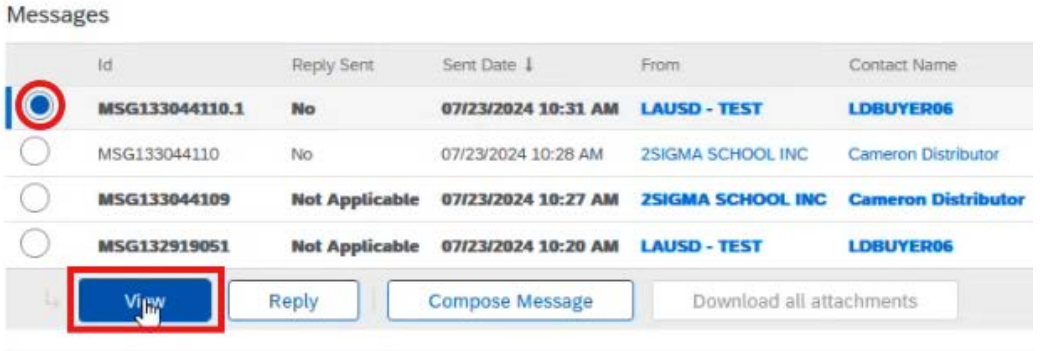
3. To see response to messages go to the open event and click on it (refer to Finding Request for Proposal on Page 1). On the left hand side, under **Console** go to **Event Messages** and click.



4. This will route to a new page where all messages pertaining to the event are visible



5. To view a message, click the circle by the message you want to view and then click **View**.



SECTION 00 2513
PRE-BID MEETING
(MANDATORY)

1.01 GENERAL

A. Bidder must attend a pre-bid meeting for comprehensive scope delineation of the Work and/or Project or be declared ineligible to bid.

B. Bidder shall visit the Project site(s) prior to the bid date in order to determine the conditions normally encountered and generally recognized as inherent in or to the Work; take measurements, perform and/or cause to be performed all quantitative tests; observe and gather all information necessary in order to determine a comprehensive bid amount.

C. Additional visits to the Project site(s) shall be coordinated through the Owner Authorized Representative (OAR).

1.02 PRE-BID MEETING

A. A pre-bid meeting will occur in the administrative office as listed below:

1. School: VERDUGO HILLS HIGH SCHOOL

2. Street: 10625 Plainview Ave.

3. City: Tujunga, CA 91042

4. Time: 10:00 AM

5. Day: Wednesday

6. Date: October 21, 2026

B. Bidder failure to attend this pre-bid meeting will result in OWNER not accepting bid.

C. Sign-in sheets will be provided for issuing any changes to Bidding Documents. Bidders must print their names legibly, sign their names, submit business cards for identification purposes, and comply with all requirements of the sign-in sheets. Bidders will not be allowed to sign-in for more than one (1) company and/or entity.

D. Bidder is responsible for ensuring that it has complete Bidding Documents, including all Addendum provided by OWNER, prior to the bid due date.

1.03. NO VERBAL CHANGES

A. Nothing said or discussed before, during, at or after the mandatory pre-bid meeting shall in any way affect bidder’s obligation to strictly comply with the Bidding Documents.

END OF SECTION

SECTION 00 3000

AVAILABLE INFORMATION

1.01 GENERAL

A. This Section sets forth the following information made available to bidder. The provided information is not part of the Contract Documents.

B. The information is provided in conjunction with, but not limited to, the provisions of Sections 4.2, 4.3, 4.5, and 4.6 of the General Conditions.

1.02 SUBSURFACE CONDITIONS

A. In the preparation of the Drawings and Specifications, ARCHITECT and/or ARCHITECT Consultants have relied upon the following reports of exploration and tests of subsurface conditions at, or contiguous, to the Project site of the Work:

1. Limited Geotechnical Investigation – Prepared by Geocon West, Inc., 500N Victory Blvd. Burbank, CA 91502, dated January 30, 2026 (95 Pages)

2. SCAQMD Rule 1466 Soil Sampling Determination – Prepared by Jonathan Colomb, Site Assessment Project Manager, Office of Environmental Health and Safety, 333 S. Beaudry Ave. 21st Floor Los Angeles, CA 90017, dated April 13, 2026 (1 Page)

3. Asbestos Engineering Assessment Work Order 39471422; COLIN ID Number: 10375279 – Prepared by Samuel Madera-Marquez, Senior Insulator/Asbestos Abatement Worker, Facilities Environmental Technical Unit, 1240 S. Naomi Ave, Los Angeles, CA 90021, dated November 17, 2025 (20 Pages).

4. OEHS Bird Nesting – Prepared by Christy Wong, CEQA Project Manager, Edward Paek, Senior CEQA Project Manager, Gwenn Godek, CEQA Advisor, Office of Environmental Health & Safety, 333 S. Beaudry Ave. 21st Floor Los Angeles, CA 90017, dated January 2026 (22 Pages)

5. DGS DSA 103-25 – Prepared by Herrick Au, Design Professional in General Responsible Charge, LAUSD, 333 S. Beaudry Ave. Los Angeles, CA 90017, Young Nam, Structural of Record, VCA Engineers, Inc., 631 S Atlantic Blvd. Monterrey Park, CA 91754, dated December 15, 2025 (23 Pages)

1.03 PHYSICAL CONDITIONS

A. In the preparation of the Drawings and Specifications, ARCHITECT and/or ARCHITECT Consultants have relied upon the following drawings, descriptions, photographs, and/or mapping of physical conditions, other than Subsurface Facility, which are at, or contiguous, to the site of the Work:

1. Listed description of any drawings, descriptions, photographs, asbestos and/or lead reports, chemical inventory listings, assessments, and/or mapping of physical conditions, other than Subsurface Facility, relating to existing surface and/or subsurface structures at, or contiguous, to the site that were utilized in preparing the Bidding Documents.

2. Asbestos and lead reports supplied by the OWNER's consultants to be identified and inserted in Division 02, under Section 02 8213 for Asbestos Abatement.

B. The information is provided for bidder investigation. OWNER does not warrant the accuracy or completeness thereof. Bidder is responsible for conducting all tests, investigations, sampling, and/or inquiries to ascertain all actual conditions that may affect the Work.

1.04 SUBSURFACE FACILITY

A. In the preparation of the Drawings and Specifications, ARCHITECT and/or ARCHITECT Consultants have relied upon the following drawings, descriptions and/or mapping of subsurface facility which are at, or contiguous, to the site of the Work:

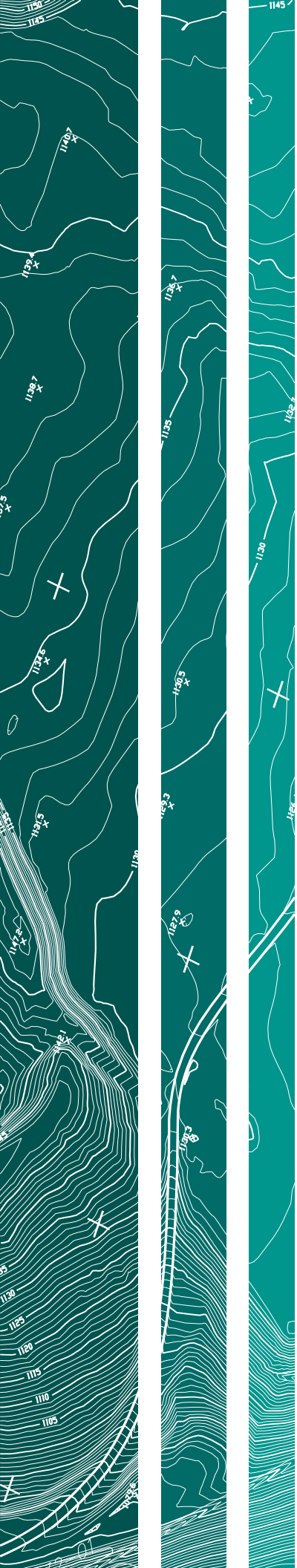
1. Listed description of any drawings (public improvements, easements, etc.), descriptions, prepared and dated by, number, and/or mapping of subsurface facility which are at, or contiguous, to the site that were utilized in preparing the Bidding Documents.

B. The information is provided for bidder investigation. OWNER does not warrant the accuracy or completeness thereof. Bidder is responsible for conducting all tests, investigations, sampling, and/or inquiries to ascertain all actual conditions that may affect the Work.

1.05 AVAILABILITY

A. Copies of these reports, assessments, drawings and other information may be examined at LAUSD, 333 S. Beaudry Ave. Los Angeles, CA 90017, (213) 241-3952 during regular business hours of ARCHITECT.

END OF SECTION



GEOCON

LIMITED GEOTECHNICAL INVESTIGATION

PROPOSED SOFTBALL AND BASEBALL FIELD SCOREBOARDS
VERDUGO HILLS HIGH SCHOOL
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

JANUARY 30, 2026
PROJECT NO. A8326-06-63G

PREPARED FOR:
Los Angeles Unified
School District
Los Angeles, California

Project No. A8326-06-63G
January 30, 2026

Los Angeles Unified School District
333 S. Beaudry Avenue, 22nd Floor
Los Angeles, CA 90029

Subject: LIMITED GEOTECHNICAL INVESTIGATION
PROPOSED SOFTBALL AND BASEBALL FIELD SCOREBOARDS
VERDUGO HILLS HIGH SCHOOL
10625 PLAINVIEW AVENUE, TUJUNGA, CALIFORNIA 91042

Ladies and Gentlemen:

In accordance with your authorization of our proposal dated October 23, 2025, we have performed a limited geotechnical investigation for the proposed softball and baseball field scoreboards within the Verdugo Hills High School campus located at 10625 Plainview Avenue in the city of Tujunga, California. The accompanying report presents the findings of our study, and our conclusions and recommendations pertaining to the geotechnical aspects of the proposed design and construction. Based on the results of our investigation, it is our opinion that the site improvements can be constructed as proposed, provided the recommendations in this report are followed and implemented during construction.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.

Rex Panoy
Senior Staff Engineer

Harry Derkalousdian
PE 79694

REGISTERED PROFESSIONAL ENGINEER
H. HARRY DERKALOUSDIAN
C 79694
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STATE OF CALIFORNIA

(email) Addressee

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LIMITED GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a limited geotechnical investigation for the proposed softball and baseball field scoreboards within the Verdugo Hills High School campus located at 10625 Plainview Avenue in the city of Tujunga, California (see Figure 1, Vicinity Map). The purpose of the investigation was to evaluate subsurface soil and geologic conditions throughout the area of proposed construction and based on conditions encountered provide conclusions and recommendations pertaining to the geotechnical aspects of design and construction.

The scope of our investigation included a site reconnaissance, a field investigation, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on December 23, 2025 by excavating two (2) 8-inch-diameter borings using a limited access hollow-stem auger drilling machine to a maximum depth of approximately 30½ feet beneath the ground surface. The approximate locations of the exploratory borings are depicted on the Site Plan (see Figure 2). A detailed discussion of the field investigation, including boring logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

If project details vary significantly from those described herein, Geocon should be contacted to determine the necessity for review and possible revision of this report.

2. SITE AND PROJECT DESCRIPTION

The subject area of proposed improvements is located within the Verdugo Hills High School campus located at 10625 Plainview Avenue in the city of Tujunga, California. The school property is bounded by Hillrose Street to the north, by Plainview Street to the east, by Summitrose Street to the south, and by Irma Street to the west. The area of improvements is located at the southwest portion of the campus between the softball and baseball fields and to the northwest of the batting cages (see Site Plan, Figure 2).

Based on the information provided by the Client, it is our understanding that the proposed site improvements will consist of the removal of an existing scoreboard and the construction of two new scoreboards that will be supported by 10- and 16-feet tall steel columns on deepened foundations. Ancillary improvements may include asphalt and/or concrete paving surrounding the area of improvements.

Due to the preliminary nature of the design at this time, loads for the proposed improvements were not available. It is anticipated that structural loads for proposed improvements will be up to 20 kips.

Once the design phase and foundation loading configuration proceed to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location, or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. BACKGROUND REVIEW

As a part of the preparation of this report, we reviewed the prior reports prepared for Verdugo Hills High School that is in close proximity to the area of proposed improvements:

> *Geotechnical Investigation, Proposed Softball Field Renovation, Verdugo Hills High School,* Geocon Project No. A8326-06-27, dated April 4, 2008.

Geocon prepared the referenced geotechnical investigation report for the renovation of the softball field at the school dated April 4, 2008. The scope of the investigation included the excavation of four 4½-inch diameter hand auger borings to depths between 2½ and 5½ feet below the ground surface. The site exploration encountered a thin layer of artificial fill consisting of medium dense, dark brown, fine-grained poorly graded sand with varying amounts of silt, gravel, and construction debris. The fill was encountered in the site explorations ranging from 1½ to 2½ feet thick and is believed to be the result of past grading activities at the site. The artificial fill is underlain by Holocene Age alluvial fan deposits consisting primarily of brown, poorly graded sand. The alluvial fan deposits are primarily medium dense and slightly moist and become denser with increased depth.

The report recommended improvements associated with the softball field renovations, such as dugouts, benches, a batting cage, bullpen, fences, and other appurtenances, to be supported on shallow conventional foundations penetrating through existing fill and deriving support in undisturbed alluvial soils. Additionally, isolated structures, such as flag poles or light poles, to be supported on drilled cast in-place concrete friction piles deriving support in the undisturbed alluvial soils. A copy of the reference report is provided in Appendix C.

4. SOIL AND GEOLOGIC CONDITIONS

Based on our field investigation and published geologic maps of the area, the site is underlain by unconsolidated Holocene Age alluvial fan deposits (Crook, et al., 1987). The alluvial fan deposits generally consist of granular soils with cobbles and boulders and extend to an approximate depth of 100 feet beneath the existing ground surface, and rest on a thick layer of Pleistocene Age deposits (Crook, et al., 1987). The soil and geologic units encountered at the site are discussed below. Stratigraphic profiles are provided on the Boring Logs in Appendix A.

4.1 Artificial Fill

Artificial fill was encountered in borings B1 and B2 to a maximum depth of 5½ feet below existing ground surface. The artificial fill generally consists of dark brown silty sand with varying amounts of gravel and cobbles that can be characterized as slightly moist and loose to medium dense to dense.

4.2 Alluvium

As summarized in Section 3 of the April 4, 2008 report, the fill is underlain by Holocene Age alluvial fan deposits or detrital sediments derived from the nearby San Gabriel Mountains. For this investigation, the alluvial fan deposits primarily consist of brown, silty sand with varying amounts of gravels and cobbles and well graded sand. The alluvial fan deposits are primarily medium dense to very dense and slightly moist and become denser with increased depth and the presence of gravel and cobbles.

5. GROUNDWATER

Based on a review of the Seismic Hazard Evaluation of the Sunland 7.5 Minute Quadrangle, Los Angeles County, California (California Division of Mines and Geology, 1998), the historically highest groundwater in the area is in excess of 40 feet beneath the ground surface. The groundwater information presented was generated from data collected in the early 1900's to present.

The Los Angeles County Department of Public Works maintains various wells in the vicinity of the school. Well No. 4994B is located downgradient approximately 0.45 mile west of the site and review of the monitoring data from this well from over the past 10 years (at the time of the investigation) indicates that the depth to groundwater has fluctuated between 58.0 and 72.3 feet beneath the ground surface. Based on current groundwater basin management practices, it is unlikely that groundwater levels will ever approach the historic high levels.

Groundwater was not encountered during the most recent exploration at the site. Based on the lack of groundwater in the most recent exploratory borings and the depth of proposed construction, static groundwater will likely not be encountered during construction and is not expected to have a detrimental effect on the project. However, it is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed (especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall), groundwater seepage levels encountered during construction may be actually higher than those encountered during our investigation. In addition, recent requirements for storm water infiltration could result in shallower seepage conditions in the region. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the *Surface Drainage* section of this report (see Section 7.12).

6. SEISMIC DESIGN CRITERIA

The seismic provisions of the 2025 California Building Code (CBC) are based on the American Society of Civil Engineers (ASCE)/Structural Engineering Institute (SEI) publication: ASCE/SEI 7-22, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures* (ASCE 7-22). For seismic design purposes, sites are classified based on the average shear wave velocity, $\bar{v}_s$, from the ground surface to a depth of 100 feet. The following table presents the Site Classifications based on ASCE 7-22.

SITE CLASSIFICATION

Site Class	Average Shear Wave Velocity, $\bar{v}_s$ (Feet/Second)
A – Hard Rock	5,000+
B – Medium Hard Rock	3,000 to 5,000
BC – Soft Rock	2,100 to 3,000
C – Very Dense Sand or Hard Clay	1,450 to 2,100
CD – Dense Sand or Very Stiff Clay	1,000 to 1,450
D – Medium Dense Sand or Stiff Clay	700 to 1,000
DE – Loose Sand or Medium Stiff Clay	500 to 700
E – Very Loose Sand or Soft Clay	Less Than 500
F – Soils Requiring Site Response Analysis	n/a

Where shear wave velocity is not directly measured at the project site, appropriate generalized correlations between shear wave velocity and standard penetration test (SPT) blow counts, Cone Penetration Test (CPT) data, shear strength, or other geotechnical parameters can be used to estimate the shear wave velocity profile. These correlations can be applied where the data extends at least 50 feet deep and where we expect the geology/soil conditions do not possess soft layers below the maximum exploration depth.

For this project, site exploration was performed to a maximum depth of 30½ feet. Therefore, the seismic design parameters shall be based on the "default" condition, which is the most critical spectral response acceleration at each period of Site Classes C, CD, and D.

We used the online ASCE Hazard Tool (https://ascehazardtool.org) to evaluate the code-based seismic design parameters in accordance with ASCE 7-22. The results are summarized in the following table. Appendix C presents the output generated by the ASCE Hazard Tool.

SEISMIC DESIGN PARAMETERS

Parameter		Value	ASCE 7-22 Reference
Site Class		Default	Table 20.1-1
S_S	MCE_R 5% Damped Spectral Response Acceleration at a Period of 0.2 Seconds for Site Class BC	2.29g	USGS Seismic Design Geodatabase
S_1	MCE_R 5% Damped Spectral Response Acceleration at a Period of 1 Second for Site Class BC	0.77g	
S_{MS}	MCE_R 5% Damped Spectral Response Acceleration at Short Periods Adjusted for Site Class	2.46g	
S_{M1}	MCE_R 5% Damped Spectral Response Acceleration at a Period of 1 Second Adjusted for Site Class	1.8g	
S_{DS}	Design, 5% Damped Spectral Response Acceleration at Short Periods	1.64g	Equation 11.4-1
S_{D1}	Design, 5% Damped Spectral Response Acceleration at a Period of 1 Second	1.2g	Equation 11.4-2
PGA_M	Maximum Considered Earthquake Geometric Mean (MCE_G) Peak Ground Acceleration	0.95g	USGS Seismic Design Geodatabase

If required for structural design, the multi-period MCE_R response spectra is provided in the ASCE Hazard Tool report presented in Appendix D and as Figure D1. The two-period MCE_R response spectra may be constructed based on ASCE 7-22 Section 11.4.5.2 using the values in the table above.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 General

7.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude the construction of the proposed improvement, provided the recommendations presented herein are followed and implemented during design and construction.

7.1.2 Up to 5½ feet of existing artificial fill was encountered during site exploration. The existing fill is believed to be the result of past grading and/or construction activities at the site. Deeper fill may exist in other areas of the site that were not directly explored. It is our opinion that the existing fill, in its present condition, is not suitable for direct support of proposed improvements in these areas. However, the existing fill, and site soils are suitable for re-use as engineered fill, provided the recommendations in the *Grading* section of this report are followed (see Section 7.4).

7.1.3 Based on these considerations, the proposed scoreboards may be supported on drilled, cast-in-place, concrete friction piles deriving support in the undisturbed, competent alluvial soils generally found at or below a depth of 5½ feet. Foundations should be deepened as necessary to penetrate through any unsuitable soils and derive support in the competent alluvial soils. All foundation excavations must be observed and approved in writing by the Geotechnical Engineer prior to placement of steel or concrete. Recommendations for the design and installation of deepened foundations are provided in sections 7.5 and 7.6 of this report.

7.1.4 Based on our onsite observations and our knowledge of the geologic setting, cobbles should be anticipated during earthwork at the subject site. Please be aware that the use of hollow-stem auger drilling equipment utilized for this investigation does not allow for the identification of the size of rock or abundance of rock being encountered or the visual observation of caving conditions since the drilling method is a small diameter cased excavation. It is recommended that the contractors bidding on excavation and pile installation for this project perform their own excavations and test borings with the intended earthwork and drilling equipment to verify the presence, abundance, and size of buried rock (cobbles and boulders), potential for caving, as well as the suitability of the proposed excavation and drilling equipment for the safe and efficient earthwork operations and installation of the pile system.

7.1.5 Where new paving is to be placed, it is recommended that all existing fill soils and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable soils may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of soil should be scarified and properly compacted for paving support. Paving recommendations are provided in the *Pavement Recommendations* section of this report (see Section 7.9).

7.1.6 Where new exterior concrete slab-on-grade is to be constructed, it is recommended that the upper 12 inches of the exposed ground be properly compacted for slab support. Any soils unintentionally disturbed during construction activities should be properly compacted. Recommendations for earthwork are provided in the Grading section of this report (see Section 7.4).

7.1.7 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding materials, fill, steel, gravel or concrete.

7.1.8 Once the design and foundation loading configuration for the proposed improvements proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Based on the final foundation loading configurations, the potential for settlement should be re-evaluated by this office.

7.1.9 Any changes in the design, location or elevation, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

7.2 Soil and Excavation Characteristics

7.2.1 The in-situ soils can be excavated with moderate effort using conventional excavation equipment. Due to the granular nature of the soils, moderate to excessive caving should be anticipated in vertical excavations. The contractor should be aware that casing will likely be required to prevent caving of foundation excavations. In addition, due to the presence of cobbles and possible boulders, the contractor should be prepared for difficult excavation conditions during earthwork activities.

7.2.2 Please be aware that the use of hollow-stem auger drilling equipment utilized for this investigation does not allow for the identification of the size of rock or abundance of rock being encountered or the visual observation of caving conditions since the drilling method is a small diameter cased excavation. It is recommended that the contractors bidding on excavation and pile installation for this project perform their own excavations with the intended earthwork equipment to verify the presence, abundance, and size of buried rock (cobbles and boulders), potential for caving, as well as the suitability of the proposed excavation equipment for the safe and efficient earthwork operations.

7.2.3 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of existing adjacent improvements.

7.2.4 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping or shoring. Excavation recommendations are provided in the *Temporary Excavations* section of this report (see Section 7.10).

7.2.5 The upper five feet of existing site soils encountered during the investigation are considered to have a “very low” expansive potential (EI = 0) and are classified as “non-expansive” in accordance with the 2025 California Building Code (CBC) Section 1803.5.3. The recommendations presented herein assume that foundations and slabs will derive support in these materials.

7.3 Minimum Resistivity, pH, and Water-Soluble Sulfate

7.3.1 Potential of Hydrogen (pH) and resistivity testing, as well as chloride content testing were performed on the upper five feet of onsite soil to generally evaluate the corrosion potential to surface utilities. The tests were performed in accordance with California Test Method Nos. 643 and 422, and indicate that the soils are considered “moderately corrosive” with respect to corrosion of buried ferrous metals on site. The results are presented in Appendix B (Figure B12) and should be considered for the design of underground structures. Due to the corrosive potential of the soils, it is recommended that PVC, ABS, or other approved plastic piping be utilized in lieu of cast-iron when in direct contact with the site soils.

7.3.2 Laboratory tests were performed on the upper five feet of the on-site soil to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B12) and indicate that the on-site soil possesses a sulfate exposure class of "S0" to concrete structures as defined by 2025 CBC and ACI 318 Chapter 19.

7.3.3 Geocon West, Inc. does not practice in the field of corrosion engineering and mitigation. If corrosion-sensitive improvements are planned, it is recommended that a corrosion engineer be retained to evaluate corrosion test results and incorporate the necessary precautions to avoid premature corrosion of buried metal pipes and concrete structures in direct contact with the soils.

7.4 Grading

7.4.1 Grading is anticipated to include excavation for proposed foundations and utility trenches, subgrade preparation for asphalt paving and/or concrete slabs-on-grade, and backfill for utility trenches.

7.4.2 A preconstruction conference should be held at the site prior to the beginning of excavation operations, with the owner, contractor, civil engineer, geotechnical engineer, and building official in attendance. Special soil handling requirements can be discussed at that time.

7.4.3 If required, grading should commence with the removal of all existing vegetation and existing improvements from the area to be graded. Deleterious debris, such as wood and root structures, should be exported from the site and should not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein. Once a clean excavation bottom has been established, it must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.).

7.4.4 Earthwork should be observed, and compacted fill tested by representatives of Geocon West, Inc. The existing fill and alluvial soil encountered during exploration is suitable for re-use as engineered fill, provided any encountered oversize material (greater than 6 inches) and any encountered deleterious debris are removed. Additionally, the site soils have little to no cohesion and are prone to excessive caving. The contractor should be prepared for difficult excavation conditions. The presence of these materials and their impact on construction methods and equipment selection should be considered prior to construction.

7.4.5 **If the onsite soils are utilized as engineered fill, screening of the earth materials will likely be required to remove oversized (greater than 6 inches) rock, prior to placement and compaction**. Generation of oversized material (greater than 6 inches) should be anticipated. The contractor should be prepared for difficult excavation conditions. The presence of these materials and their impact on construction methods and equipment selection should be considered by both the owner and contractor prior to construction.

7.4.6 Please be aware that the use of hollow-stem auger drilling equipment utilized for this investigation does not allow for the identification of the size of rocks being encountered or the visual observation of caving conditions since the drilling method is a small diameter cased excavation. It is recommended that the contractor bidding on excavation for this project perform their own test excavations utilizing the intended excavation equipment to verify the presence and size of buried rock (cobble and boulders), potential for caving, as well as the suitability of the proposed equipment to perform for safe and efficient earthwork activities.

7.4.7 It is recommended that the deepened foundations penetrate through the existing fill and derive support exclusively in the underlying competent, undisturbed alluvial soils generally found at and below a depth of 5½ feet. The presence of existing artificial fill in proposed foundation excavations will be field verified by Geocon during construction activities. Foundations should be deepened as necessary to penetrate through the existing artificial fill at the direction of the Geotechnical Engineer. All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.4.8 All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned to near optimum moisture content, and properly compacted to a minimum 90 percent of the maximum dry density in accordance with ASTM D 1557 (latest edition).

7.4.9 Although not anticipated for this project, all imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site. Import fill should consist of the characteristics presented in the table below.

SUMMARY OF IMPORT FILL RECOMMENDATIONS

Soil Characteristic	Values
Expansion Potential	" Low" (Expansion Index of 20 or less)
Particle Size	Maximum Dimension Less Than 6 Inches
	Free of Debris
Corrosivity	Less Detrimental Than Existing Onsite Soils

7.4.10. Where new paving is to be placed, it is recommended that all existing fill and soft alluvium be excavated and properly compacted for paving support. As a minimum, the upper 12 inches of soil should be scarified, moisture conditioned to optimum moisture content, and compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Paving recommendations are provided in the *Pavement Recommendations* section of this report (see Section 7.10).

7.4.11 Utility trenches should be properly backfilled in accordance with the following requirements. The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least 1 foot over the pipe, and the bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). The use of gravel is not acceptable unless used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of minimum 2-sack slurry as backfill is also acceptable. Prior to placing any bedding materials or pipes, the excavation bottom must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.4.12 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding materials, fill, steel, gravel, or concrete.

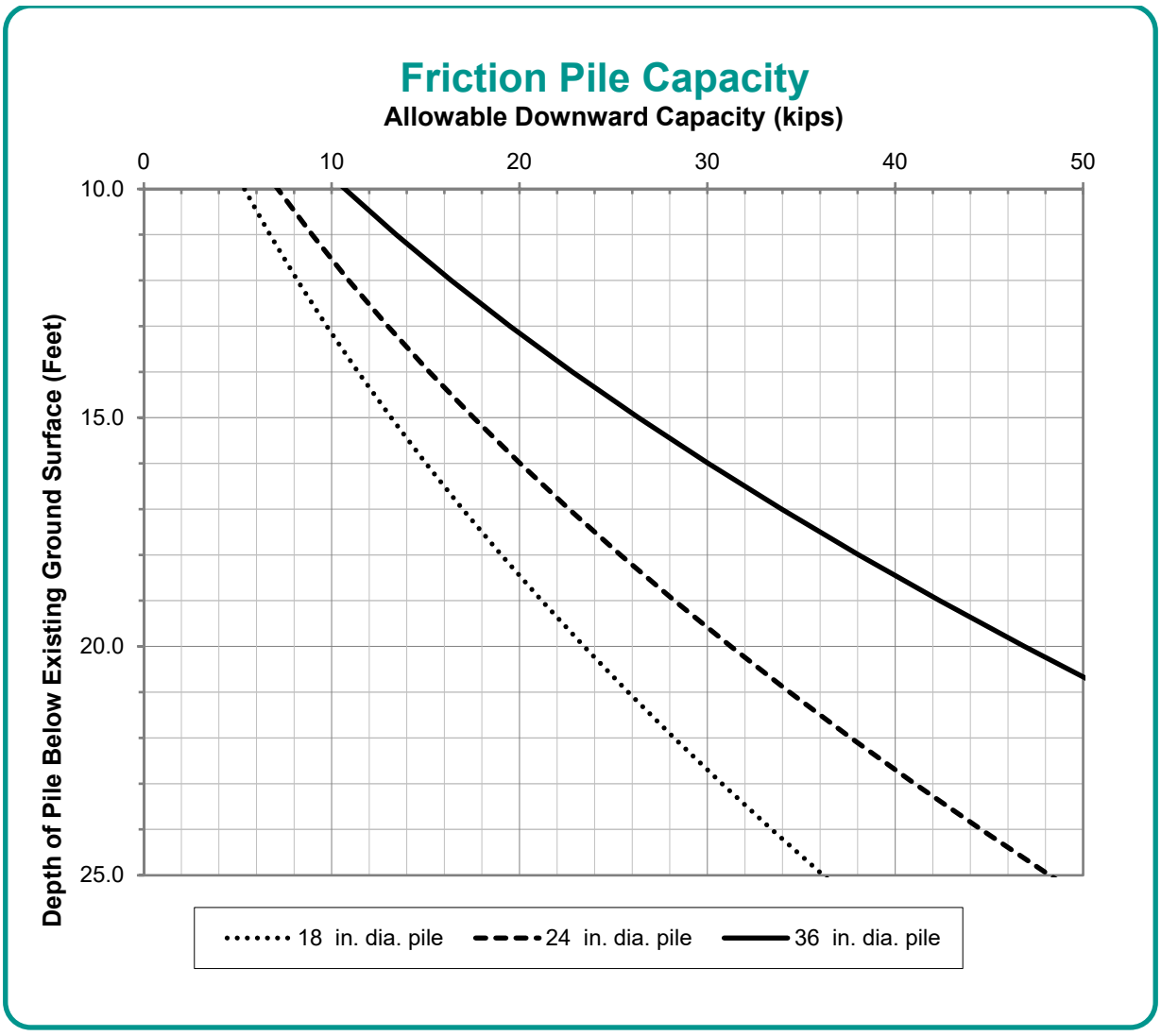
7.5 Deepened Foundation Design – Friction Piles

7.5.1 The proposed scoreboards may be supported on drilled, cast-in-place, concrete friction piles embedded a minimum of 4 feet into the undisturbed, competent alluvial soils generally found at and below a depth of 5½ feet. For preliminary design purposes, 18-, 24-, and 36-inch diameter drilled cast-in-place friction piles have been evaluated. The allowable axial capacities for embedment below the ground surface are provided in the Friction Pile Capacity chart in this section. The axial capacities are based on skin friction only; end-bearing capacity is not being considered. Where piles penetrate through unsuitable fill materials at the surface, these materials should not be considered in the contribution of the pile capacity. Where not protected by pavement, the upper two feet of soil should be ignored when calculating axial and lateral capacity.

7.5.2 Uplift capacity may be assumed to be ½ the allowable downward capacity. The pile capacities indicated above are for the total of dead and frequently applied live loads and may be increased by one-third for short-duration loading, which includes the effects of transient wind or seismic forces.

7.5.3 The maximum expected static settlement for deepened foundations supported in undisturbed alluvium is estimated to be less than ½ inch. The majority of settlement is anticipated to occur on initial application of loading during construction.

7.5.4 If piles are spaced at least 3 diameters on center, no reduction in axial capacity is considered necessary for group effects. If pile spacing is closer than three pile diameters, an evaluation for group effects including appropriate reductions should be incorporated into the pile design based on pile dimension, spacing, and the direction of loading.



7.5.5 All drilled pile excavations should be continuously observed by personnel of this firm to verify adequate penetration into the recommended bearing materials. The capacity presented is based on the strength of the soils encountered during this investigation. The compressive and tensile strength of the pile sections should be checked to verify the structural capacity of the piles.

7.6 Deepened Foundation Installation

7.6.1 Casing will be required since caving is expected in the granular soil layers during deep drilled excavation. The contractor should have casing available and should be prepared to use it. If casing is used, extreme care should be employed so that the pile is not pulled apart as the casing is withdrawn. At no time should the distance between the surface of the concrete and the bottom of the casing be less than 5 feet. Continuous observation of the drilling and pouring of the piles by the Geotechnical Engineer (a representative of Geocon West, Inc.) is required.

7.6.2 Friction piles do not require the complete removal of all loose earth materials from the bottom of the excavation since the end-bearing capacity is not being considered for design. However, a cleanout of the excavation bottom will be required.

7.6.3 Groundwater was not encountered during the most recent exploration at the site. Based on the depth of groundwater in our exploration, the reported historic high groundwater levels in the immediate area, and the scope of the proposed site improvements, static groundwater is neither expected to be encountered during construction. However, should groundwater or seepage be encountered during construction, pile excavations with more than 6 inches of standing water level require the use of a tremie to place the concrete into the bottom of the hole. A tremie shall consist of a water-tight tube, with a hopper at the top. The tube shall be equipped with a device that will close the discharge end and prevent water from entering the tube while it is being charged with concrete. The tremie shall be supported so as to permit free movement of the discharge end over the entire top surface of the work and to permit rapid lowering when necessary to retard or stop the flow of concrete. The discharge end shall be closed at the start of the work to prevent water entering the tube and shall be entirely sealed at all times, except when the concrete is being placed. The tremie tube shall be kept full of concrete. The flow shall be continuous until the work is completed, and the resulting concrete seal shall be monolithic and homogeneous. The tip of the tremie tube shall always be kept about 5 feet below the surface of the concrete and definite steps and safeguards should be taken to ensure that the tip of the tremie tube is never raised above the surface of the concrete.

7.6.4 A special concrete mix should be used for concrete to be placed below water. The design shall provide for concrete with a strength of 1,000 psi over the initial job specification. An admixture that reduces the problem of segregation of paste/aggregates and dilution of paste shall be included. The slump shall be commensurate to any research report for the admixture, provided that it shall also be the minimum for a reasonable consistency for placing when water is present. Extreme care should be employed so that the pile is not pulled apart as the casing is withdrawn. At no time should the distance between the surface of the concrete and the bottom of the casing be less than 5 feet. Continuous observation of the drilling and pouring of the piles by a representative of this firm is required.

7.6.5 Closely spaced piles should be drilled and filled alternately, with the concrete permitted to set at least eight hours before drilling an adjacent hole. Pile excavations should be filled with concrete as soon after drilling and inspection as possible, the holes should not be left open overnight unless approved by the Geotechnical Engineer.

7.7 Lateral Design

7.7.1 Resistance to lateral loading may be provided by passive earth pressure acting against the sides of pile foundations

7.7.2 Passive earth pressure for the sides of pile foundations poured against undisturbed alluvial soils may be computed as an equivalent fluid having a density of 280 pounds per cubic foot (pcf) with a maximum earth pressure of 2,800 psf. Where the upper portions of the piles are poured against the existing fill soils, the passive value should be reduced to 150 pounds per cubic foot (pcf). For design purposes, this may be assumed to be the upper 5½ feet of existing fill soils. Where not protected by pavement, the upper 2 feet of soil should be ignored when calculating lateral capacity.

7.7.3 If piles are spaced at least at least 8 diameters on-center when loaded in-line and at least 3 diameters on-center when loaded in parallel, no reduction in lateral capacity is considered necessary for group effects. If so spaced, piles may be considered isolated, and the allowable passive pressure may be doubled based on isolated pile conditions. If pile spacing is closer, an evaluation for group effects including appropriate reductions should be incorporated into the pile design based on pile dimension, spacing, and the direction of loading.

7.7.4 To develop the full passive lateral value, provisions should be implemented to ensure firm contact between the piles and the underlying soils. A one-third increase in the passive value may be used for wind or seismic loads. Piles may be assumed fixed at an embedment depth of 7 feet below the existing ground surface.

7.8 Exterior Concrete Slabs-on-Grade

7.8.1 Exterior concrete slabs-on-grade subject to vehicle loading should be designed in accordance with the recommendations in the *Pavement Recommendations* section of this report (Section 7.10).

7.8.2 Exterior concrete slabs-on-grade for walkways or flatwork, not subject to vehicle loading, should be a minimum of 4 inches thick and minimum slab reinforcement should consist of No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Steel reinforcing should be positioned vertically near the slab midpoint. Crack control joints should be spaced at intervals not greater than 10 feet and should be constructed using saw-cuts or other methods as soon as practical following concrete placement. Crack control joints should extend a minimum depth of one-fourth the slab thickness. Construction joints should be designed by the project structural engineer.

7.8.3 Slabs-on-grade at the ground surface that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder placed directly beneath the slab. The vapor retarder and acceptable permeance should be specified by the project architect or developer based on the type of floor covering that will be installed. The vapor retarder design should be consistent with the guidelines presented in Section 9.3 of the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06) and should be installed in general conformance with ASTM E 1643 (latest edition) and the manufacturer's recommendations. A minimum thickness of 15 mils extruded polyolefin plastic is recommended; vapor retarders which contain recycled content or woven materials are not recommended. The vapor retarder should have a permeance of less than 0.01 perms demonstrated by testing before and after mandatory conditioning. The vapor retarder should be installed in direct contact with the concrete slab with proper perimeter seal. If the California Green Building Code requirements apply to this project, the vapor retarder should be underlain by 4 inches of clean aggregate. It is important that the vapor retarder be puncture resistant since it will be in direct contact with angular gravel. As an alternative to the clean aggregate suggested in the Green Building Code, it is our opinion that the concrete slab-on-grade may be underlain by a vapor retarder over 4 inches of clean sand (sand equivalent greater than 30), since the sand will serve a capillary break and will minimize the potential for punctures and damage to the vapor barrier.

7.8.4 For seismic design purposes, a coefficient of friction of 0.4 may be utilized between concrete slabs and subgrade soils without a moisture barrier, and 0.15 for slabs underlain by a moisture barrier.

7.8.5 The moisture content of the slab subgrade should be maintained and sprinkled as necessary to maintain a moist condition as would be expected in any concrete placement.

7.8.6 The recommendations of this report are intended to reduce the potential for cracking of slabs due to settlement. However, even with the incorporation of the recommendations presented herein, foundations and slabs-on-grade may exhibit some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

7.9 Pavement Recommendations

7.9.1 Where new paving is to be placed, it is recommended that all existing fill and soft alluvium materials be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing artificial fill and soft alluvium in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvium material may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of paving subgrade should be scarified, moisture conditioned to near optimum moisture content, and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).

7.9.2 The following pavement sections are based on an assumed R-Value test result of 35. If necessary, once site grading activities are complete, R-Value testing can be performed to confirm the properties of the soils serving as paving subgrade prior to placing pavement.

7.9.3 The Traffic Indices listed below are estimates. Geocon does not practice in the field of traffic engineering. The actual Traffic Index for each area should be determined by the project civil engineer. If pavement sections for Traffic Indices other than those listed below are required, Geocon should be contacted to provide additional recommendations. Pavement thicknesses were determined following procedures outlined in the *California Highway Design Manual* (Caltrans) for pavements with a 20-year design life. It is anticipated that the majority of traffic will consist of automobile and large truck traffic.

PRELIMINARY PAVEMENT DESIGN SECTIONS

Location	Estimated Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
Playground	3.0	3.0	3.0
Automobile Parking and Drive Aisles	4.0	3.0	4.0
Trash Truck & Fire Lanes	7.0	4.0	9.0

7.9.4 Asphalt concrete should conform to Section 203-6 of the Greenbook. Aggregate base materials should be approved by LAUSD and conform to LAUSD standard specifications. The use of Crushed Miscellaneous Base (CMB) is not acceptable.

7.9.5 Unless specifically designed and evaluated by the project structural engineer, where exterior concrete paving will be utilized for support of vehicles, it is recommended that the concrete be a minimum of 6 inches of concrete reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Concrete paving supporting vehicular traffic should be underlain by a minimum of 4 inches of aggregate base and a properly compacted subgrade. The subgrade and base material should be compacted to 95 percent relative compaction as determined by ASTM Test Method D 1557 (latest edition).

7.9.6 The performance of pavements is highly dependent upon providing positive surface drainage away from the edge of pavements. Ponding of water on or adjacent to the pavement will likely result in saturation of the subgrade materials and subsequent cracking, subsidence and pavement distress. If planters are planned adjacent to paving, it is recommended that the perimeter curb be extended at least 12 inches below the bottom of the aggregate base to minimize the introduction of water beneath the paving.

7.10 Temporary Excavations

7.10.1 Excavations of up to 15 feet in height may be required during foundation installation and construction. The excavations are expected to expose artificial fill and alluvial soils, which are subject to excessive caving where granular soils are encountered. Due to the presence of cobbles, the contractor should be prepared for difficult excavation conditions. Vertical excavations up to 5 feet in height may be attempted where not surcharged; however, the contractor should be prepared for caving, sloughing, and raveling in open excavations.

7.10.2 Vertical excavations greater than 5 feet or where surcharged by existing structures will require sloping or shoring measures in order to provide a stable excavation. Where sufficient space is available, temporary unsurcharged embankments could be sloped back at a uniform 1½:1 slope gradient or flatter up to a maximum of 10 feet in height. A uniform slope does not have a vertical portion.

7.10.3 Where temporary construction slopes are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary construction slopes are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. The soils exposed in the cut slopes should be inspected during excavation by our personnel so that modifications of the slopes can be made if variations in the soil conditions occur. All excavations should be stabilized within 30 days of initial excavation.

7.11 Surcharge from Adjacent Structures and Improvements

7.11.1 Additional pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses.

7.11.2 It is recommended that line-load surcharges from adjacent wall footings, use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$For\ {}^{x}/_{H} \leq 0.4$$

$$\sigma_H(z) = \frac{0.20 \times \left(\frac{z}{H}\right)}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

and

$$For\ {}^{x}/_{H} > 0.4$$

$$\sigma_H(z) = \frac{1.28 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

where *x* is the distance from the face of the excavation or wall to the vertical line-load, *H* is the distance from the bottom of the footing to the bottom of excavation or wall, *z* is the depth at which the horizontal pressure is desired, Q_L is the vertical line-load and $\sigma_H(z)$ is the horizontal pressure at depth *z*.

7.11.3 It is recommended that vertical point-loads, from construction equipment outriggers or adjacent building columns use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$For\ {}^{x}/_{H} \leq 0.4$$

$$\sigma_H(z) = \frac{0.28 \times \left(\frac{z}{H}\right)^2}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

and

$$For\ {}^{x}/_{H} > 0.4$$

$$\sigma_H(z) = \frac{1.77 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)^2}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

then

$$\sigma'_H(z) = \sigma_H(z) cos^2(1.1\theta)$$

where *x* is the distance from the face of the excavation/wall to the vertical point-load, *H* is distance from the outrigger/bottom of column footing to the bottom of excavation, *z* is the depth at which the horizontal pressure is desired, *Qp* is the vertical point-load, $\sigma_H(z)$ is the horizontal pressure at depth *z*, *Θ* is the angle between a line perpendicular to the excavation/wall and a line from the point-load to location on the excavation/wall where the surcharge is being evaluated, and $\sigma_H(z)$ is the horizontal pressure at depth *z*.

7.12 Surface Drainage

7.12.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.

7.12.2 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2025 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains, and scuppers is not recommended onto unprotected soils within 5 feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.

7.12.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures.

7.12.4 Landscaping planters immediately adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Either a subdrain, which collects excess irrigation water and transmits it to drainage structures, or impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, it is recommended that consideration be given to providing a cutoff wall along the edge of the pavement that extends at least 12 inches below the base material.

7.13 Plan Review

7.13.1 Grading, foundation, and, if necessary, shoring plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

2. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon Incorporated should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon Incorporated.

3. This report is issued with the understanding that it is the responsibility of the owner or his representative to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

4. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

LIST OF REFERENCES

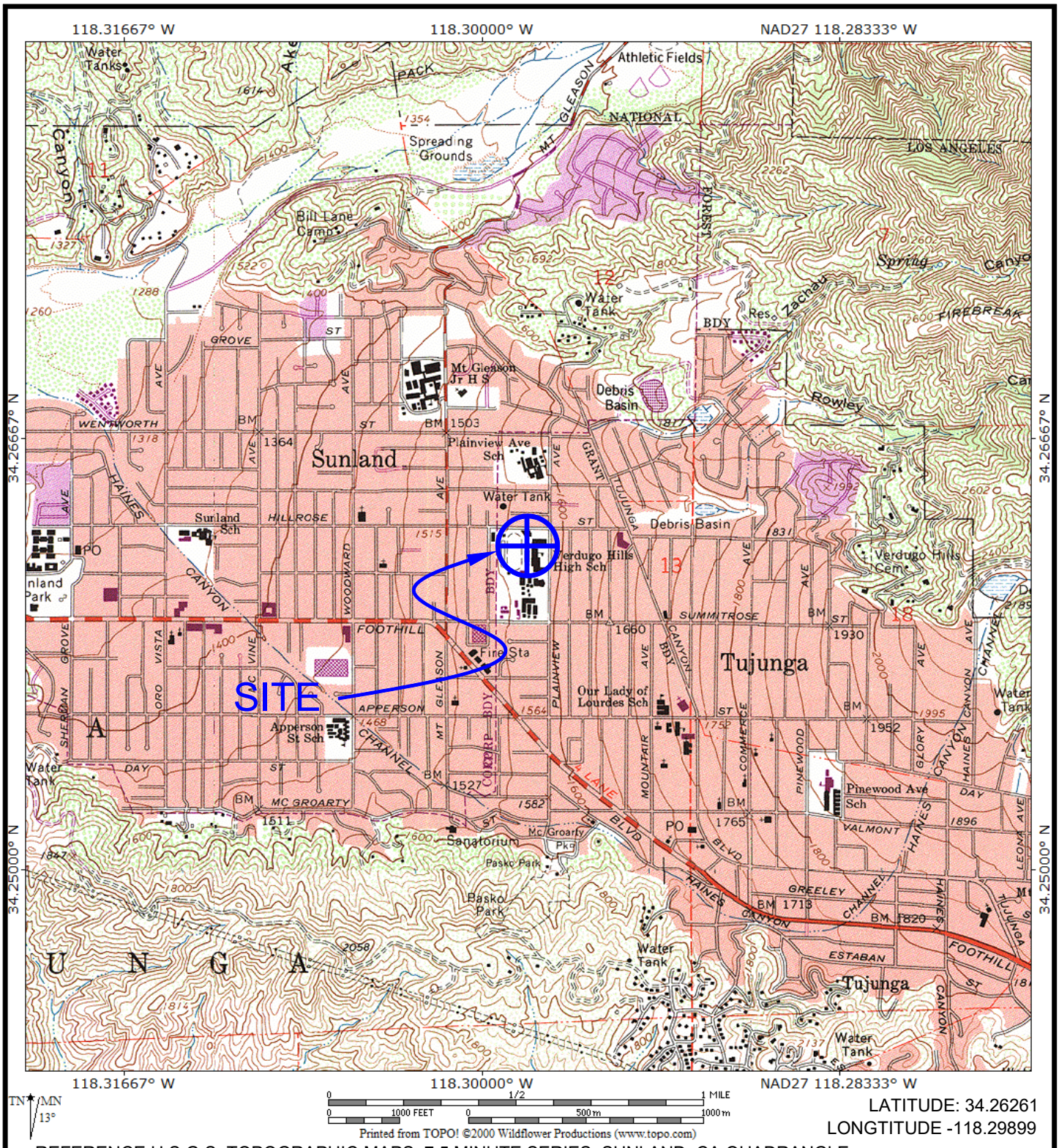
1. *California Division of Mines and Geology, 1999; State of California Seismic Hazard Zones, Sunland Quadrangle, Official Map, Released: March 25, 1999;*

2. California Division of Mines and Geology, 1979, State of California Special Studies Zones, Sunland Quadrangle, Revised Official Map, Effective: January 1, 1979;

3. California Geological Survey, 1998, Seismic Hazard Evaluation of the Sunland 7.5- Minute Quadrangle, Los Angeles County, California: Division of Mines and Geology, Open-File Report 98-08;

4. USGS Earthquake Hazard Toolbox, https://earthquake.usgs.gov/nshmp/, accessed October 2025;

5. ASCE Hazard Tool, https://ascehazardtool.org/ , accessed October 2025.



REFERENCE:U.S.G.S. TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES, SUNLAND, CA QUADRANGLE

GEOCON WEST, INC.

ENVIRONMENTAL GEOTECHNICAL MATERIALS
500 N. VICTORY BLVD. - BURBANK, CA 91502
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DRAFTED BY: RP | CHECKED BY: GAK

VICINITY MAP

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

JAN. 2026 | PROJECT NO. A8326-06-63G | FIG. 1





NO SCALE

LEGEND

B2 — Number and Location of Boring

B4 — Number and Location of Prior Borings (Geocon - April 2008)

Area of Proposed Site Improvements

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SITE PLAN

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

JAN. 2026	PROJECT NO. A8326-06-63G	FIG. 2

LIMITED GEOTECHNICAL INVESTIGATION 00 3000-29

APPENDIX A

APPENDIX A
FIELD INVESTIGATION

The site was explored on December 23, 2025 by excavating two (2) 8-inch-diameter borings using a truck mounted hollow-stem auger drilling machine to a maximum depth of approximately 30½ feet beneath the ground surface. Representative and relatively undisturbed samples were obtained by driving a 3-inch, O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a slide hammer. The California Modified Sampler was equipped with 1-inch by 2⅜-inch diameter brass sampler rings to facilitate soil removal and testing. Bulk sample were also obtained.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). The logs of the borings are presented on Figures A1 and A2. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the logs were revised based on subsequent laboratory testing. The approximate locations of the borings are shown on Figure 2.

GEOCON

Soil Boring Number: B-1

PROJECT NAME Verdugo Hills HS
LOGGED BY NP
PROJECT NUMBER A8326-06-63G
LATITUDE / LONGITUDE 34.2606, -118.2995
BORING DATE 12/23/2025
FIGURE NUMBER A1
DEPTH 30.5'
SURFACE ELEVATION N/A
LOCATION 10625 Plainview Ave, Tujunga, CA
CLIENT NAME LAUSD
DRILLING FIRM -
COMPLETED 12/23/2025
EQUIPMENT Limited Access Rig -
METHOD Cal-Mod
BORING DIAMETER 8 in
HAMMER TYPE Auto
NOTES -
HAMMER WEIGHT / DROP 140 lb / 30 in

Depth (ft)	Water Levels	Graphic Log	USCS	Material Description	Bulk	Driven	Sample Number	Blow Counts/6"	Dry Density (pcf)	Moisture Content (%)
0			Fill	**ARTIFICIAL FILL** (**AC: 3.5" BASE: NONE**) **Silty SAND**, medium dense, slightly moist, dark brown, fine-grained, some gravel and cobbles	X		BULK: 0-5'			
2										
4				cobbles		■	B1@3'	9 11 19	116.2	9.3
6			SM	**ALLUVIUM** **Silty SAND w/ Gravel**, medium dense, slightly moist, light brown, fine-grained						
8						■	B1@7'	7 24 23	119.6	3.5
10				dense, trace cobbles		■	B1@10'	20 32 40	123.2	6.5
12				very dense						
14						■	B1@13'	25 40 50/3"	121.2	6.0
16										
18				reddish brown with oxidation mottles		■	B1@17'	34 50/6"	124.7	5.7

DRAFT

The log of subsurface conditions shown applies only to the specific location at the date indicated and might not represent subsurface conditions at other locations or times. The stratigraphy presented represents the approximate boundary between soil types; these transitions could be gradual.

GEOCON

SOIL BORING: B-1

Depth (ft)	Water Levels	Graphic Log	USCS	Material Description	Bulk	Driven	Sample Number	Blow Counts/6"	Dry Density (pcf)	Moisture Content (%)
22			SM	**Silty SAND**, medium dense, slightly moist, dark brown, fine-grained		■	B1@21'	14 15 16	119.5	15.5
24			SW	**SAND**, well-graded, dense, slightly moist, light brown, fine- to medium-grained, some oxidation staining, trace gravel		■	B1@25'	22 29 40	116.8	3.0
26										
28										
30				trace interbedded poorly graded sand		■	B1@30'	50/6"	122.8	4.6
32				Total depth of boring: 30.5 feet Fill to 5.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. Concrete patched.						
34										
36										
38										

DRAFT

The log of subsurface conditions shown applies only to the specific location at the date indicated and might not represent subsurface conditions at other locations or times. The stratigraphy presented represents the approximate boundary between soil types; these transitions could be gradual.

GEOCON

Soil Boring Number: B-2

PROJECT NAME Verdugo Hills HS
LOGGED BY NP
PROJECT NUMBER A8326-06-63G
LATITUDE / LONGITUDE 34.2606, -118.2995
BORING DATE 12/23/2025
FIGURE NUMBER A2
DEPTH 20.5'
SURFACE ELEVATION N/A
LOCATION 10625 Plainview Ave, Tujunga, CA
CLIENT NAME LAUSD
DRILLING FIRM -
COMPLETED 12/23/2025
EQUIPMENT Limited Access Rig -
METHOD Cal-Mod
BORING DIAMETER 8 in
HAMMER TYPE Auto
NOTES -
HAMMER WEIGHT / DROP 140 lb / 30 in

Depth (ft)	Water Levels	Graphic Log	USCS	Material Description	Bulk	Driven	Sample Number	Blow Counts/6"	Dry Density (pcf)	Moisture Content (%)
0			Fill	**ARTIFICIAL FILL** **Silty SAND**, dense, slightly moist, dark brown, fine-grained, trace cobbles	X		BULK: 0-5'			
2				some cobbles		■	B2@3'	20 29 38	127.0	3.0
4										
6			SM	**ALLUVIUM** **Silty SAND**, dense, slightly moist, brown, fine-grained		■	B2@6'	28 40 48	116.0	8.4
8				some cobbles						
10				very dense		■	B2@9'	50/6"	107.0	4.7
12			SM	**Silty SAND w/ Gravel**, dense, slightly moist, brown, fine-grained		■	B2@12'	20 32 40	123.3	5.6
14										
16				very dense		■	B2@15'	28 40 50/3"	122.3	6.0
18										

DRAFT

The log of subsurface conditions shown applies only to the specific location at the date indicated and might not represent subsurface conditions at other locations or times. The stratigraphy presented represents the approximate boundary between soil types; these transitions could be gradual.

GEOCON

SOIL BORING: B-2

Depth (ft)	Water Levels	Graphic Log	USCS	Material Description	Bulk	Driven	Sample Number	Blow Counts/6"	Dry Density (pcf)	Moisture Content (%)
			SM			■	B2@20'	19 30 39	112.0	8.6
				Total depth of boring: 20.5 feet Fill to 5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped.						
22										
24										
26										
28										
30										
32										
34										
36										
38										

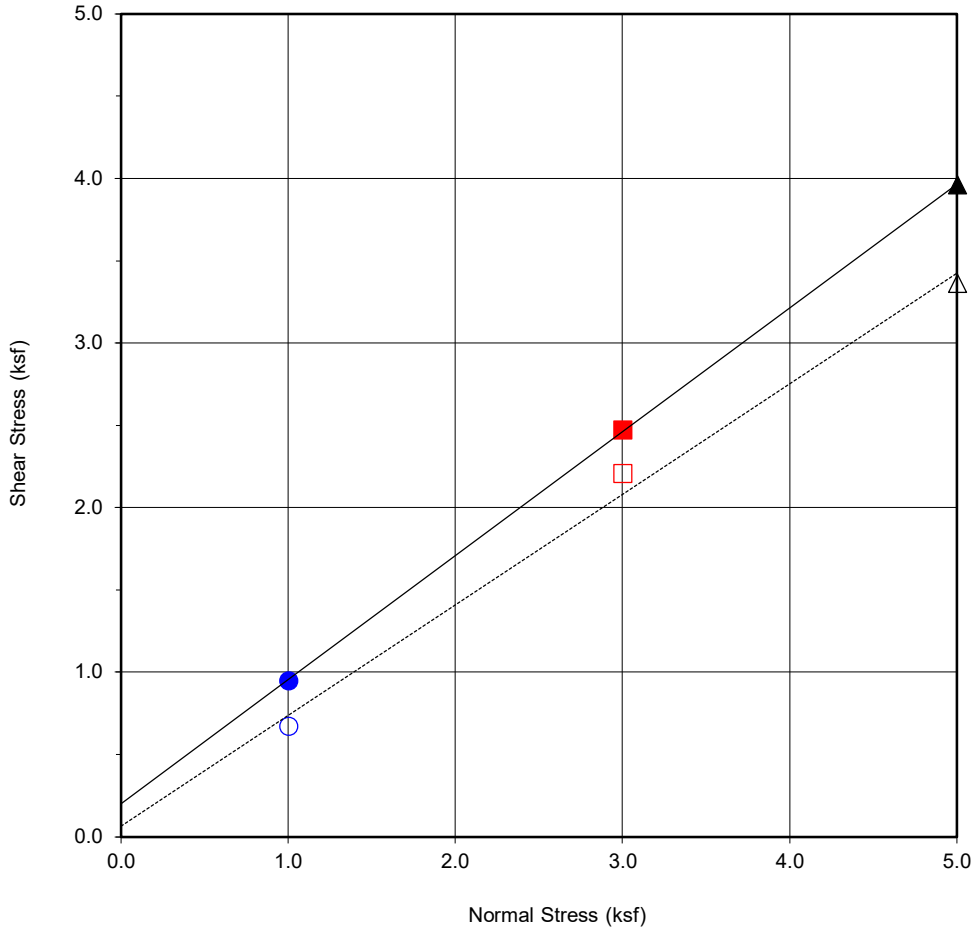
DRAFT

The log of subsurface conditions shown applies only to the specific location at the date indicated and might not represent subsurface conditions at other locations or times. The stratigraphy presented represents the approximate boundary between soil types; these transitions could be gradual.

APPENDIX B

APPENDIX B
LABORATORY TESTING

We performed laboratory tests in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM) or other suggested procedures. We tested selected soil samples for in-place dry density/moisture content, expansion index, compaction characteristics, consolidation, corrosivity, and direct shear strength. The in-place dry density and moisture content of the samples tested are presented on the boring logs, Appendix A.



Boring No.	**B1**
Sample No.	**B1@3'**
Depth (ft)	**3'**
Sample Type:	Ring

Soil Identification:		
Silty Sand (SM) - Artificial Fill		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	201	37
Ultimate	64	34

Normal Stress (kip/ft²)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.95	■ 2.47	▲ 3.96
Shear Stress @ End of Test (ksf)	○ 0.67	□ 2.21	△ 3.36
Deformation Rate (in./min.)	0.005	0.005	0.005
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	9.3	9.4	9.5
Initial Dry Density (pcf)	111.6	110.8	112.0
Initial Degree of Saturation (%)	49.2	48.7	51.0
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	17.2	17.0	16.5

GEOCON

DIRECT SHEAR TEST RESULTS

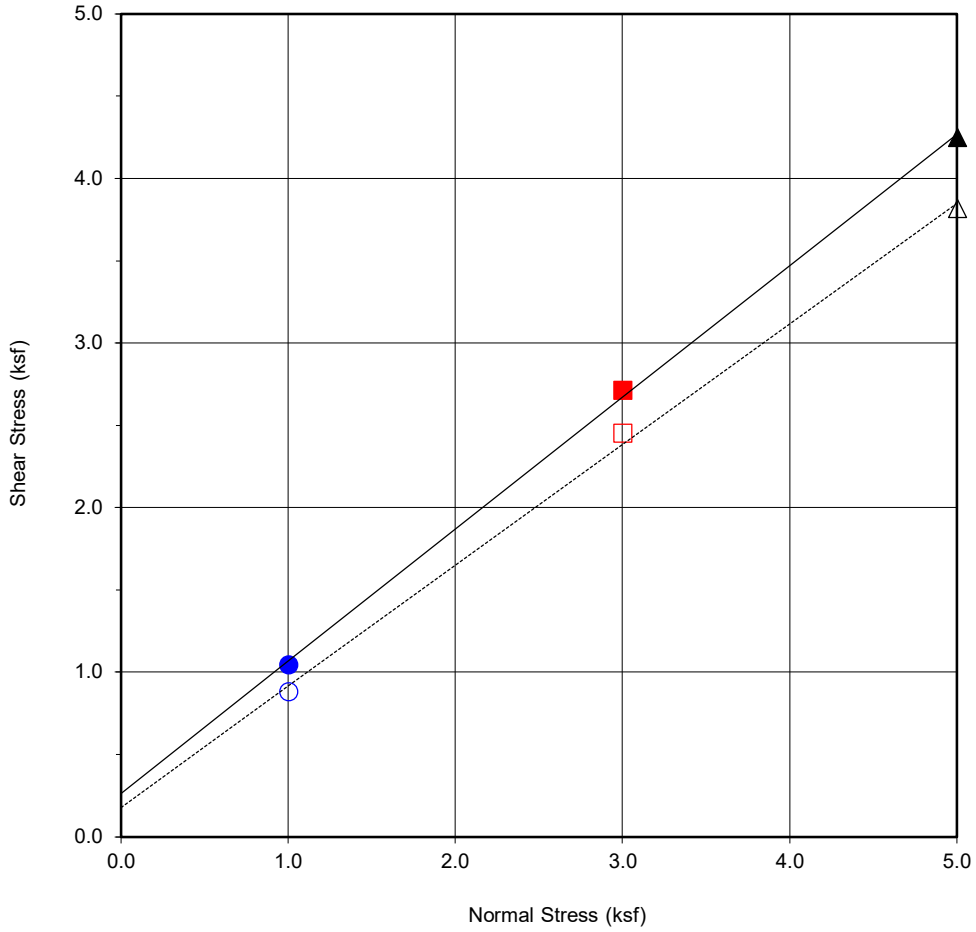
Consolidated Drained ASTM D-3080

Checked by: RP

Project No.: A8326-06-63G

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TUJUNGA, CALIFORNIA

January 2026 Figure B1



Boring No.	**B1**
Sample No.	**B1@10'**
Depth (ft)	**10'**
Sample Type:	Ring

Soil Identification:		
Silty Sand w/ Gravel (SM)		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	264	39
Ultimate	180	36

Normal Stress (kip/ft²)	1	3	5
Peak Shear Stress (kip/ft²)	● 1.04	■ 2.71	▲ 4.25
Shear Stress @ End of Test (ksf)	○ 0.88	□ 2.45	△ 3.82
Deformation Rate (in./min.)	0.005	0.005	0.005
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	6.5	7.5	8.3
Initial Dry Density (pcf)	118.9	116.2	112.7
Initial Degree of Saturation (%)	42.2	44.8	45.4
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	13.2	14.0	15.1

GEOCON

DIRECT SHEAR TEST RESULTS

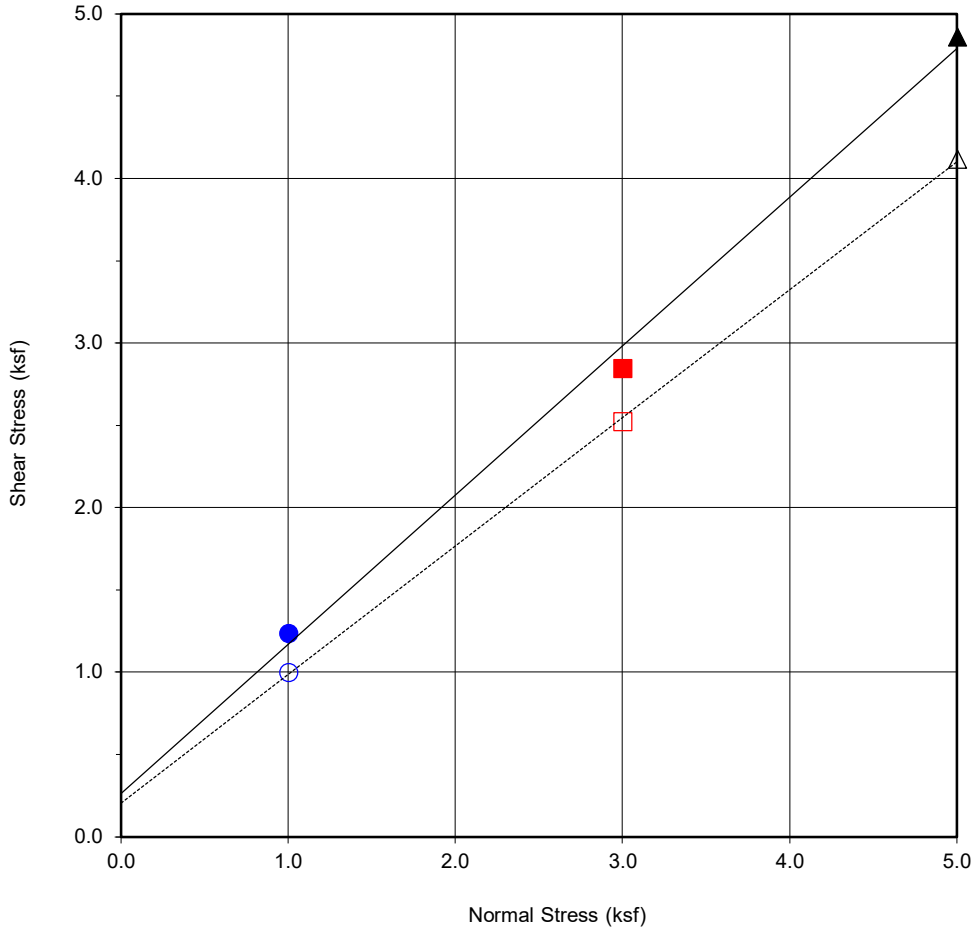
Consolidated Drained ASTM D-3080

Checked by: RP

Project No.: A8326-06-63G

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

January 2026 Figure B2



Boring No.	**B1**
Sample No.	**B1@17'**
Depth (ft)	**17'**
Sample Type:	Ring

Soil Identification:		
Silty Sand w/ Gravel (SM)		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	262	42
Ultimate	204	38

Normal Stress (kip/ft²)	1	3	5
Peak Shear Stress (kip/ft²)	● 1.24	■ 2.84	▲ 4.86
Shear Stress @ End of Test (ksf)	○ 1.00	□ 2.52	△ 4.12
Deformation Rate (in./min.)	0.005	0.005	0.005
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	5.7	6.6	5.8
Initial Dry Density (pcf)	111.0	110.9	107.0
Initial Degree of Saturation (%)	29.8	34.3	27.4
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	14.3	14.5	14.6

GEOCON

DIRECT SHEAR TEST RESULTS

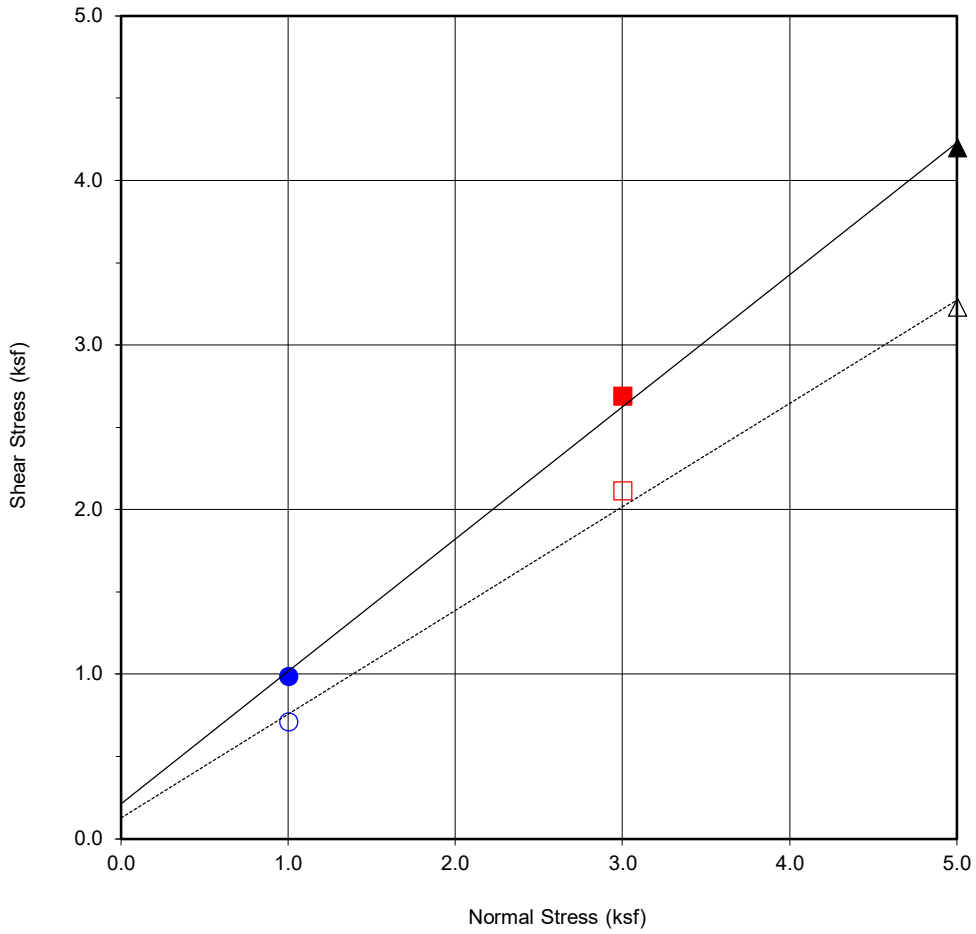
Consolidated Drained ASTM D-3080

Checked by: RP

Project No.: A8326-06-63G

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

January 2026 Figure B3



Boring No.	**B1**
Sample No.	**B1@21'**
Depth (ft)	**21'**
Sample Type:	Ring

Soil Identification:		
Silty Sand (SM)		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	212	39
Ultimate	126	32

Normal Stress (kip/ft²)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.98	■ 2.69	▲ 4.20
Shear Stress @ End of Test (ksf)	○ 0.71	□ 2.11	△ 3.23
Deformation Rate (in./min.)	0.005	0.005	0.005
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	15.5	14.5	13.5
Initial Dry Density (pcf)	115.1	116.6	119.8
Initial Degree of Saturation (%)	90.0	87.8	90.0
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	17.3	16.2	15.4

GEOCON

DIRECT SHEAR TEST RESULTS

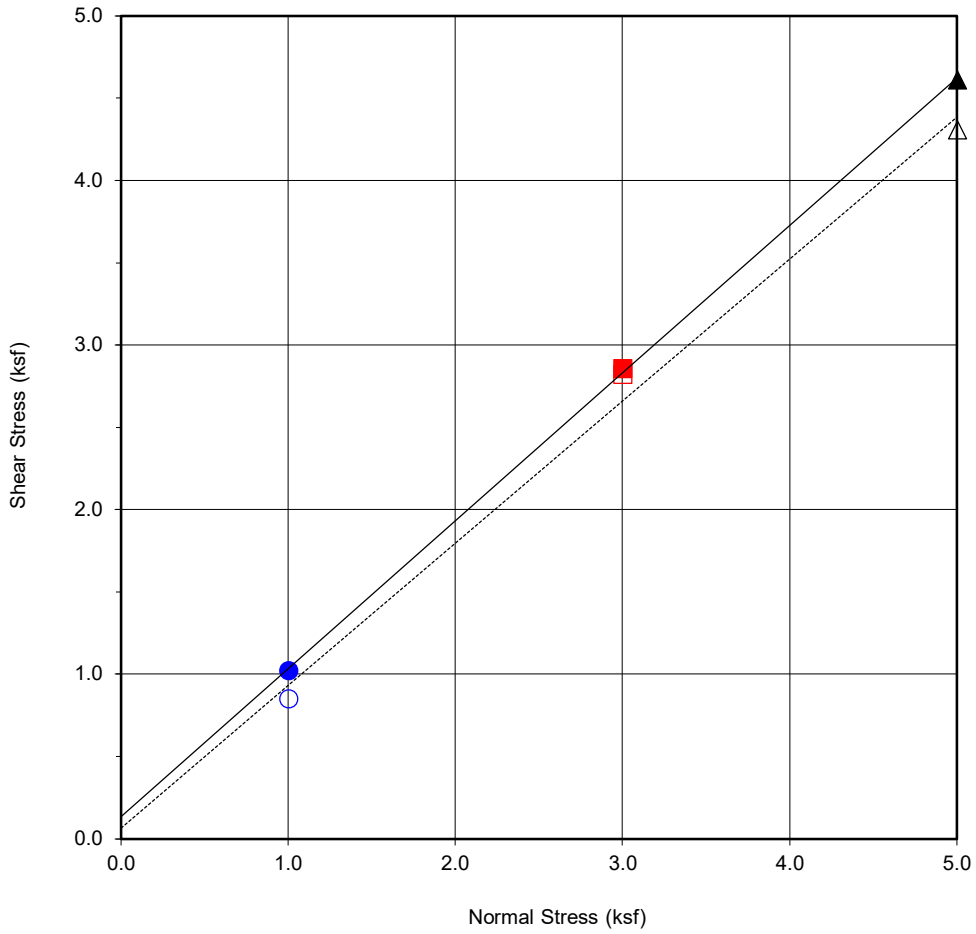
Consolidated Drained ASTM D-3080

Checked by: RP

Project No.: A8326-06-63G

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

January 2026 Figure B4



Boring No.	**B1**
Sample No.	**B1@30'**
Depth (ft)	**30'**
Sample Type:	Ring

Soil Identification:		
Well Graded Sand (SW)		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	136	42
Ultimate	66	41

Normal Stress (kip/ft²)	1	3	5
Peak Shear Stress (kip/ft²)	● 1.02	■ 2.86	▲ 4.61
Shear Stress @ End of Test (ksf)	○ 0.85	□ 2.82	△ 4.31
Deformation Rate (in./min.)	0.005	0.005	0.005
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	4.6	1.3	11.0
Initial Dry Density (pcf)	113.1	110.7	105.4
Initial Degree of Saturation (%)	25.5	6.5	49.6
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	15.2	15.5	15.1

GEOCON

DIRECT SHEAR TEST RESULTS

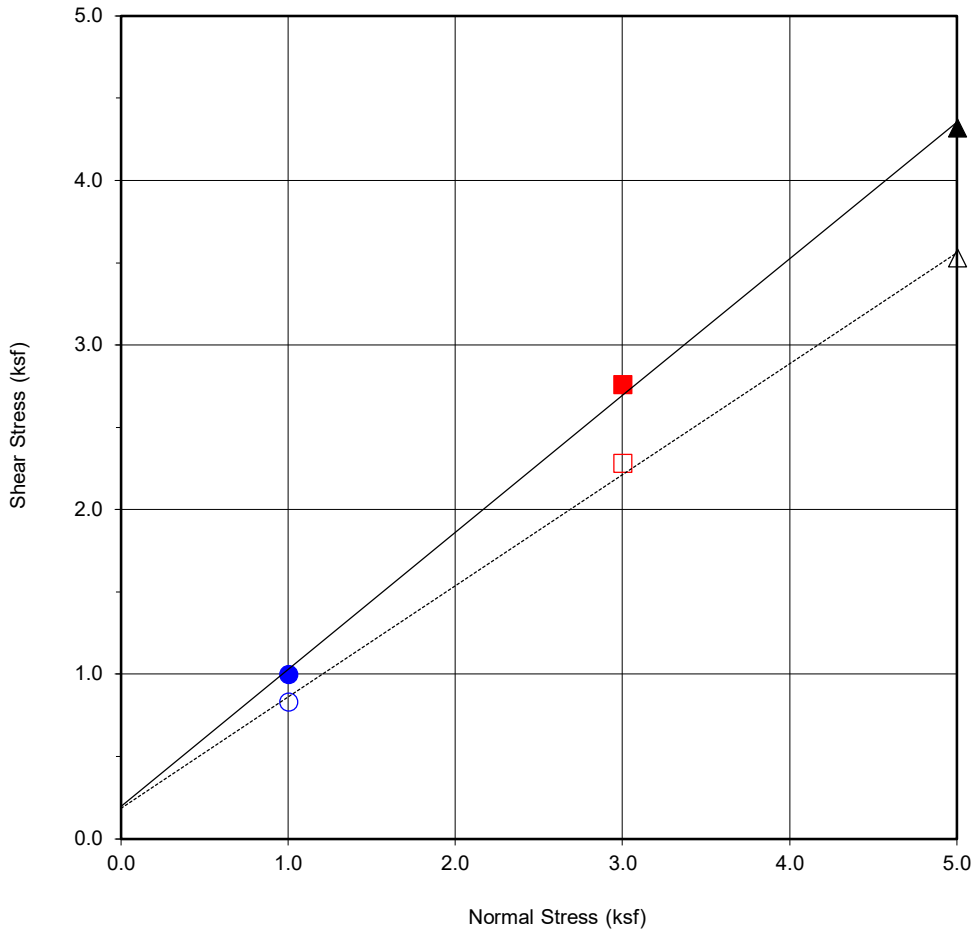
Consolidated Drained ASTM D-3080

Checked by: RP

Project No.: A8326-06-63G

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

January 2026 Figure B5



Boring No.	**B2**
Sample No.	**B2@6'**
Depth (ft)	**6'**
Sample Type:	Ring

Soil Identification:		
Silty Sand (SM)		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	199	40
Ultimate	187	34

Normal Stress (kip/ft²)	1	3	5
Peak Shear Stress (kip/ft²)	● 1.00	■ 2.76	▲ 4.32
Shear Stress @ End of Test (ksf)	○ 0.83	□ 2.28	△ 3.53
Deformation Rate (in./min.)	0.005	0.005	0.005
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	8.4	9.6	9.7
Initial Dry Density (pcf)	114.2	113.6	114.3
Initial Degree of Saturation (%)	47.7	53.6	54.9
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	15.0	15.8	14.9

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DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

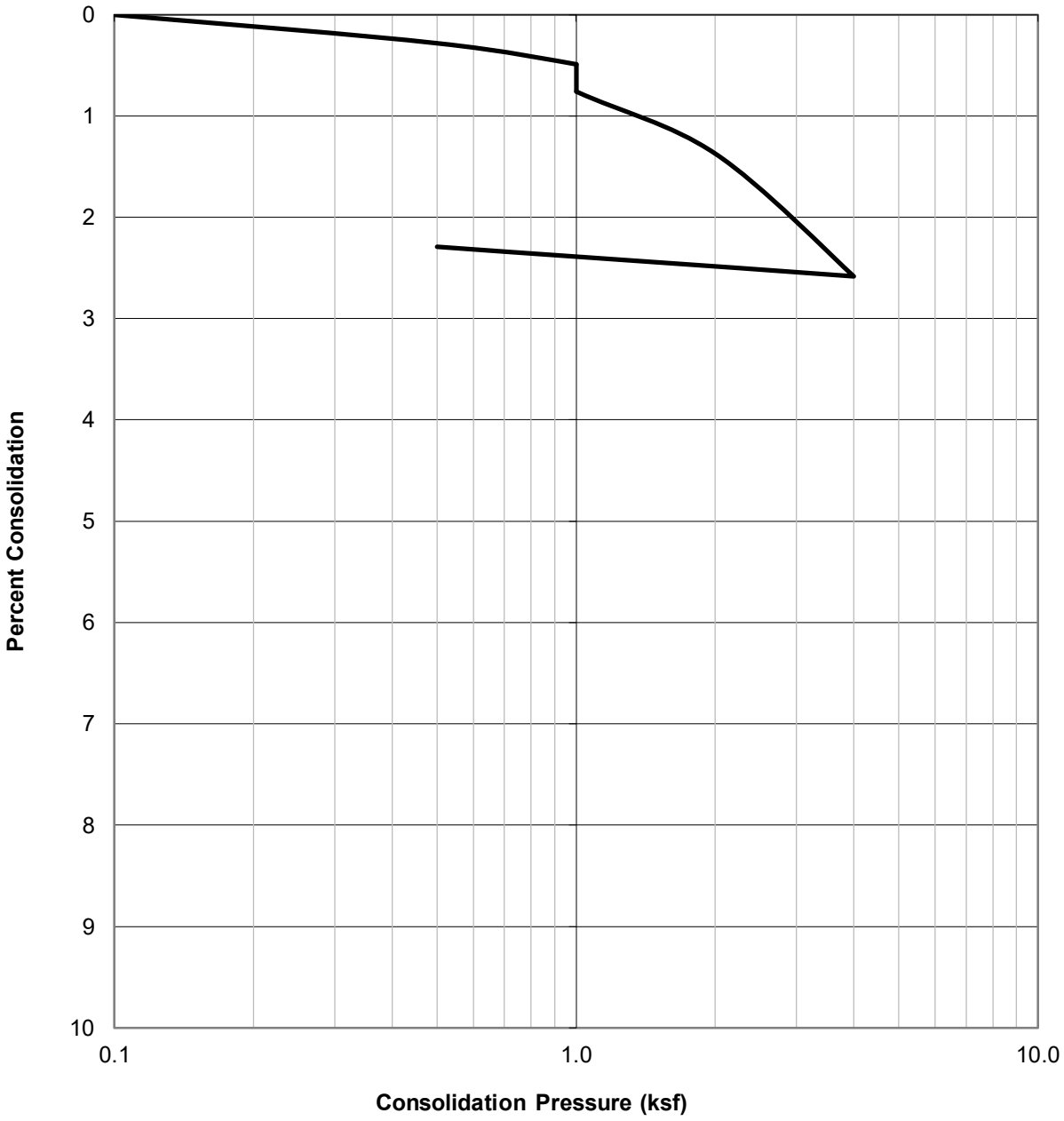
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Project No.: A8326-06-63G

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

January 2026 Figure B6

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@12'	Silty Sand w/ Gravel (SM)	116.6	5.6	13.0

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CONSOLIDATION TEST RESULTS

ASTM D-2435

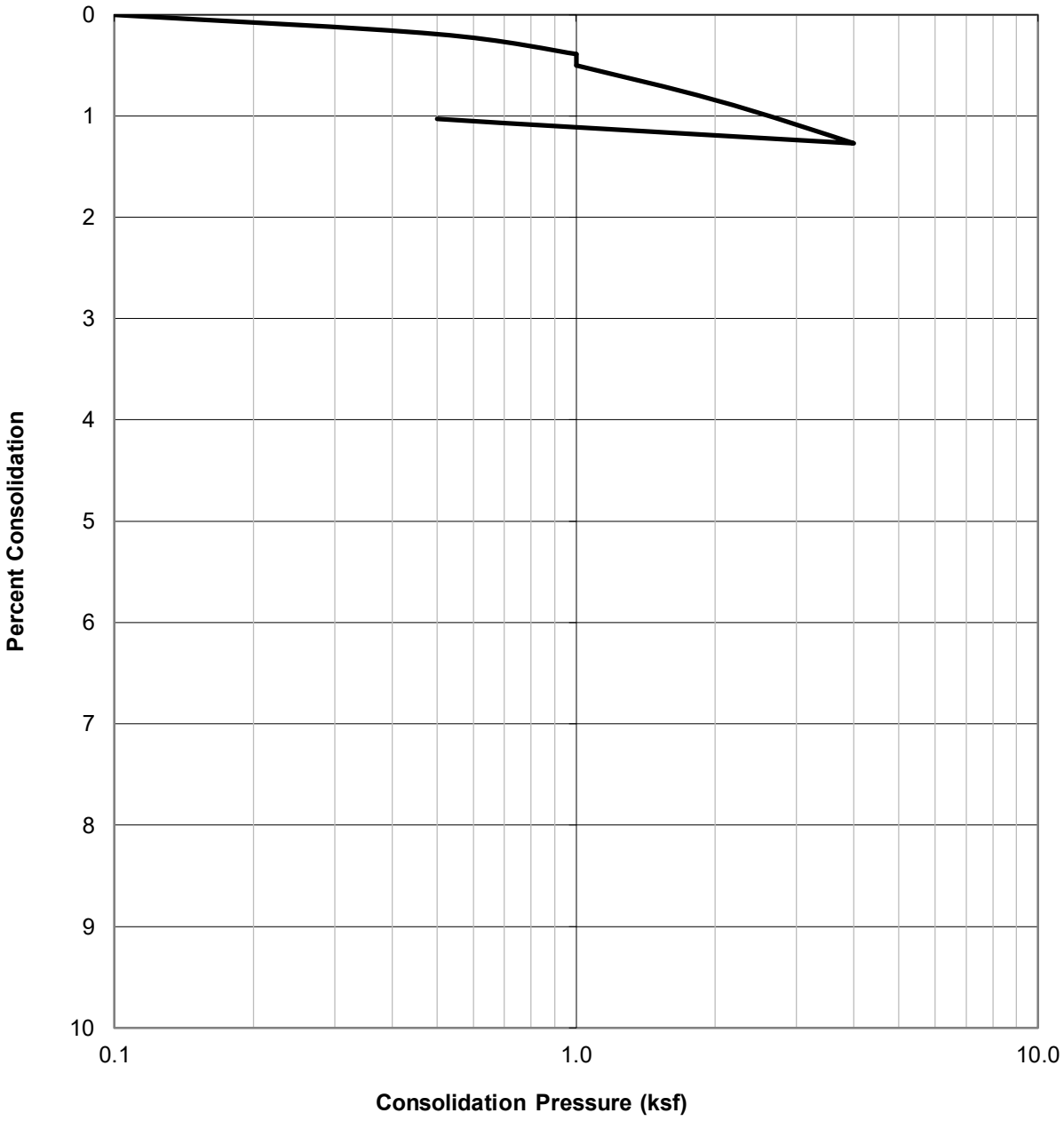
Checked by: RP

Project No.: A8326-06-63G

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

January 2026 Figure B7

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@15'	Silty Sand w/ Gravel (SM)	120.8	6.0	12.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

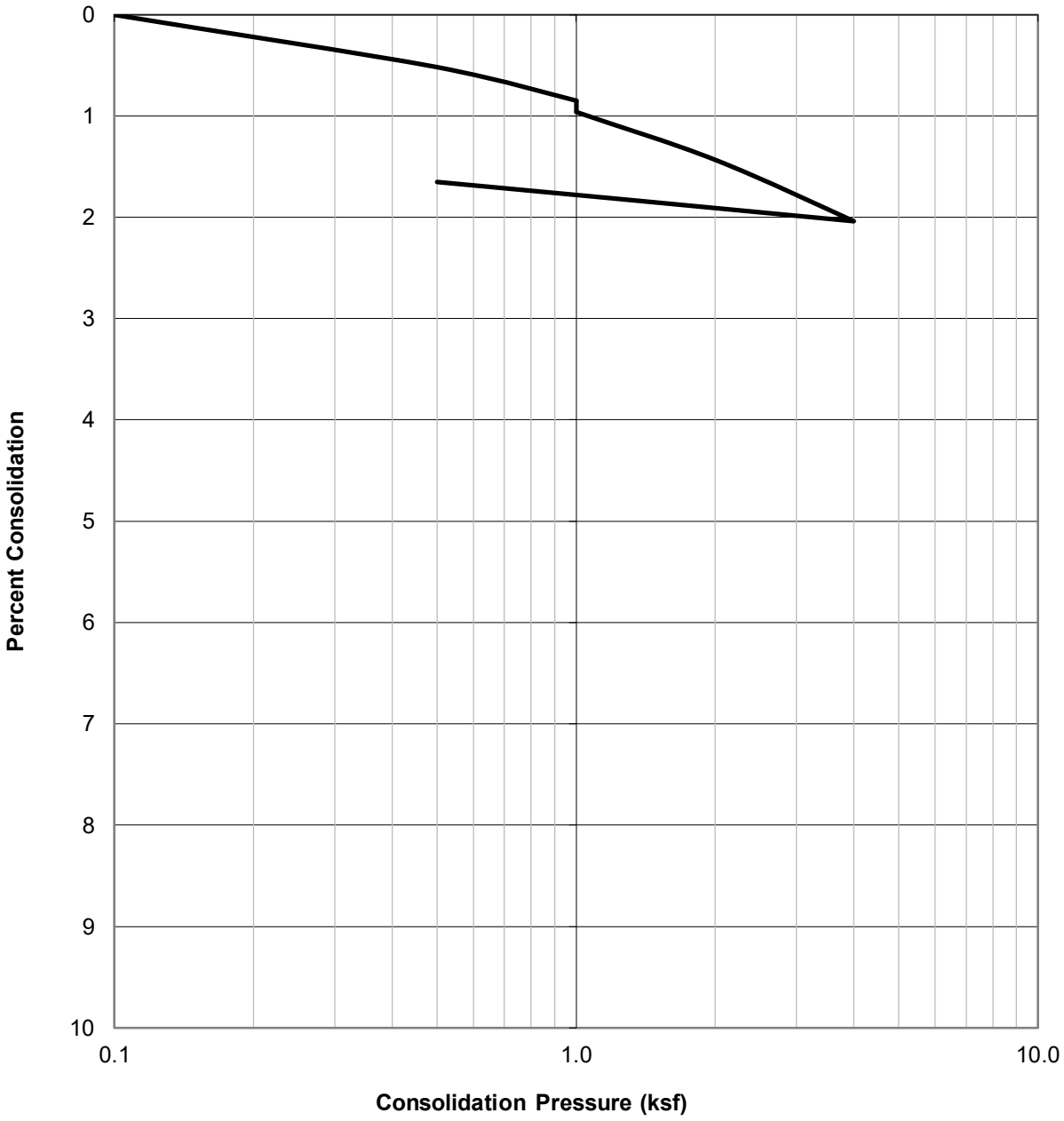
Checked by: RP

Project No.: A8326-06-63G

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

January 2026 Figure B8

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@20'	Silty Sand w/ Gravel (SM)	111.7	8.6	16.9

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CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: RP

Project No.: A8326-06-63G

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

January 2026 Figure B9

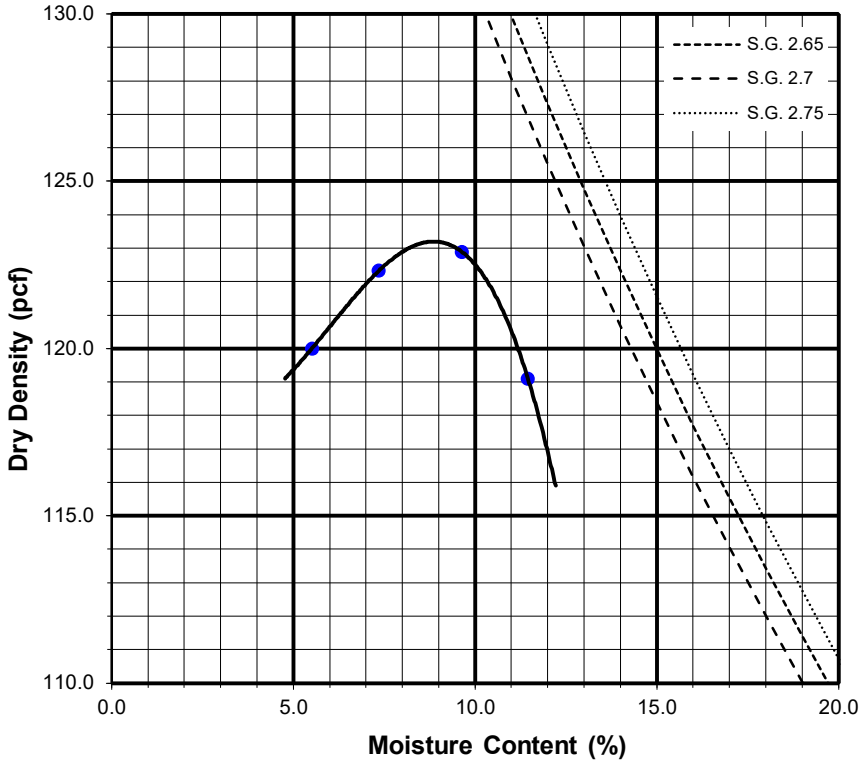
Sample No:

B1@0-5'	Silty Sand (SM)

TEST NO.		1	2	3	4	5	6
Wt. Compacted Soil + Mold	(g)	9645	9761	9877	9809		
Weight of Mold	(g)	5293	5293	5293	5293		
Net Weight of Soil	(g)	4351	4467	4584	4516		
Wet Weight of Soil + Cont.	(g)	1263.1	1257.3	1354.1	1340.9		
Dry Weight of Soil + Cont.	(g)	1203.7	1180.5	1248.0	1217.5		
Weight of Container	(g)	125.8	136.1	147.4	140.8		
Moisture Content	(%)	5.5	7.4	9.6	11.5		
Wet Density	(pcf)	127.9	131.3	134.7	132.7		
Dry Density	(pcf)	120.0	122.3	122.9	119.1		

Maximum Dry Density (pcf)	**123.0**
Bulk Specific Gravity (dry)	**2.60**
Corrected Maximum Dry Density (pcf)	**126.0**

Optimum Moisture Content (%)	**9.5**
Oversized Fraction (%)	**9.6**
Corrected Moisture Content (%)	**9.0**



Preparation Method: C

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COMPACTION CHARACTERISTICS USING MODIFIED EFFORT TEST RESULTS

ASTM D-1557

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Project No.: A8326-06-63G

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

January 2026 Figure B10

B1@0-5'

MOLDED SPECIMEN		BEFORE TEST	AFTER TEST
Specimen Diameter	(in.)	4.0	4.0
Specimen Height	(in.)	1.0	1.0
Wt. Comp. Soil + Mold	(gm)	787.5	815.5
Wt. of Mold	(gm)	367.4	367.4
Specific Gravity	(Assumed)	2.7	2.7
Wet Wt. of Soil + Cont.	(gm)	491.8	815.5
Dry Wt. of Soil + Cont.	(gm)	469.0	388.3
Wt. of Container	(gm)	191.8	367.4
Moisture Content	(%)	8.2	15.4
Wet Density	(pcf)	126.7	135.0
Dry Density	(pcf)	117.1	117.0
Void Ratio		0.4	0.4
Total Porosity		0.3	0.3
Pore Volume	(cc)	63.2	62.9
Degree of Saturation	(%) [S_{meas}]	50.8	95.1

Date	Time	Pressure (psi)	Elapsed Time (min)	Dial Readings (in.)
1/12/2026	10:00	1.0	0	0.2905
1/12/2026	10:10	1.0	10	0.2905
Add Distilled Water to the Specimen				
1/13/2026	10:00	1.0	1430	0.289
1/13/2026	11:00	1.0	1490	0.289

Expansion Index (EI meas) =	-1.5
Expansion Index (Report) =	**0**

Expansion Index, EI_{50}	CBC CLASSIFICATION *	UBC CLASSIFICATION **
0-20	Non-Expansive	Very Low
21-50	Expansive	Low
51-90	Expansive	Medium
91-130	Expansive	High
>130	Expansive	Very High

* Reference: 2022 California Building Code, Section 1803.5.3
** Reference: 1997 Uniform Building Code, Table 18-I-B.

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EXPANSION INDEX TEST RESULTS
ASTM D-4829

Checked by: RP

Project No.: A8326-06-63G
LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

January 2026 Figure B11

SUMMARY OF LABORATORY
POTENTIAL OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS
AASHTO T289 ASTM D4972 and AASHTO T288 ASTM G187

Sample No.	pH	Resistivity (ohm centimeters)
B2@0-5'	8.1	4200 (Moderately Corrosive)

SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS
AASHTO T291 ASTM C1218

Sample No.	Chloride Ion Content (%)
B2@0-5'	0.063

SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
AASHTO T290 ASTM C1580

Sample No.	Water Soluble Sulfate (% SO_4)	Sulfate Exposure
B2@0-5'	0.000	S0

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CORROSIVITY TEST RESULTS

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Project No.: A8326-06-63G

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

January 2026 Figure B12

APPENDIX C

GEOTECHNICAL INVESTIGATION

PROPOSED SOFTBALL FIELD RENOVATION
VERDUGO HILLS HIGH SCHOOL
10625 PLAINVIEW AVENUE
TUJUNGA DISTRICT,
LOS ANGELES, CALIFORNIA
LAUSD PROJECT 23.07171

GEOCON
INLAND EMPIRE, INC.
GEOTECHNICAL
CONSULTANTS

PREPARED FOR

LOS ANGELES UNIFIED SCHOOL DISTRICT
LOS ANGELES, CALIFORNIA

PROJECT NO. A8326-06-27

APRIL 4, 2008

GEOCON
INLAND EMPIRE, INC.

GEOTECHNICAL CONSULTANTS

Project No. A8326-06-27
April 4, 2008

VIA OVERNIGHT COURIER

Los Angeles Unified School District
333 S. Beaudry Ave., 23rd Floor
Los Angeles, CA 90017

Attention: Mr. Doc Nghiem
Supervising Structural Engineer

Subject: GEOTECHNICAL INVESTIGATION
PROPOSED SOFTBALL FIELD RENOVATION
VERDUGO HILLS HIGH SCHOOL
10625 PLAINVIEW AVENUE
TUJUNGA DISTRICT, LOS ANGELES, CALIFORNIA
LAUSD PROJECT 23.07171

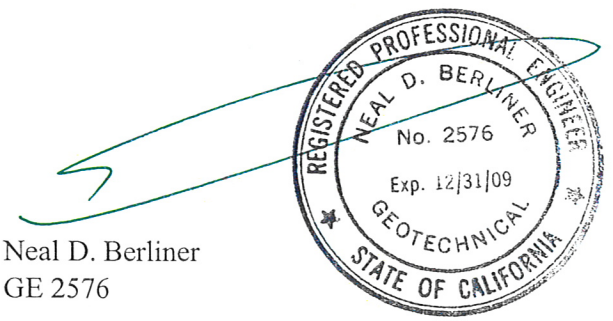
Dear Mr. Nghiem:

In accordance with your authorization of our proposal dated February 28, 2008, we have performed a geotechnical investigation for the proposed softball field renovation at the Verdugo Hills High School campus located at 10625 Plainview Avenue in the Tujunga District of the City of Los Angeles, California. The accompanying report presents the findings of our study, and our conclusions and recommendations pertaining to the geotechnical aspects of design and construction of proposed improvements. Based on the results of our investigation, it is our opinion that the site can be developed as proposed, provided the recommendations in this report are followed and implemented during construction.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,
GEOCON INLAND EMPIRE, INC.

Jelesa M. Thomas
Staff Engineer



Neal D. Berliner
GE 2576

JT:NDB:am

(4+1 CD) Addressee

3303 N. San Fernando Boulevard, Suite 100 ■ Burbank, CA 91504 ■ Telephone (818) 841-8388 ■ Fax (818) 841-1704

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APPENDIX C
AGRONOMIC LABORATORY TESTING RESULTS

GEOTECHNICAL INVESTIGATION

1. PURPOSE

This report presents the results of a geotechnical investigation for the proposed softball field renovation at the Verdugo Hills High School campus located at 10625 Plainview Avenue, in the Tujunga District of the City of Los Angeles, California (see Figure 1, Vicinity Map). The purpose of this investigation was to evaluate subsurface soil conditions in the areas of proposed improvement, and based on conditions encountered, to provide conclusions and recommendations pertaining to the geotechnical aspects of design and construction.

The scope of our investigation included the excavation of four exploratory borings, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on March 10, 2008 by excavating four borings to depths between 2½ and 5½ feet below the existing ground surface utilizing a 4½ inch diameter hand auger and hand tools. The approximate locations of the exploratory excavations are depicted on Figure 2, Site Plan. A detailed discussion of the field investigation, including boring logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical, chemical and agronomic soil properties. Appendix B presents a summary of the laboratory test results. Appendix C presents a summary of the agronomic laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

2. SITE DESCRIPTION

The area for the proposed softball field renovation is situated along the south-central portion of the Verdugo Hills High School campus located at 10625 Plainview Avenue in the Tujunga District of the City of Los Angeles, California. The campus is bounded by Hillrose Street to the north, by Plainview Avenue to the east, by Summitrose Street to the south, and by Irma Avenue to the west. The area for the softball field renovation is currently occupied by at-grade asphalt paving and the outfield lawn of the existing baseball field. The subject site is bounded by an athletic field to the north, a 2:1 (h:v) slope and a 2-story classroom structure to the east, a 1-story classroom structure to the south, and a 1:1 concrete faced slope to the west. The area of proposed work is roughly level with no pronounced highs or lows. Surface water drainage at the site appears to be by sheetflow along the ground surface to existing area drains and the city streets. Vegetation on the site consists of grass, shrubs and trees.

Information concerning the proposed project was furnished by the client and is preliminary in nature. It is our understanding that the proposed project will consist of approximately 37,300 square feet of new turf for a new softball field. The new field will also require the construction of dugouts, benches, a batting cage, bullpen, fences, and other appurtenances. The location of the proposed improvements and structure are indicated on the Site Plan, Figure 2.

Once the design phase proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. SOIL AND GEOLOGIC CONDITIONS

Based on our field investigation and published geologic maps of the area, the site is underlain by unconsolidated Holocene Age alluvial fan deposits (Crook, et al., 1987). The alluvial fan deposits generally consist of granular soils with cobbles and boulders and extend to an approximate depth of 100 feet beneath the existing ground surface, and rest on a thick layer of Pleistocene Age deposits (Crook, et al., 1987). The soil and geologic units encountered at the site are discussed below. Stratigraphic profiles are provided on the Boring Logs in Appendix A.

3.1 Artificial Fill

The site is mantled by a thin layer of fill soil consisting of medium dense, dark brown, fine-grained poorly graded sand with varying amounts of silt, gravel, and construction debris. The fill was encountered in our site explorations ranging from 1½ to 2½ feet thick and is believed to be the result of past grading activities at the site. Deeper fill could exist between boring locations or on other portions of the site that were not explored.

3.2 Alluvial Fan Deposits

The fill is underlain by Holocene Age alluvial fan deposits consists primarily of brown, poorly graded sand. The alluvial fan deposits are primarily medium dense and slightly moist and become denser with increased depth. The soils consist of detrital sediments derived from the nearby San Gabriel Mountains.

4. GROUNDWATER

Based on a review of the Seismic Hazard Evaluation of the Sunland 7.5 Minute Quadrangle, Los Angeles County, California (California Division of Mines and Geology, 1998), the historically highest groundwater in the area is in excess of 40 feet beneath the ground surface. Groundwater information presented in this document is generated from data collected in the early 1900's to present.

The Los Angeles County Department of Public Works maintains various wells in the vicinity of the subject site. Well No. 4994B is located downgradient approximately 0.45 mile west of the site. Review of the monitoring data from this well over the past 10 years indicates that the depth to groundwater has fluctuated between 58.0 and 72.3 feet beneath the ground surface for Well No. 4994B. (LADPW, 2007). Based on current groundwater basin management practices, it is unlikely that groundwater levels will ever approach the historic high levels.

Groundwater was not encountered in our site explorations; however, it is not uncommon for groundwater levels to vary seasonally or for groundwater conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. Proper surface drainage of irrigation and precipitation will be critical to future performance of the project. Recommendations for drainage are provided in the S*urface Drainage* section of this report (see Section 7.8).

5. OIL FIELDS & METHANE ZONES

Based on a review of the California Division of Oil, Gas and Geothermal Resources (DOGGR) Oil and Gas Well Location Maps, the site is not located within the boundaries of any mapped oil fields. No oil wells, existing or abandoned, are indicated in the immediate vicinity of the site. However, due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map.

The site is not located within the boundaries of a methane or methane buffer zone, as defined by the City of Los Angeles (2004).

6. SEISMIC DESIGN

6.1 Seismic Design Criteria

Table 6.1.1 summarizes site-specific design criteria obtained from the 2001 California Building Code (CBC). The values listed in the table on the following page are for the Verdugo Fault, identified as a Type B fault, with a measured distance of less than 2.0 kilometers from the subject site (CDMG, Maps of Active Known Faults Near Source Zones, 1998).

TABLE 6.1.1
UBC SEISMIC DESIGN PARAMETERS

Parameter	Value	UBC Reference
Seismic Zone Factor, Z	0.40	Table 16-I
Soil Profile Type	S_D	Table 16-J
Seismic Coefficient, C_a	0.57	Table 16-Q
Seismic Coefficient, C_v	1.02	Table 16-R
Near-Source Factor, N_a	1.3	Table 16-S
Near-Source Factor, N_v	1.6	Table 16-T
Control Period, Ts	0.716	---
Control Period, To	0.143	---
Seismic Source	B	Table 16-U

Table 6.1.2 below summarizes site-specific design criteria obtained from the 2007 California Building Code (CBC; Based on the 2006 International Building Code [IBC]), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The values were derived using the computer program Seismic Hazard Curves and Uniform Hazard primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive. Response Spectra, provided by the USGS. The short spectral response uses a period of 0.2 second.

TABLE 6.1.2
IBC SEISMIC DESIGN PARAMETERS

Parameter	Value	IBC-06 Reference
Site Class	D	Table 1613.5.2
Spectral Response – Class B (short), S_S	2.555g	Figure 1613.5(3)
Spectral Response – Class B (1 sec), S_1	0.964g	Figure 1613.5(4)
Site Coefficient, F_a	1.0	Table 1613.5.3(1)
Site Coefficient, F_v	1.5	Table 1613.5.3(2)
Maximum Considered Earthquake Spectral Response Acceleration (short), S_{MS}	2.555g	Section 1613.5.3 (Eqn 16-37)
Maximum Considered Earthquake Spectral Response Acceleration – (1 sec), S_{M1}	1.445g	Section 1613.5.3 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.703g	Section 1613.5.4 (Eqn 16-39)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.964g	Section 1613.5.4 (Eqn 16-40)

Conformance to the criteria in the previous tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The intent of the code is "Life Safety," not to completely prevent damage to structures, since such design may be economically prohibitive

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 General

7.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude the construction of the proposed improvements provided the recommendations presented herein are followed and implemented during construction.

7.1.2 Approximately 1½ to 2½ feet of existing artificial fill was encountered during exploration on the property. The fill is believed to be the result of past grading and construction activities at the site and in its present condition is not considered suitable for support of proposed foundations, slabs, or additional fill.

7.1.3 As a minimum, the vegetation and paving in the proposed softball field footprint area should be excavated and disposed of offsite. The resulting depression should be backfilled and properly compacted with approved import soils. Deeper excavations may be required if unsuitable soils or abandoned improvements are encountered, and should be performed at the direction of the Geocon representative. Recommendations for earthwork are provided in the *Grading* section of this report (see Section 7.3).

7.1.4 It is recommended that the improvements associated with the softball field renovation, such as dugouts, benches, a batting cage, bullpen, fences, and other appurtenances, be supported on shallow conventional foundations penetrating through existing fill and deriving support in undisturbed alluvial soils. Isolated structures, such as flag poles or light poles, may be supported on drilled cast in-place concrete friction piles deriving support in the undisturbed alluvial soils, Recommendations for foundations are provided in the *Foundation Design* section of this report (see Section 7.4). All foundation excavations must be observed and approved by the Geotechnical Engineer (a representative of Geocon) prior to placing steel or concrete.

7.1.5 If the alluvial soils exposed in the excavation bottom are loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. As an alternative the foundation can be deepened by removing loose or disturbed soil.

7.1.6 Results of the agronomic soil tests for samples of soil taken at a depth of 12 to 14 inches below existing ground surface are presented in Appendix C.

7.1.7 Once the design phase proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation, as outlined in this report, should be reviewed by this office.

7.2 Soil and Excavation Characteristics

7.2.1 The in-situ soils can be excavated with moderate effort using conventional excavation equipment. Excessive caving is not anticipated in shallow vertical excavations.

7.2.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations in order to maintain safety and the stability of adjacent improvements.

7.2.3 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures.

7.2.4 The upper 24 inches of earth materials encountered in the area of proposed improvement yields a "very low" expansion potential as defined by the California Building Code (CBC).

7.3 Grading

7.3.1 Grading will include the excavation of at least the upper 12 inches of asphalt, concrete, and/or earth materials in the footprint of the proposed softball field. Excess earth material generated from excavation grading operations will be hauled off-site. Import soil will be used for the creation of roughly level subgrade for the proposed softball field. Earthwork should be observed, and compacted fill tested by representatives of Geocon Inland Empire, Inc.

7.3.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer and geotechnical engineer in attendance. Special soil handling requirements can be discussed at that time.

7.3.3 Grading should commence with the removal of all existing vegetation, paving, and existing improvements from the area to be graded. Once a clean excavation bottom has been established it must be approved by the Geotechnical Engineer (a representative of Geocon Inland Empire, Inc.). Deleterious debris such as wood and root structures should be exported from the site and should

not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein.

7.3.4 The resulting depression should be backfilled and properly compacted with approved import soils. Import soils should conform to the standards required by the Los Angeles Unified School District. All imported fill shall be observed, tested and approved by Geocon Inland Empire, Inc. prior to bringing soils to the site. Rocks larger than six inches in diameter shall not be used in the fill. Imported soils used in the field area should have an Expansion Index less than 20.

7.3.5 All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned to near optimum moisture content, and compacted to at least 90 percent relative compaction, as determined by ASTM Test Method D 1557-07.

7.3.6 The field subgrade area should be properly fine-graded for drainage and proof-rolled in the presence of the Geotechnical Engineer (a representative of Geocon Inland Empire, Inc.)

7.3.7 Utility trenches should be properly backfilled in accordance with the requirements of the Green Book (latest edition). The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least one foot over the pipe. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained.

7.3.8 All excavation bottoms must be observed and approved by the Geotechnical Engineer (a representative of Geocon), prior to placing fill, steel, gravel or concrete.

7.4 Foundation Design

7.4.1 Subsequent to the recommended grading, conventional spread foundations may be utilized for support of the proposed improvements associated with the softball field renovation. Foundations should derive support in undisturbed alluvial soils.

7.4.2 Continuous footings may be designed for an allowable bearing capacity of 2,000 pounds per square foot, and should be a minimum of 12 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing materials.

7.4.3 Isolated spread foundations may be designed for an allowable bearing capacity of 2,300 pounds per square foot, and should be a minimum of 24 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing materials.

7.4.4 The soil bearing pressure above may be increased by 100 psf and 250 psf for each additional foot of foundation width and depth, respectively, up to a maximum allowable soil bearing pressure of 3,000 psf.

7.4.5 Should the soils exposed in the excavation bottom be soft, compaction of the soft soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker. As an alternative, excavations should be deepened as necessary to extend into satisfactory soils.

7.4.6 The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.

7.4.7 Continuous footings should be reinforced with two No. 4 steel reinforcing bars, one placed near the top of the footing and one near the bottom. Reinforcement for spread footings should be designed by the project structural engineer.

7.4.8 The above foundation dimensions and minimum reinforcement recommendations are based on soil conditions and building code requirements only, and are not intended to be used in lieu of those required for structural purposes.

7.4.9 No special subgrade presaturation is required prior to placement of concrete. However, the slab and foundation subgrade should be sprinkled as necessary; to maintain a moist condition as would be expected in any concrete placement.

7.4.10 Foundation excavations should be observed by the Geotechnical Engineer (a representative of Geocon Inland Empire, Inc.) prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.

7.4.11 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. An allowable coefficient of friction of 0.40 may be used with the dead load forces in the alluvium or properly compacted engineered fill.

7.4.12 Based on a factor of safety of 1.5, the passive earth pressure for the sides of foundations and slabs poured against properly compacted fill or undisturbed alluvium may be computed as an equivalent fluid having a density of 300 pounds per cubic foot with a maximum earth pressure of 3,000 pounds per square foot. When combining passive and friction for lateral resistance, the passive component should be reduced by one-third.

7.5 Cast-in-Place Friction Piles

7.5.1 Cast-in-place friction piles may also be utilized for support of the proposed improvements associated with the new softball field provided support is derived in the undisturbed alluvial soils. Piles should be a minimum of 24 inches in diameter and should be embedded a minimum of 8 feet into the recommended bearing materials (undisturbed alluvium).

7.5.2 The friction piles may be designed based on a skin friction capacity of 400 pounds per square foot, and do not require the complete removal of all loose earth materials from the bottom of the excavation, since the end-bearing capacity is not being considered for design. However, a cleanout of the excavation bottom will be required. Piles may be assumed fixed at an embedment depth of 6 feet below the ground surface. A one-third increase in the capacity may be used for wind or seismic loads. The coefficient of friction may be taken as 0.35 based on uniform contact between the concrete and retained earth.

7.5.3 For design purposes, an allowable passive value for the soils may be assumed to be 200 pounds per square foot per foot. The allowable passive value may be doubled for isolated piles. To develop the full lateral value, provisions should be implemented to assure firm contact between the piles and the undisturbed soils and/or bedrock.

7.5.4 All drilled pile excavations should be continuously observed by personnel of this firm to verify adequate penetration into the recommended bearing materials. The capacity presented is based on the strength of the alluvial soils. The compressive and tensile strength of the pile sections should be checked to verify the structural capacity of the piles.

7.6 Pile Installation

7.6.1 Casing will likely be required during pile excavation due to the presence of granular soils and the potential for excessive caving. When casing is used, extreme care should be employed so that the pile is not pulled apart as the casing is withdrawn. At no time should the distance between the surface of the concrete and the bottom of the casing be less than five feet.

7.6.2 Seepage is not anticipated during drilled pile excavations for this project. However, should conditions change, piles placed below the water level require the use of a tremie to place the concrete into the bottom of the hole, and casing will likely be required to prevent caving. A tremie should consist of a rigid, water-tight tube having a diameter of not less than 6 inches with a hopper at the top. The tube should be equipped with a device that will close the discharge end and prevent water from entering the tube while it is being charged with concrete. The tremie should be supported so as to permit free movement of the discharge end over the entire top surface of the work and to permit rapid lowering when necessary to retard or stop the flow of concrete. The discharge end should be closed at the start of the work to prevent water entering the tube and should be entirely sealed at all times, except when the concrete is being placed. The tremie tube should be kept full of concrete. The flow should be continuous until the work is completed and the resulting concrete seal should be monolithic and homogeneous. The tip of the tremie tube should always be kept about five feet below the surface of the concrete and definite steps and safeguards should be taken to insure that the tip of the tremie tube is never raised above the surface of the concrete.

7.6.3 A special concrete mix should be used for concrete to be placed below water. The design should provide for concrete with an unconfined compressive strength psi of 1,000 pounds per square inch (psi) over the initial job specification. An admixture that reduces the problem of segregation of paste/aggregates and dilution of paste should be included. The slump should be commensurate to any research report for the admixture, provided that it should also be the minimum for a reasonable consistency for placing when water is present.

7.6.4 Pile excavations should be filled with concrete as soon after drilling and inspection as possible. Unless the holes are fully cased from top to bottom, it is not recommended that holes be left open overnight.

7.7 Surface Drainage

7.7.1 Proper surface drainage is critical to the future performance of the project. Infiltration of irrigation excess and storm runoff into the supporting soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.

7.7.2 All site drainage should be collected and transferred to the street in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. Drainage should not be allowed to flow uncontrolled over any descending slope.

7.7.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures.

7.8 Plan Review

7.8.1 Grading, foundation and shoring plans should be reviewed by the Geotechnical Engineer (a representative of Geocon Inland Empire, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon Inland Empire, Inc., should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon Inland Empire, Inc.

2. This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

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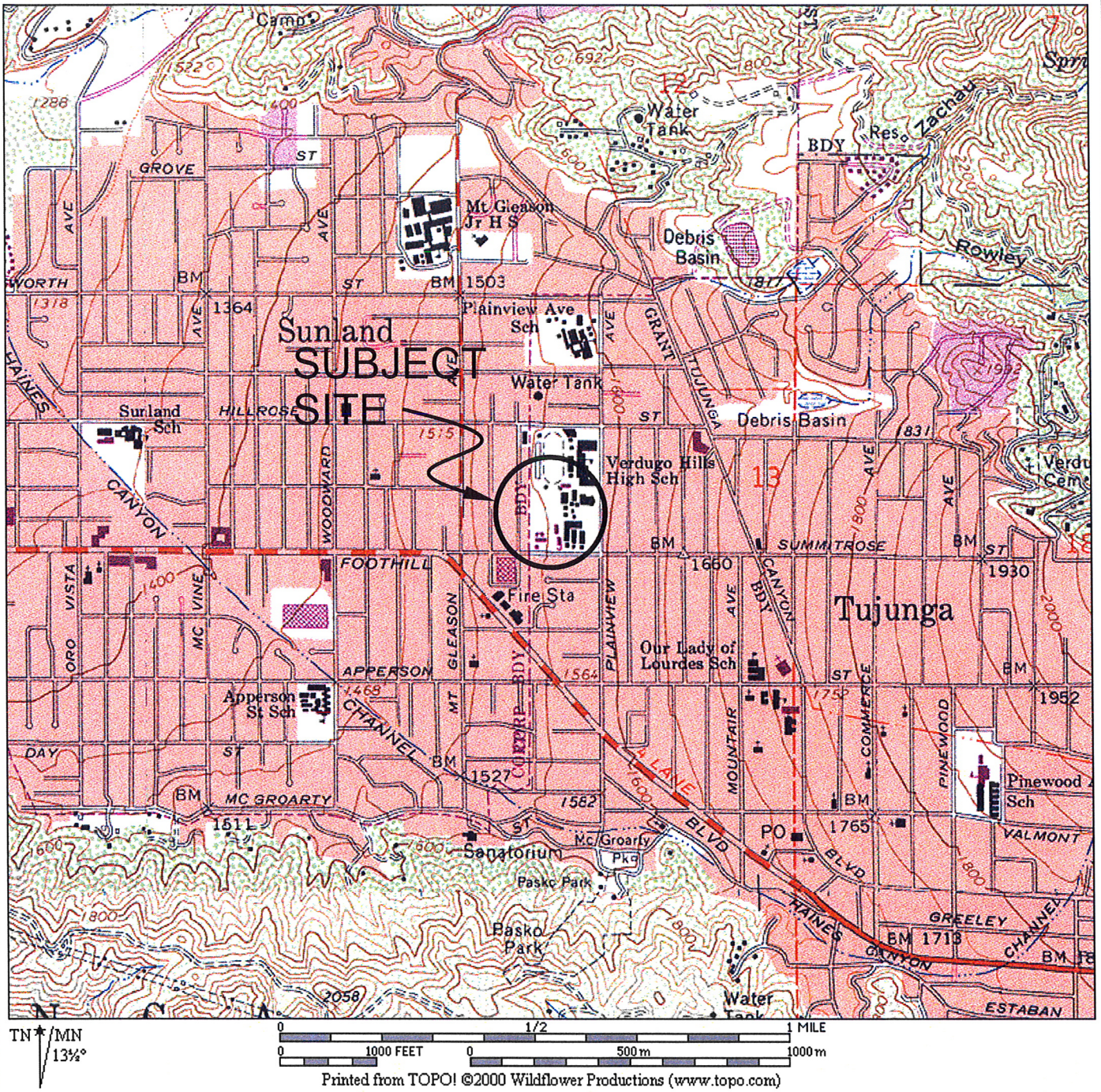
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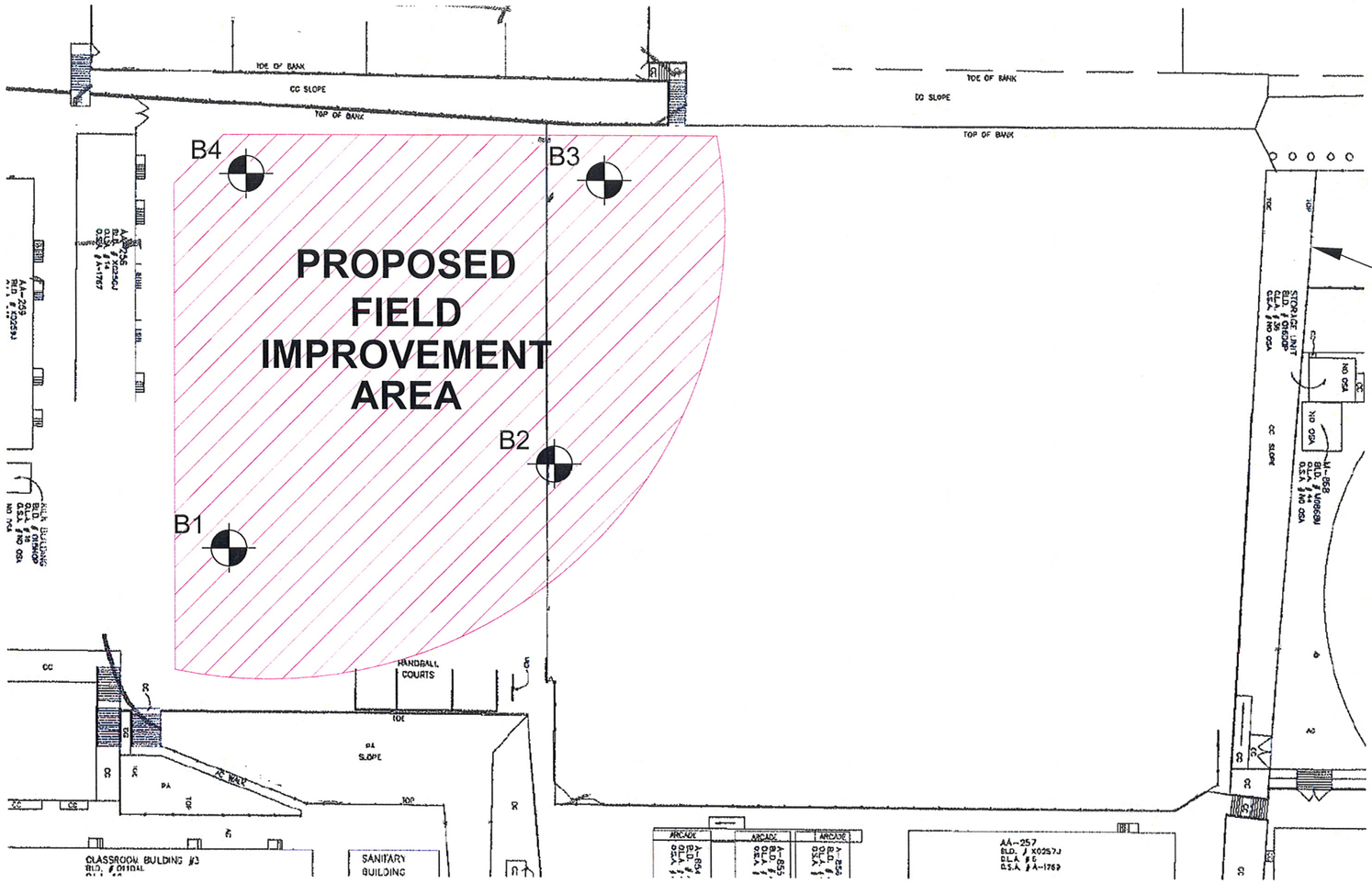
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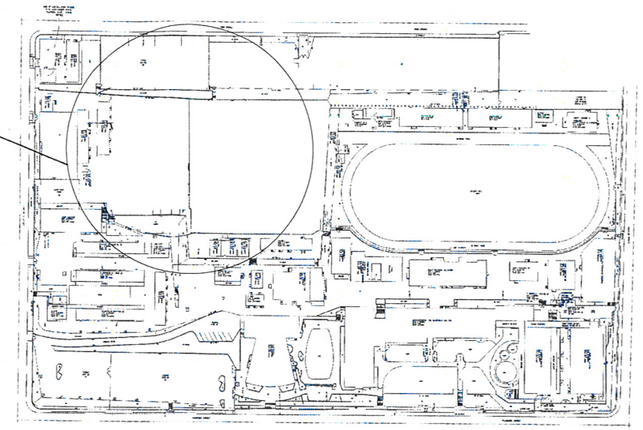
VICINITY MAP

VERDUGO HILLS HIGH SCHOOL

LOS ANGELES UNIFIED SCHOOL DISTRICT
10625 PLAINVIEW AVENUE
TUJUNGA DISTRICT, LOS ANGLES, CALIFORNIA

APRIL 4, 2008	PROJECT NO. A8326-06-27	FIG. 1





NO SCALE

0 60’ 80’

LEGEND

B1 APPROXIMATE LOCATION OF BORING

APPROXIMATE LOCATION OF SOFTBALL FIELD

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SITE PLAN

VERDUGO HILLS HIGH SCHOOL
LOS ANGELES UNIFIED SCHOOL DISTRICT
10625 PLAINVIEW AVENUE
TUJUNGA DISTRICT, LOS ANGLES, CALIFORNIA

APRIL 4, 2008	PROJECT NO. A8326-06-27	FIG. 2

APPENDIX A

APPENDIX A

FIELD INVESTIGATION

The site was explored on March 10, 2008 by excavating four borings to depths between 2½ and 5½ feet below the existing ground surface utilizing a 4½ inch diameter hand auger and hand tools. Representative and relatively undisturbed samples were obtained by driving a 3 inch O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 60 pound slide hammer. The California Modified Sampler was equipped with 1-inch high by 2⅜-inch diameter brass sampler rings to facilitate removal and testing. Bulk samples were also obtained.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). Logs of the excavations are presented on Figures A-1 through A-4. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The approximate locations of the excavations are shown on the Site Plan, Figure 2.

PROJECT NO. A8326-06-27

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1** ELEV. (MSL.)_____ DATE COMPLETED **3/10/08** EQUIPMENT **HAND AUGER** BY: **CHL**	PENETRATION RESISTANCE (BLOWS/FT.)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**FILL** Sand, poorly graded, medium dense, slightly moist, dark brown, fine-grained with some medium-grained, abundant gravel			
2					**ALLUVIUM FAN** Sand, poorly graded, medium dense, slightly moist, brown, fine-grained with some medium- to coarse-grained, abundant gravel			
4	B1@3'			SP			127.0	3.7
	B1@5'						114.7	1.9
					End at 5.5 feet Fill to 2 feet No groundwater encountered Backfilled and tamped with soil cuttings Capped with asphalt patch			

Figure A-1,
Log of Boring 1, Page 1 of 1

A8326-06-27 BORING LOGS A1-A4.GPJ

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A8326-06-27

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 2** ELEV. (MSL.)_____ DATE COMPLETED **3/10/08** EQUIPMENT **HAND AUGER** BY: **CHL**	PENETRATION RESISTANCE (BLOWS/FT.)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**FILL** Sand with Silt, poorly graded, medium dense, moist, dark brown, fine-grained with some medium- to coarse-grained, abundant gravel			
2				SP	**ALLUVIUM FAN** Sand, poorly graded, medium dense, moist, brown, fine-grained with some medium- to coarse-grained, abundant gravel, trace cobbles			
					Refusal at 2.5 feet on cobble Fill to 2.5 feet No groundwater encountered Backfilled and tamped with soil cuttings			

Figure A-2,
Log of Boring 2, Page 1 of 1

A8326-06-27 BORING LOGS A1-A4.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◥ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. A8326-06-27

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 3 ELEV. (MSL.)_____ DATE COMPLETED 3/10/08 EQUIPMENT HAND AUGER BY: CHL MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**FILL** Sand, poorly graded, medium dense, moist, dark brown, fine-grained with some medium- to coarse-grained, abundant gravel			
2	B3@3'			SP	**ALLUVIUM FAN** Sand, poorly graded, medium dense, slightly moist, brown, fine-grained with some medium- to coarse-grained, abundant gravel -Cobble		116.8	4.3
4					Refusal at 4 feet on cobble Fill to 1.5 feet No groundwater encountered Backfilled and tamped with soil cuttings			

Figure A-3,
Log of Boring 3, Page 1 of 1

A8326-06-27 BORING LOGS A1-A4.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◥ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A8326-06-27

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 4** ELEV. (MSL.)_____ DATE COMPLETED **3/10/08** EQUIPMENT **HAND AUGER** BY: **CHL**	PENETRATION RESISTANCE (BLOWS/FT.)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**FILL** Sand with Silt, poorly graded, medium dense, moist, dark brown, fine-grained with some medium- to coarse-grained, abundant gravel			
2				SP	**ALLUVIUM FAN** Sand, poorly graded, medium dense, slightly moist, brown, fine-grained with some medium- to coarse-grained, abundant gravel			
					Refusal at 3.5 feet on cobble Fill to 2 feet No groundwater encountered Backfilled and tamped with soil cuttings			

Figure A-4,
Log of Boring 4, Page 1 of 1

A8326-06-27 BORING LOGS A1-A4.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

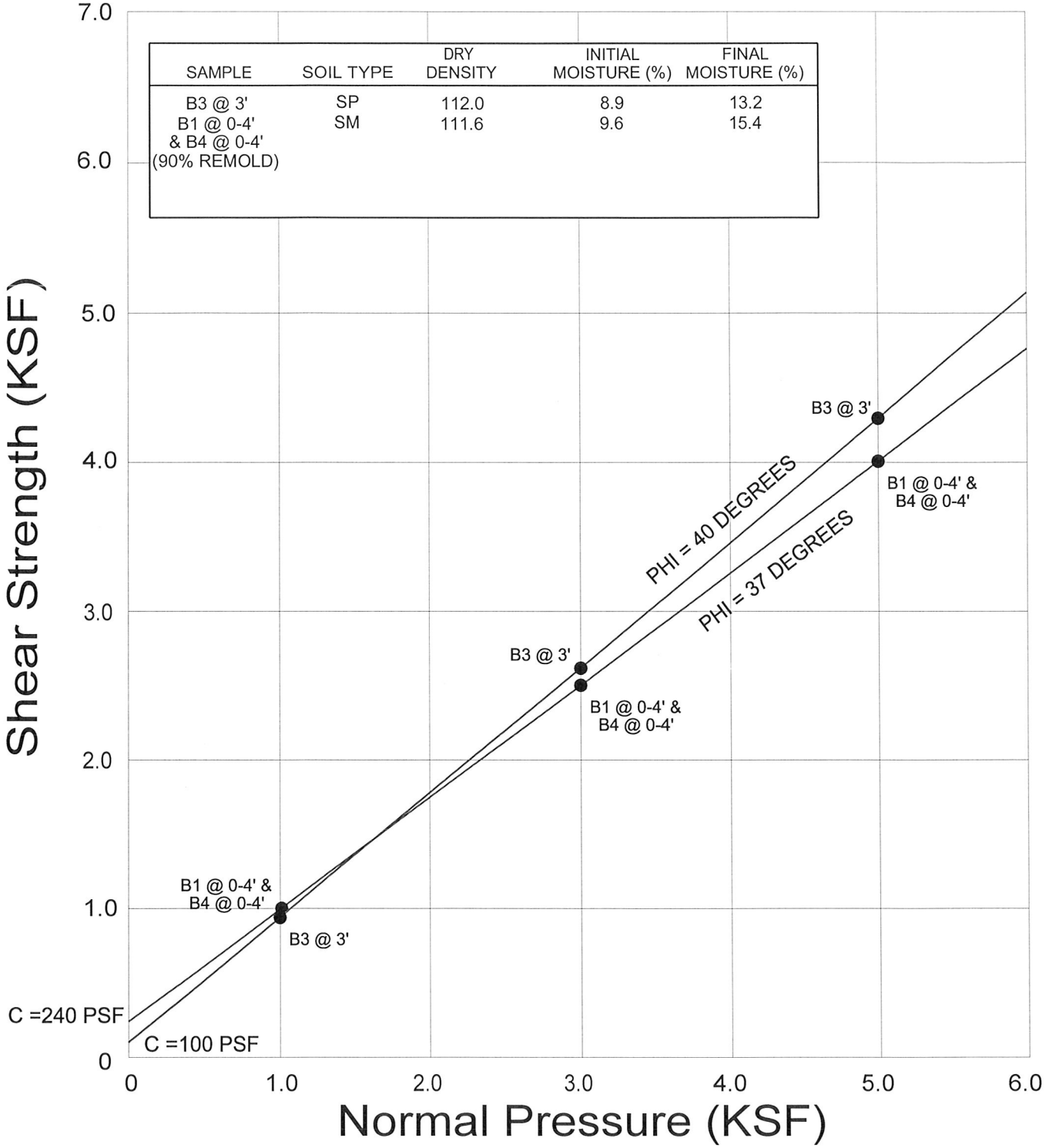
APPENDIX B

APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM) or other suggested procedures. Selected samples were tested for direct shear strength and consolidation characteristics, expansion characteristics, grain size, in-place dry density and moisture content. The results of the laboratory tests are summarized in Figures B1 through B4. The in-place dry density and moisture content of the samples tested are presented on the test pit logs in Appendix A.

SAMPLE	SOIL TYPE	DRY DENSITY	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3 @ 3'	SP	112.0	8.9	13.2
B1 @ 0-4' & B4 @ 0-4' (90% REMOLD)	SM	111.6	9.6	15.4



GEOCON
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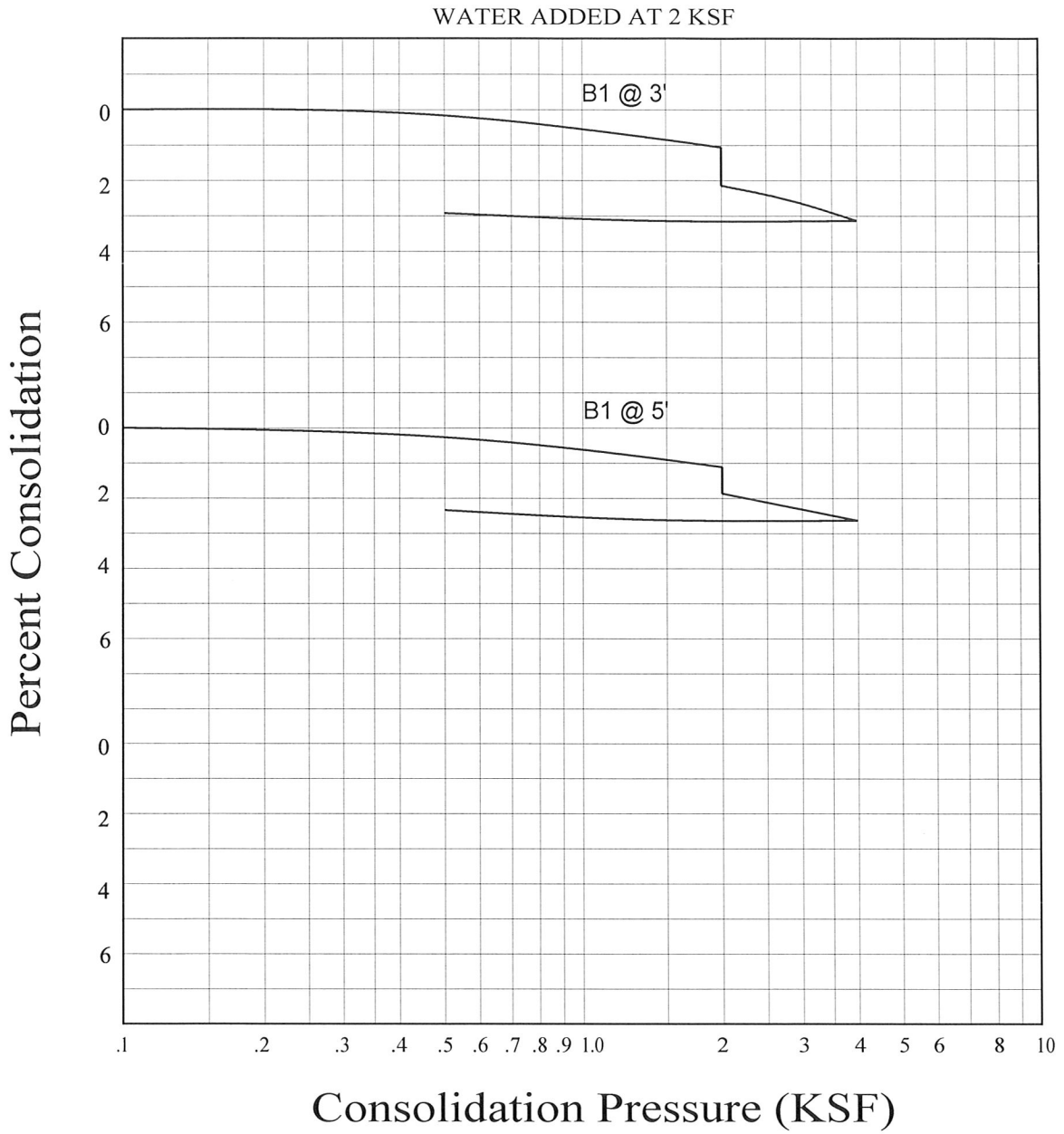
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

JMT		8000

DIRECT SHEAR TEST RESULTS

VERDUGO HILLS HIGH SCHOOL
LOS ANGELES UNIFIED SCHOOL DISTRICT
10625 PLAINVIEW AVENUE
TUJUNGA DISTRICT, LOS ANGLES, CALIFORNIA

APRIL 4, 2008	PROJECT NO. A8326-06-27	FIG. B1



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INLAND EMPIRE, INC.

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3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

JMT		8000

CONSOLIDATION TEST RESULTS

VERDUGO HILLS HIGH SCHOOL
LOS ANGELES UNIFIED SCHOOL DISTRICT
10625 PLAINVIEW AVENUE
TUJUNGA DISTRICT, LOS ANGLES, CALIFORNIA

APRIL 4, 2008	PROJECT NO. A8326-06-27	FIG. B2

SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS
ASTM D 4829-95

Sample No.	Moisture Content (%)		Dry Density (pcf)	Expansion Index	*CBC Classification
	Before	After			
B1 @ 0-4' & B4 @ 0-4' (MIX)	7.1	15.6	114.2	0	Very Low

*Reference: 2007 California Building Code.

SUMMARY OF LABORATORY MAXIMUM DENSITY AND AND OPTIMUM MOISTURE CONTENT TEST RESULTS
ASTM D 1557-02

Sample No.	Soil Description	Maximum Dry Density (pcf)	Optimum Moisture (%)
B1 @ 0-4' & B4 @ 0-4' (MIX)	Brown, Silty Sand	126.0	8.5

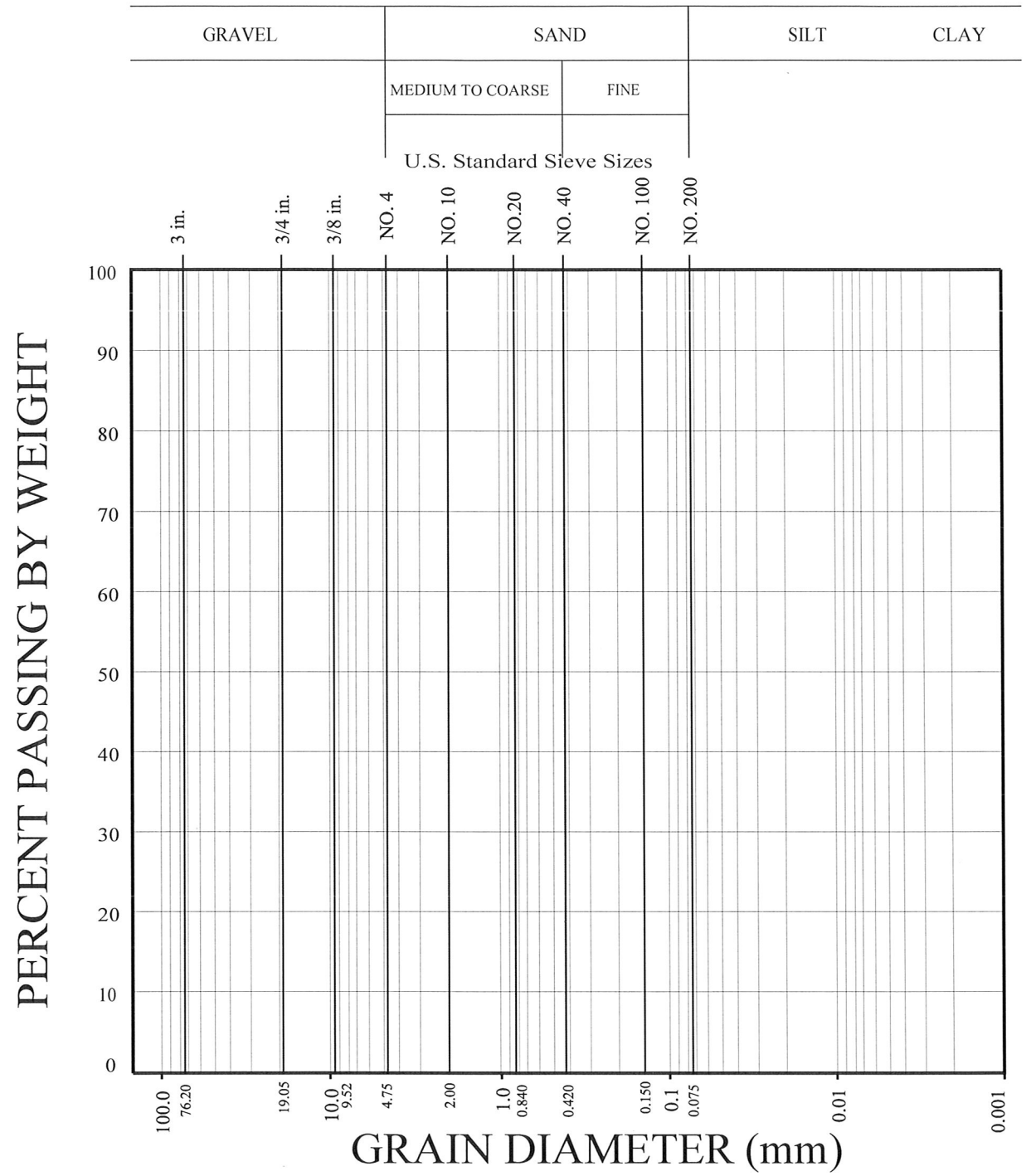
GEOCON
INLAND EMPIRE, INC.
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

JMT		8000

LABORATORY TEST RESULTS

VERDUGO HILLS HIGH SCHOOL
LOS ANGELES UNIFIED SCHOOL DISTRICT
10625 PLAINVIEW AVENUE
TUJUNGA DISTRICT, LOS ANGELES, CALIFORNIA

APRIL 4, 2008	PROJECT NO. A8326-06-27	FIG. B3



SAMPLE	UNIFIED SOIL CLASSIFICATION	SAMPLE	UNIFIED SOIL CLASSIFICATION
1- B1 & B4 @ 0-4' (MIX)	Silty Sand		

GEOCON
INLAND EMPIRE, INC.

ENVIRONMENTAL GEOTECHNICAL MATERIALS
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PHONE (818) 841-8388 - FAX (818) 841-1704

JMT		8000

GRAIN SIZE DISTRIBUTION

VERDUGO HILLS HIGH SCHOOL
LOS ANGELES UNIFIED SCHOOL DISTRICT
10625 PLAINVIEW AVENUE
TUJUNGA DISTRICT, LOS ANGELES, CALIFORNIA

APRIL 4, 2008	PROJECT NO. A8326-06-27	FIG. B4

APPENDIX C

APPENDIX C

AGRONOMIC LABORATORY TESTING RESULTS

FRUIT GROWERS LABORATORY, INC.

ANALYTICAL CHEMISTS

March 20, 2008

Geo-Con Consulting, Inc.
3303 San Fernando Boulevard,
Suite 100
Burbank, CA 91504

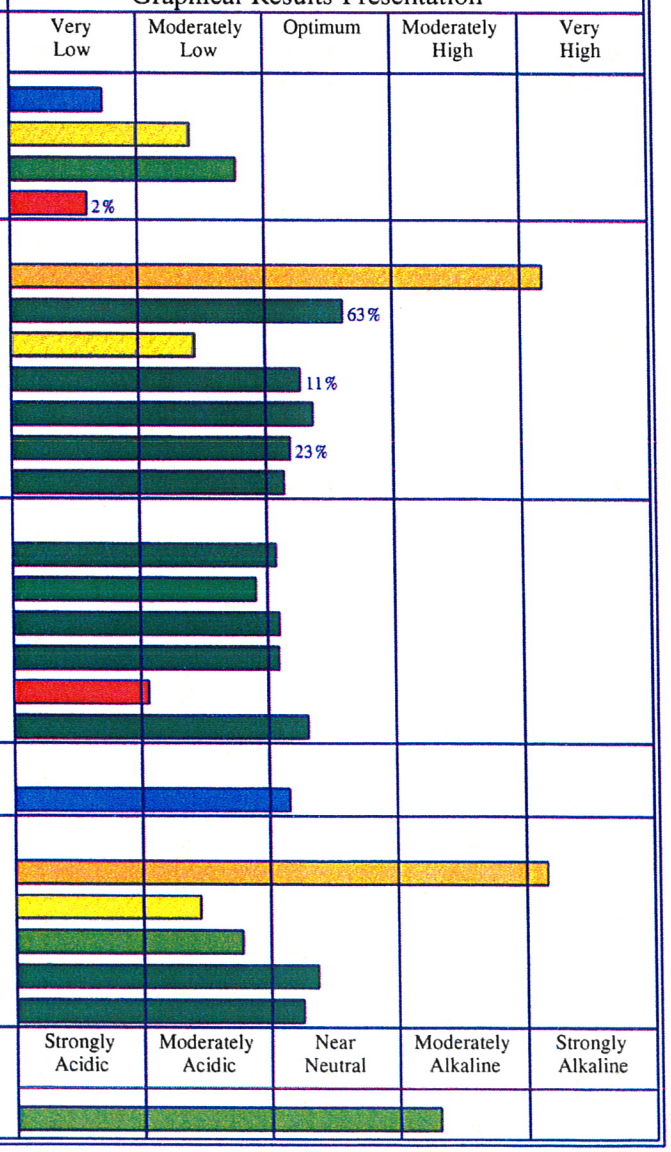
Description : B4 Asphalt Area
Project : Verdugo Hills H.S./A8326-06-27

Lab ID : SP 0802721-001
Customer ID : 2-21007

Sampled On : March 12, 2008
Sampled By : Cesar H. Larios
Received On : March 13, 2008
Depth : 12-14"
Meth Irrg. : S.S. Sprinklers

TALL FESCUE SOIL ANALYSIS

Test Description	Result	Units	Optimum Range
Primary Nutrients			
Nitrate-Nitrogen	19	Lbs/AF	54 - 94
Phosphorus-P_2O_5	160	Lbs/AF	230 - 320
Potassium-K_2O (Exch)	360	Lbs/AF	540 - 1400
Potassium-K_2O (Sol)	41	Lbs/AF	140 - 520
Secondary Nutrients			
Calcium (Exch)	10500	Lbs/AF	6900 - 9200
Calcium (Sol)	449	Lbs/AF	160 - 640
Magnesium (Exch)	390	Lbs/AF	700 - 1400
Magnesium (Sol)	49	Lbs/AF	10 - 160
Sodium (Exch)	160	Lbs/AF	0.0 - 660
Sodium (Sol)	184	Lbs/AF	0.0 - 1000
Sulfate	710	Lbs/AF	190 - 4000
Micro Nutrients			
Zinc	15.2	Lbs/AF	4.2 - 170
Manganese	8.0	Lbs/AF	8.4 - 260
Iron	56	Lbs/AF	33 - 290
Copper	4.8	Lbs/AF	1.3 - 44
Boron	1.04	Lbs/AF	2.0 - 8.0
Chloride	258	Lbs/AF	42 - 750
CEC	14.3	meq/100g	5.0 - 65
% Base Saturation			
CEC - Calcium	91.6	%	60 - 80
CEC - Magnesium	5.6	%	10 - 20
CEC - Potassium	1.33	%	2.0 - 5.0
CEC - Sodium	1.19	%	0.0 - 5.0
CEC - Hydrogen	0.00	%	0.0 - 3.0
pH	7.78	---	6.5 - 7.5



Good — Problem — Indicates physical conditions and/or phenological and amendment requirements.

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: 805-392-2000
FAX: 805-525-4172

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Stockton, CA 95215
TEL: 209-942-0182
FAX: 209-942-0423

Office & Laboratory
563 East Lindo Avenue
Chico, CA 95926
TEL: 530-343-5818
FAX: 530-343-3807

Field Office
Visalia, California
TEL: 559-734-9473
FAX: 559-734-8435
Mobile: 559-737-2399

March 20, 2008

Geo-Con Consulting, Inc.

Lab ID : SP 0802721-001
Customer ID : 2-21007
Description : B4 Asphalt Area

TALL FESCUE SOIL ANALYSIS

Test Description	Result	Units	Optimum Range	Graphical Results Presentation
Others				Satisfactory / Possible Problem / Moderate Problem / Increasing Problem
Soil Salinity	0.88	mmhos/cm	0.0 - 8.0	
SAR	1.1		0.0 - 6.0	
Limestone	< 0.10	%	0.0 - 0.50	
Lime Requirement	0	Tons/AF	---	0 / 1 / 2 / 3 / 4 / 5 / 6
Moisture	5.3	%	7.3 - 22	Very Low / Moderately Low / Optimum / Moderately High / Very High
Saturation	29.1	%	40 - 50	Loamy Sand / Sandy Loam / Loam / Silt Loam / Clay Loam / Clay / Organic

Good — Problem — Indicates physical conditions and/or phenological and amendment requirements.

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

Fertilization Recommendations

Nutrients	Lbs/Acre	via
Nitrogen	60	Soil
Phosphorus	185	Soil
Potassium (K2O)	260	Soil
Magnesium	None	Soil
Sulfur	None	Soil
Zinc	None	Soil

Nutrients	Lbs/Acre	via
Manganese	4.5	Soil
Iron	None	Soil
Copper	None	Soil
Boron	1.9	Soil
Lime	None	Soil

FRUIT GROWERS LABORATORY, INC.

CEL:NMC

Chad E. Lessard, Soil Scientist

FRUIT GROWERS LABORATORY, INC.

ANALYTICAL CHEMISTS

March 20, 2008

Geo-Con Consulting, Inc.
3303 San Fernando Boulevard,
Suite 100
Burbank, CA 91504

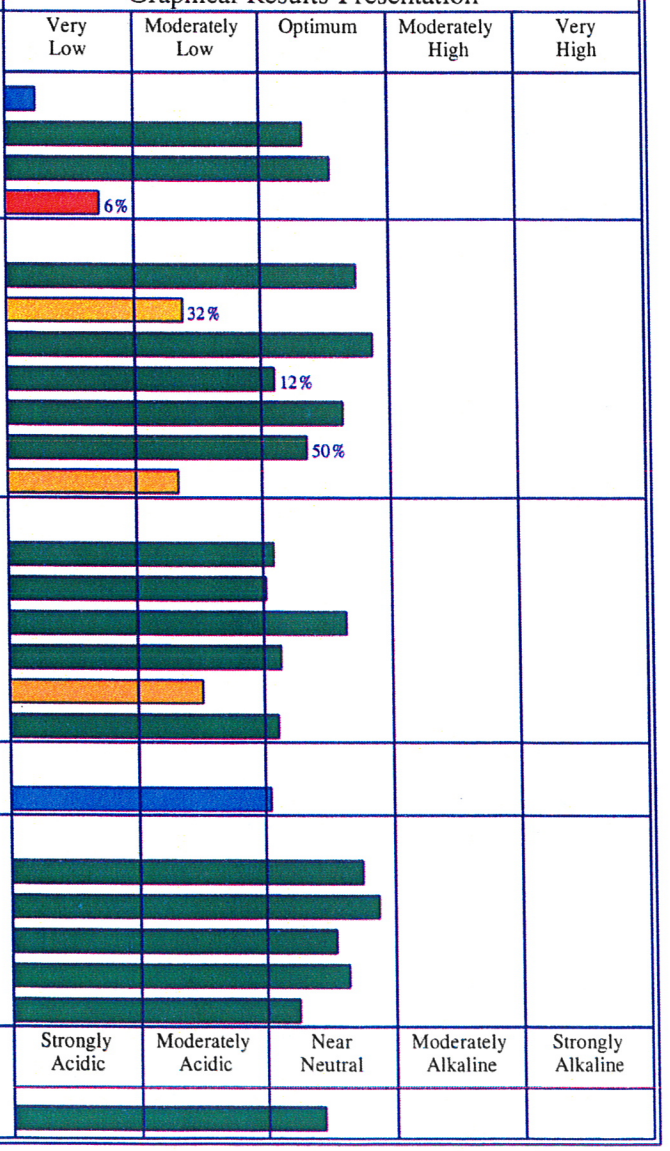
Description : B2 Field Area
Project : Verdugo Hills H.S./A8326-06-27

Lab ID : SP 0802721-002
Customer ID : 2-21007

Sampled On : March 12, 2008
Sampled By : Cesar H. Larios
Received On : March 13, 2008
Depth : 12-14"
Meth Irrg. : S.S. Sprinklers

TALL FESCUE SOIL ANALYSIS

Test Description	Result	Units	Optimum Range
Primary Nutrients			
Nitrate-Nitrogen	6	Lbs/AF	53 - 93
Phosphorus-P_2O_5	260	Lbs/AF	230 - 320
Potassium-K_2O (Exch)	510	Lbs/AF	280 - 700
Potassium-K_2O (Sol)	49	Lbs/AF	140 - 510
Secondary Nutrients			
Calcium (Exch)	4490	Lbs/AF	3600 - 4800
Calcium (Sol)	104	Lbs/AF	160 - 640
Magnesium (Exch)	680	Lbs/AF	360 - 730
Magnesium (Sol)	24	Lbs/AF	9.0 - 160
Sodium (Exch)	190	Lbs/AF	0.0 - 340
Sodium (Sol)	187	Lbs/AF	0.0 - 530
Sulfate	120	Lbs/AF	180 - 4000
Micro Nutrients			
Zinc	16.8	Lbs/AF	3.8 - 160
Manganese	12.0	Lbs/AF	7.6 - 240
Iron	184	Lbs/AF	30 - 270
Copper	6.4	Lbs/AF	1.1 - 41
Boron	1.48	Lbs/AF	2.0 - 8.0
Chloride	116	Lbs/AF	41 - 750
CEC	7.48	meq/100g	5.0 - 65
% Base Saturation			
CEC - Calcium	74.9	%	60 - 80
CEC - Magnesium	18.7	%	10 - 20
CEC - Potassium	3.61	%	2.0 - 5.0
CEC - Sodium	2.81	%	0.0 - 5.0
CEC - Hydrogen	0.00	%	0.0 - 3.0
pH	6.94	---	6.5 - 7.5



Good — Problem — Indicates physical conditions and/or phenological and amendment requirements.

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

Corporate Offices & Laboratory
853 Corporation Street
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FAX: 209-942-0423

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TEL: 530-343-5818
FAX: 530-343-3807

Field Office
Visalia, California
TEL: 559-734-9473
FAX: 559-734-8435
Mobile: 559-737-2399

March 20, 2008

Geo-Con Consulting, Inc.

Lab ID : SP 0802721-002
Customer ID : 2-21007
Description : B2 Field Area

TALL FESCUE SOIL ANALYSIS

Test Description	Result	Units	Optimum Range	Graphical Results Presentation
Others				Satisfactory / Possible Problem / Moderate Problem / Increasing Problem
Soil Salinity	0.37	mmhos/cm	0.0 - 8.0	
SAR	2.1		0.0 - 6.0	
Limestone	< 0.10	%	0.0 - 0.50	
Lime Requirement	0	Tons/AF	---	0 / 1 / 2 / 3 / 4 / 5 / 6
Moisture	8.6	%	7.1 - 21	Very Low / Moderately Low / Optimum / Moderately High / Very High
Saturation	28.5	%	40 - 50	Loamy Sand / Sandy Loam / Loam / Silt Loam / Clay Loam / Clay / Organic

Good — Problem — Indicates physical conditions and/or phenological and amendment requirements.

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

Fertilization Recommendations

Nutrients	Lbs/Acre	via
Nitrogen	70	Soil
Phosphorus	None	Soil
Potassium (K2O)	150	Soil
Magnesium	None	Soil
Sulfur	50	Soil
Zinc	None	Soil

Nutrients	Lbs/Acre	via
Manganese	None	Soil
Iron	None	Soil
Copper	None	Soil
Boron	1.4	Soil
Lime	None	Soil

FRUIT GROWERS LABORATORY, INC.

CEL:NMC

Chad E. Lessard, Soil Scientist

SOIL ANALYSES TERMS

Primary Nutrients

Nitrogen

Nitrogen is essential to plant growth and is usually available in two forms:

a) Nitrate-Nitrogen - D.I. (de-ionized) water extractable
This is a water soluble form of nitrogen which is most readily available to plants but is also vulnerable to leaching.

b) Ammonium Nitrogen - potassium chloride extractable
The ammonium nitrogen found in soil is usually derived from decomposing organic matter and is readily absorbed by plants.

Phosphorus

Phosphorus is essential to plant growth. The sodium bicarbonate method is used to measure the available phosphorus in calcareous soils. The weak Bray is the more appropriate method to measure available phosphorus in soils having a pH of less than 6.

Potassium - Ammonium acetate (exchangeable) and saturated paste (water soluble) extractable.
Potassium is essential to plant growth. Ample levels of exchangeable potassium do not always result in optimum plant uptake. The rate at which exchangeable potassium becomes available to plants is influenced by soil type, pH, temperature and moisture content. The soluble potassium found in a soil is readily available for plant uptake.

Secondary Nutrients

Calcium, Magnesium - Ammonium acetate (exchangeable) and saturated paste (water soluble) extractable.
These elements are essential to plant growth and also influence soil structure. See SAR.

Sodium - Ammonium acetate (exchangeable) and saturated paste (water soluble) extractable.
This element is not generally believed to be essential to plant growth. A high level of sodium in relation to calcium and magnesium will result in poor soil structure. See SAR.

Sulfate - Saturated paste (water soluble) extractable
Sulfur is an essential plant nutrient. Sulfate is a readily available form of sulfur in soil.

Micronutrients

Zinc, Manganese, Iron, Copper - DTPA extractable
These elements are essential to plant growth but are required in very small quantities.

Boron - Saturated paste (water soluble) extractable. A hot water extraction is used in the analysis of soils with very low levels of boron to determine deficiency potential.
Boron is an essential plant nutrient. Boron is required in very small quantities and can also be very toxic when present, even in slightly higher than needed levels.

Chloride - Saturated paste (water soluble) extractable
Chloride is essential to plant growth in quantities ranging from less than 150 ppm (0.015%) to over 1000ppm (0.1%), depending upon specific plant requirements. Actual chloride deficiencies are rare.

Cation Exchange Capacity (CEC)

The CEC is a measure of a soil's capacity to hold the positively charged ions of calcium, magnesium, potassium, sodium and hydrogen. The proper balance (ratio) of these elements has an important impact on soil structure and affects their availability for plant uptake.

Conversion Factors

* 1 acre foot of soil = 4,000,000 (approx lbs)
* PPM x 4 ~ lbs./acre ft
* Meq/l x eq. wt. = ppm
* SO_4 x 0.33 = S
* P x 2.3 = P_2O_5
* K x 1.2 = K_2O
* NO_3 x 0.23 = N

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P.O. Box 272 / 853 Corporation Street
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FAX: (805) 392-2063

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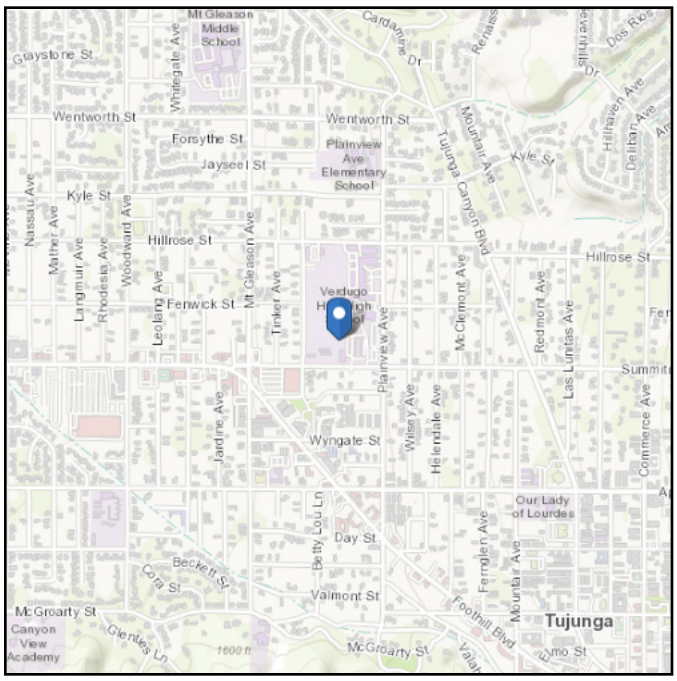
Field Office
Visalia, California
TEL: (559) 734-9473
FAX: (559) 734-8435
Mobile: (559) 737-2399

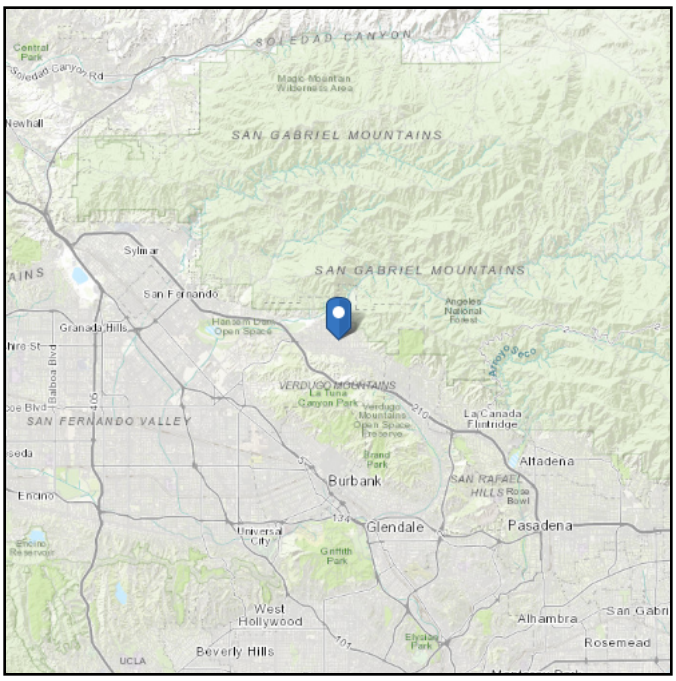
APPENDIX D

ASCE Hazards Report

Address:
No Address at This Location

Standard:	ASCE/SEI 7-22	**Latitude:**	34.260342
Risk Category:	II	**Longitude:**	-118.299504
Soil Class:	Default	**Elevation:**	1566.2785027554248 ft (NAVD 88)





Seismic

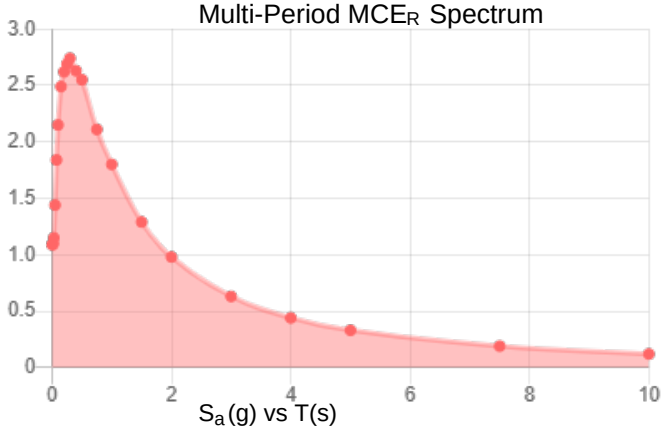
Site Soil Class: Default

Results:

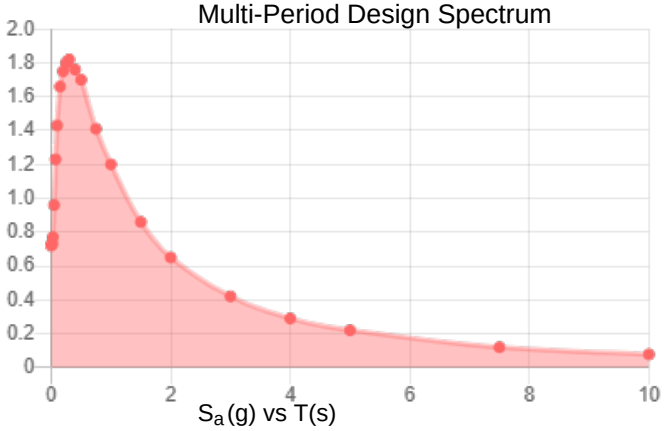
PGA_M :	0.95	T_L :	8
S_{MS} :	2.46	S_S :	2.29
S_{M1} :	1.8	S_1 :	0.77
S_{DS} :	1.64	V_{S30} :	260
S_{D1} :	1.2		

Seismic Design Category: E

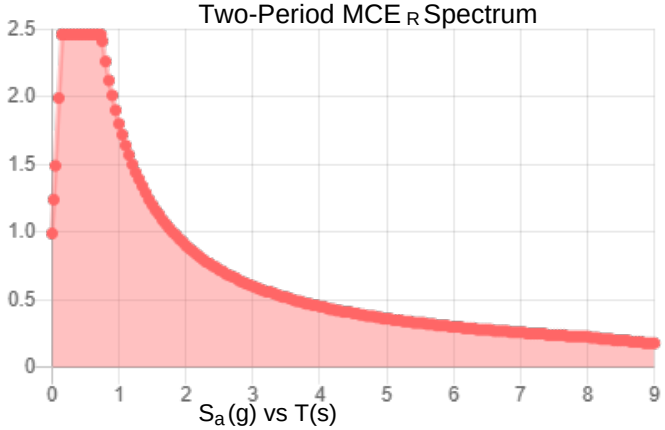
Multi-Period MCE_R Spectrum



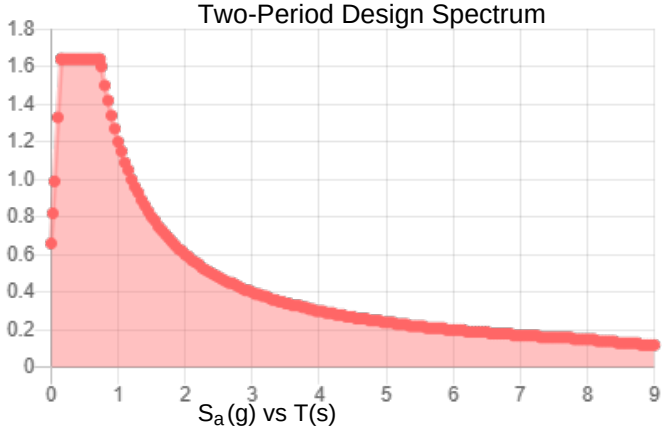
Multi-Period Design Spectrum



Two-Period MCE_R Spectrum



Two-Period Design Spectrum



MCE_R Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Design Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Data Accessed: Tue Jan 27 2026

Date Source:
USGS Seismic Design Maps based on ASCE/SEI 7-22 and ASCE/SEI 7-22 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-22 Ch. 21 are available from USGS.

The ASCE Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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Period	Site Class Default
0.00	0.72
0.01	0.73
0.02	0.73
0.03	0.77
0.05	0.96
0.08	1.23
0.10	1.43
0.15	1.66
0.20	1.75
0.25	1.80
0.30	1.82
0.40	1.76
0.50	1.70
0.75	1.41
1.00	1.20
1.50	0.86
2.00	0.65
3.00	0.42
4.00	0.29
5.00	0.22
7.50	0.12
10.00	0.08

Values are from https://ascehazardtool.org/

GEOCON

MULTI-PERIOD MCER SPECTRUM

Checked by: GAK

Project No.: A8326-06-63G

LAUSD - VERDUGO HILLS HS
10625 PLAINVIEW AVENUE
TUJUNGA, CALIFORNIA

JAN. 2026 Figure D1

INTEROFFICE CORRESPONDENCE
Los **A**ngeles **U**nified **S**chool **D**istrict
Office of Environmental Health and Safety

TO: Michael Toubi, AIA, Contract Professional Design Manager
FSD – M&O – Architecture & Engineering Services

DATE: April 13, 2026

FROM: Jonathan Colomb, Contract Professional
Site Assessment Project Manager
Office of Environmental Health and Safety

SUBJECT: VERDUGO HILLS HIGH SCHOOL
NEW BASEBALL & SOFTBALL SCOREBOARDS (COLIN#: 10375279)
SCAQMD RULE 1466 SOIL SAMPLING DETERMINATION

This correspondence has been prepared by the Office of Environmental Health and Safety (OEHS) to document the applicability of South Coast Air Quality Management District (SCAQMD) Rule 1466 to the New Baseball and Softball Scoreboards project (the "Project") at Verdugo Hills High School, 10625 Plainview Avenue, Tujunga, California 91042. OEHS has determined that SCAQMD Rule 1466 does **NOT** apply to this project for the reasons stated herein.

Rule 1466 does not apply to earth-moving activities that disturb less than 50 cubic yards of soil [§(b)(2)]. Based on OEHS' review of the following plan set, less than 50 cubic yards of soil will be disturbed:

- New Scoreboards For Softball & Baseball, prepared by Maintenance and Operations, Architectural/Engineering Services, Facilities Services Division, dated March 18, 2026 (14 sheets).

Because Rule 1466 does not apply to this project, OEHS will not collect or analyze soil samples for the referenced project.

If the project scope of work is modified to include the disturbance of over 50 cubic yards of soil, stop work must be initiated and OEHS must be notified immediately.

As a precaution, dust mitigation measures shall be implemented during any project-related excavation and/or earth-disturbing activities. Additionally, if any stained or odorous soil is observed during construction, stop work shall be initiated and OEHS shall be notified.

If the project requires the disposal of excess soil, soil sampling per the Los Angeles Unified School District Specification Section 01-4524 will be required prior to characterization and acceptance for off-site disposal.

Should you have any questions or concerns regarding this memorandum, please contact OEHS Site Assessment Project Manager Jonathan Colomb at (213) 241-0384 or cp-jonathan.colomb@lausd.net.

COPY: Project File

LOS ANGELES UNIFIED SCHOOL DISTRICT

TO: Michael Toubi
Los Angeles Unified School District
Maintenance and Operations – Architecture & Engineering Services
333 S. Beaudry Avenue
Los Angeles, CA 90017

Greta Galoustian
Los Angeles Unified School District
Facilities Environmental Technical Unit
1240 S. Naomi Avenue, 2nd Floor
Los Angeles, CA 90021

Asbestos Engineering Assessment
Verdugo Hills Senior High School (8914)
10325 Plainview Avenue
Tujunga, CA 91042
Verdugo Hills HS – New Baseball/Softball Scoreboard

Work Order Number: 39471422
Lab Work Order Number: 39471429
COLIN Number: 10375279

Date Prepared: November 17, 2025

Prepared by: Samuel Madera-Marquez

Digitally signed by Samuel Madera-Marquez
DN: cn=Samuel Madera-Marquez, o=Facilitties Environmental Techinical Unit (FETU), ou=Facilitties Environmental Techinical Unit, email=s.maderamarquez@lausd.net, c=US
Date: 2025.11.17 12:52:19 -08'00'

Samuel Madera-Marquez, CAC# 15-5476 (exp. 7/14/26)
Senior Insulator/Asbestos Abatement Worker
Facilities Environmental Technical Unit (FETU)
(213) 745-1450

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LIST OF ACRONYMS

ACM	Asbestos-Containing Material
ACBM	Asbestos-Containing Building Material
ACCM	Asbestos-Containing Construction Material (California only)
AHERA	Asbestos Hazard Emergency Response Act
CAC	Certified Asbestos Consultant
Cal/OSHA	California Division of Occupational Safety and Health
CCR	California Code of Regulations
CSST	Certified Site Surveillance Technician
CFR	Code of Federal Regulations
FETU	Facilities Environmental Technical Unit (LAUSD)
HEPA	High Efficiency Particulate Air
HVAC	Heating, Ventilation, and Air Conditioning
LAUSD	Los Angeles Unified School District
NEA	Negative Exposure Assessment
NESHAP	National Emission Standards for Hazardous Air Pollutants
OEHS	Office of Environmental Health & Safety (LAUSD)
PEL	Permissible Exposure Limit
PLM	Polarized Light Microscopy
RACM	Regulated Asbestos-Containing Material
SCAQMD	South Coast Air Quality Management District
USEPA	United States Environmental Protection Agency (EPA)

LIST OF DEFINITIONS

Abatement: Control/elimination of asbestos through operations and maintenance, repair, enclosure, encapsulation, or removal.

Amended Water: Water to which a chemical wetting agent or surfactant (wetting agent) has been added to improve penetration into ACM as stated in SCAQMD Rule 1403.

Asbestos: Asbestiform varieties of Chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite grunerite), anthophyllite tremolite, and actinolite.

Asbestos-Containing Material (ACM): Material or product containing more than one percent (1%) asbestos

Asbestos-Containing Building Material (ACBM): Surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a school building.

Asbestos-Containing Construction Material (ACCM): For California only. Manufactured construction material that contains more than one-tenth of one percent (0.1%) asbestos by weight.

Building ID Number or Code: Six-digit alphanumeric identification code assigned to each building on a site; sometimes referred to as the insurance code, ID number, or other similar terms.

District: The Los Angeles Unified School District and its representatives.

Friable: Used in reference to a school building material which, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure.

High Efficiency Particulate Air (HEPA): Filter or system capable of removing particulates of 0.3 microns or larger from air at 99.97 percent or greater efficiency.

Nonfriable: Used in reference to a school building material which, when dry, may not be crumbled, pulverized, or reduced to powder by hand pressure.

Plasticize: To cover floors, ceilings, and walls with plastic (polyethylene) sheeting.

Regulated Area: Area established by the employer (abatement contractor) to demarcate where asbestos work is conducted, and by the adjoining area where debris and waste from such asbestos work accumulate; a work area within which airborne concentrations of asbestos exceed or may exceed (with reasonable possibility) the permissible exposure limit.

I. Executive Summary, Introduction, Purpose, and Scope of Services

For the upcoming boring project at Verdugo Hills Senior High School (8914), the Facilities Environmental Technical Unit (FETU) has performed an asbestos engineering assessment of the work area involved. On October 22, 2025, the project engineering assessment was conducted by Samuel Madera-Marquez a Senior Insulator/Asbestos Abatement Worker with the Facilities Environmental Technical Unit (FETU) of the Los Angeles Unified School District (LAUSD). The asbestos engineering assessment performed was limited to the areas and building materials that will be impacted by the project, as indicated in the Request for Assistance (RFA) Form from Mr. Michael Toubi of Maintenance & Operations – Architecture & Engineering Services, dated October 10, 2025.

II. Scope of Work

The asbestos engineering assessment performed was limited only to the areas involved and building materials impacted by the scope of work for the above referenced project. The following building will be impacted by the scope of work:

Grounds (8914-G)

The main scope of this project is to conduct boring testing by the batting cages on campus.

The location above is shown on the following page. The scope of work is provided in Appendix C of this report.

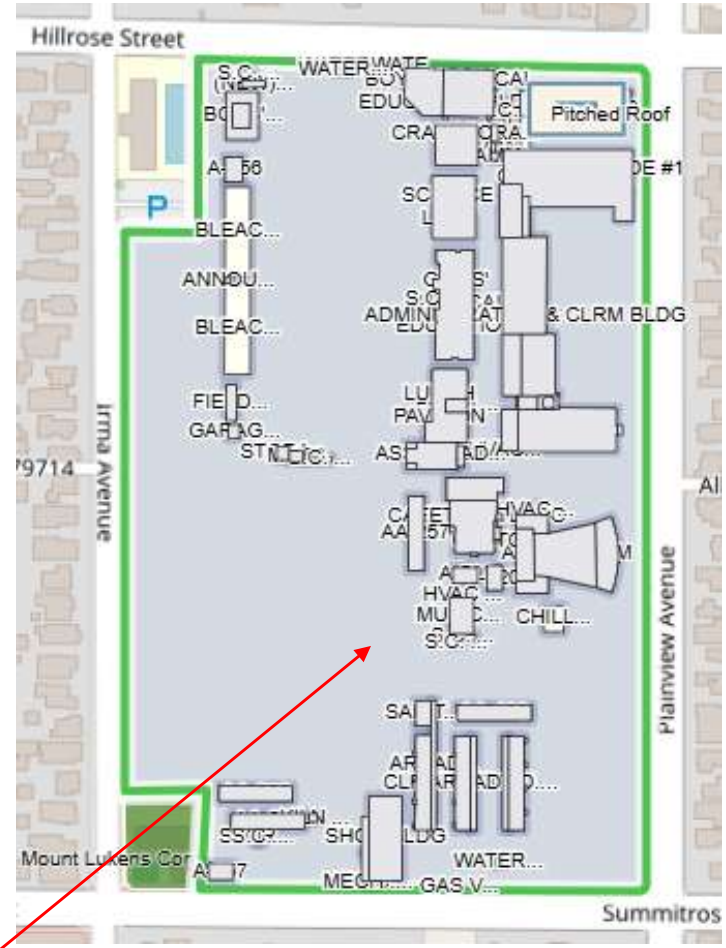
III. Discussion of Survey Findings and Recommendations.

FETU Senior Samuel Madera-Marquez visited the job site on October 22, 2025, to access the current condition and quantity of suspect asbestos-containing material to be impacted by this project. The certified asbestos consultant (CAC) conducting the assessment was Samuel Madera-Marquez (CAC# 15-5476). Samples were analyzed by Polarized Light Microscopy (PLM – Method EPA /600/R-93/116) by the LAUSD Facilities Services Division (FSD) Laboratory (NVLAP# 101505-0) located at 1449 South San Pedro Street, Los Angeles, CA 90015, (213) 745-1138.

The survey was conducted to verify the current condition and quantity of suspect material to be disturbed. The tables below include materials that are anticipated to be impacted during the course of this project.

The FETU's findings are as follows:

Location of Project Area on Site Plan



Boring Location

A. Grounds (8914-G):

1. Asbestos-Containing Materials (ACM > 1%) and Asbestos-Containing Construction Materials (ACCM > 0.1%) anticipated to be disturbed during the project:

Grounds (8914-G)					
Material	Location/Impact	Condition	Quantity (Square Feet)	Sample Number	Friable
a. none	n/a Scope of impact: n/a	n/a	n/a	n/a	***n/a***

2. Non-Asbestos-Containing Materials (Non-ACM) anticipated to be disturbed during the project:

Grounds (8914-G)		
Material	Location/Impact	Sample Number
a. Asphalt	By Batting Cages (as noted on previous page) Scope of impact: disturbance	2510-2041 to 2510-2043 10/22/25

3. Recommendations for handling ACM *and/or* ACCM:

   a. None

4. Additional Notes:

   a. No coated surfaces were observed at the boring locations. See section #V. regarding Lead Related Construction and Impact to Coated Surfaces.

IV. General Recommendations and Notes

All suspect construction materials not identified above are presumed asbestos-containing. All attics and crawl spaces not specified herein as clear for normal access and ceiling spaces not inspected and identified as absent of contamination are to be considered asbestos-contaminated areas. If materials not identified in this report will be disturbed or if attics, crawl spaces or ceiling spaces not identified in this report as clear of contamination are to be accessed during construction, notify IOR or OAR. They will contact the Facilities Environmental Technical Unit for further direction prior to disturbance of these materials or access of the contaminated spaces.

If during the course of the project contractor encounter suspect materials which are not identified in this report, contact the Facilities Environmental Technical Unit (FETU) immediately for further direction prior to disturbance of these materials.

V. Lead Related Construction / Impact to Coated Surfaces

A. The building involved with this project was built as Follow:

Grounds (8914-G)

B. Renovation, repair or painting work performed on buildings regardless of the date of construction require special handling and environmental monitoring when coated surfaces including, but not limited to, painted, varnished, and glazed surfaces are impacted. All coated surfaces applied are assumed to be lead-based. All work shall be performed in compliance with Facilities Standard Specification, Section 02 8333, "Lead Abatement and Lead Related Construction Work." XRF testing methodology is not acceptable in determining negative for lead content for Cal/OSHA compliance purposes, except for notification requirements. Disturbance of coated surfaces by contractors will be monitored by qualified District staff or Environmental Consultant sufficient to ensure that proper training and work procedures, cleanup, and waste handling are employed.

C. Loose or flaky paint that will be disturbed during the work of this project or in close proximity of the work area shall be stabilized by removing the loose or flaky paint and leaving only paint in stable condition.

D. It should be noted that any coated surfaces and building materials not listed above are to be considered lead-based and asbestos-containing respectively. Should the project require the disturbance of these surfaces and building materials, notify FETU.

If any changes occur in the scope of work, notify the FETU before such changes are implemented.

This report may not be changed, modified or include additions without the express written permission from the FETU. If you have any question regarding this report, contact Samuel Madera-Marquez at (213) 745-1450.

APPENDICES

APPENDIX A. Analytical Results

APPENDIX B. Certification

APPENDIX C. Request from Assistance (RFA) and Scope of Work

APPENDIX A.

Analytical Results

LOS ANGELES UNIFIED SCHOOL DISTRICT
FACILITIES SERVICES DIVISION
CHAIN-OF-CUSTODY FOR BULK ANALYSIS

59432

SITE NAME: Verdugo Hills HS CODE: 8914 PROJ. DESC.: Boring

SITE ADDRESS: 10625 Plainview Ave., Tujunga, CA 91042 COLIN #: 10375279

SAMPLED BY: Sam Madera DATE SAMPLED: 10/22/2025 DEPT. / CONSULTANT: FETU TEL: (213)745-1450

Fill in all information legibly and precisely. Original must be submitted with the samples. Make a copy before submitting samples. Results and a copy of the Chain of Custody (COC) with sample numbers will be submitted to FETU when analysis is completed. ***USE BLACK/BLUE INK ONLY. DO NOT USE WHITE OUT! ALL RUSH ANALYSIS AND POINT COUNT REQUESTS MUST BE APPROVED BY FETU SUPERVISORS.***

LAB NUMBER	SAMPLE NUMBER	BUILDING NUMBER	BUILDING NAME	ROOM NUMBER AND/OR NAME	LOCATION IN ROOM	MATERIAL TYPE (DESCRIBE)	FRIABLE (YES or NO)
2510-2041	1	8914-G	Grounds	Section 1	c	Asphalt (core)	NO
2510-2042	2	8914-G	Grounds	Section 2	c	Asphalt (core)	NO
2510-2043	3	8914-G	Grounds	Section 3	c	Asphalt (core)	NO

	NAME (PRINT & SIGN)	DEPT./AREA/CONSULTANT	# OF SAMPLES	DATE	TIME
Relinquished By:	Sam Madera	FETU	3	10/22/25	1:45
Received By:	Arturo Cosio	FSD Lab	3	10/22/25	1:45 pm
Relinquished By:					
Received By:					

Maximo Work Order Number: 39471429 Project Type: ☐ Maintenance (MA) ☐ Deferred Maintenance ☑ Bond (specify: K,R,Y,Q) ☐ Other: _____

FETU USE ONLY

FETU REVIEWED BY: _____ RUSH? ☐ Yes ☐ No APPROVAL: _____

FETU REVIEW DATE: 10/22/2025 POINT COUNT? ☐ Yes ☐ No PT. CT. RUSH? ☐ Yes ☐ No APPROVAL: _____

Los Angeles Unified School District
Facilities Services Division Laboratory
1449 S. San Pedro St.
Los Angeles, CA 90015
(213)745-1138

Asbestos Bulk Sample Analysis Laboratory Report

Laboratory Report

VERDUGO HILLS HS

Site ID: 8914

10625 Plainview Avenue, Tujunga, CA, 91042

NVLAP (TESTING) LAB# 101505-0
Method EPA/600/R-93/116(MOD) July 1993
Date Received: 10/22/2025

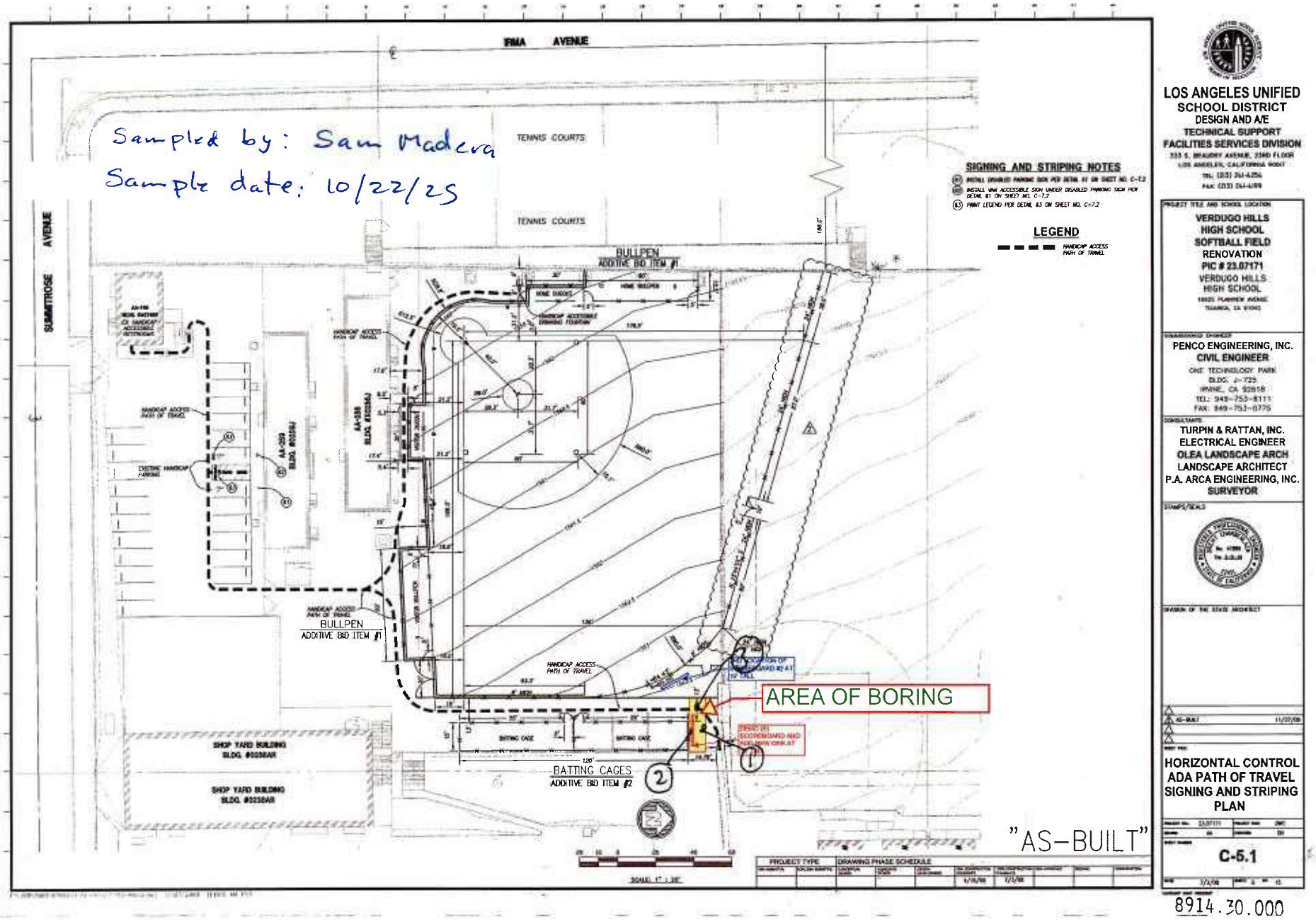
LAUSD Lab#	MIC	Date Analyzed	BUILDING/AREA SAMPLED	MATERIAL DESCRIPTION	CHR %	AM %	CROC %	TREM %	ACT %	ANTH %	TOTAL %	MATERIAL BACKGROUND
2025102041	RC	10/24/2025	8914-G : GROUNDS SECTION 1 CENTER	HOMOGENEOUS; NON-FRIABLE; BLACK; ASPHALT; TARLIKE, ROCK	0	0	0	0	0	0	0	ASPHALT, ROCK, TAR
2025102042	RC	10/24/2025	8914-G : GROUNDS SECTION 2 CENTER	HOMOGENEOUS; NON-FRIABLE; BLACK; ASPHALT; TARLIKE, ROCK	0	0	0	0	0	0	0	ASPHALT, ROCK, TAR
2025102043	RC	10/24/2025	8914-G : GROUNDS SECTION 3 CENTER	HOMOGENEOUS; NON-FRIABLE; BLACK; ASPHALT; TARLIKE, ROCK	0	0	0	0	0	0	0	ASPHALT, ROCK, TAR

Lab Supervisor Signature and Date _____ 10 / 27 / 25

Signature of Analyst _____

Note: 0%: No Asbestos Detected. <1%: Asbestos Detected Above 0% and Below or Equal to 1%.
NA: Not Applicable. "Quantification done by optical estimate" 1 - 5 % considered non-quantifiable.
This report relates to only the material tested. An asterisk '*' indicates preliminary results.
The laboratory is not responsible for samples and data collected by personnel who are not part of the laboratory.

This report is not used by LAUSD to claim product endorsement by NVLAP or any agency of the U.S. Government.
This report may not be reproduced except in its entirety.


Sampled by: Sam Madera
Sample date: 10/22/25
FIMA AVENUE
SUMMITROSE AVENUE
TENNIS COURTS
TENNIS COURTS
BULLPEN
ADDITIVE BID ITEM #1
BULLPEN
ADDITIVE BID ITEM #1
BATTING CAGES
ADDITIVE BID ITEM #2
SHOP YARD BUILDING
SHOP YARD BUILDING
AREA OF BORING
SIGNING AND STRIPING NOTES
LEGEND
HANDICAP ACCESS PATH OF TRAVEL
"AS-BUILT"
LOS ANGELES UNIFIED SCHOOL DISTRICT
DESIGN AND A/E TECHNICAL SUPPORT
FACILITIES SERVICES DIVISION
VERDUGO HILLS HIGH SCHOOL SOFTBALL FIELD RENOVATION
PIC # 23.07171
VERDUGO HILLS HIGH SCHOOL
PENCO ENGINEERING, INC.
CIVIL ENGINEER
TURPIN & RATTAN, INC.
ELECTRICAL ENGINEER
OLEA LANDSCAPE ARCH
LANDSCAPE ARCHITECT
P.A. ARCA ENGINEERING, INC.
SURVEYOR
HORIZONTAL CONTROL
ADA PATH OF TRAVEL
SIGNING AND STRIPING
PLAN
C-5.1
8914.30.000

APPENDIX B.

Certifications

STATE OF CALIFORNIA Gavin Newsom, Governor
DEPARTMENT OF INDUSTRIAL RELATIONS
Division of Occupational Safety and Health-Asbestos & Carcinogen Unit
1750 Howe Avenue, Suite 460
Sacramento, CA 95825
(916) 574-2993 Office http://www.dir.ca.gov/dosh/asbestos.html actu@dir.ca.gov

506265476C

7/14/2025

Samuel Madera
13434 Gunderson Avenue
Downey CA 90242

Dear Certified Asbestos Consultant or Technician:

Enclosed is your certification card. **To maintain your certification, you must abide by the rules printed on the back of the certification card.**

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card. [8 CCR 341.15(h)(1)].

Please hold and do not send copies of your required AHERA refresher renewal certificates to our office until you apply for renewal of your certification.

Certificates must be kept current if you are actively working as a CAC or CSST. The grace period is only for those who are not actively working as an asbestos consultant or site surveillance technician.

Please contact our office at the above address or email w any changes in your contact/mailing information within 15 days of the change.

Sincerely,

Dean Mochrie, CAC
Senior Safety Engineer

Attachment: Certification Card

cc: File

Renewal – Card Attached (08/24)


State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant
Samuel Madera
Name
Certification No. **15-5476**
Expires on **07/14/2026**
This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq of the Business and Professions Code.

APPENDIX C.

Request from Assistance (RFA) and Scope of Work

REQUEST FOR ASSISTANCE FORM

FACILITIES ENVIRONMENTAL TECHNICAL UNIT

Request for (Please select):

- [x] Environmental Assessment (Phase 1) & Abatement Design (Phase 2)
- [ ] Environmental Project Monitoring (Phase 3)
- [ ] Water Intrusion/Mold Remediation
- [ ] Asbestos Assistance
- [ ] Insulation
- [ ] Other:

Section 1 - General Information *(complete this section for all request types):*

Date: 10/10/2025	Requestor Office: AE Services M&O	
Requestor Name: Michael Toubi	Title: Design Manager	
Phone No: 213-241-4686	Email: cp-michael.toubi@lausd.net	Site Reg/Dist: North
Site Name: Verdugo Hills HS		Site Code: 13642

Building Name & Number (e.g., Administrative Building (001CDG)), Specific Location (e.g., Room #1):
Baseball Batting Cages. Next to the Baseball Field

Section 2 - Project & Funding Information *(provide as much project and/or funding information as possible)*

Official Project Name: Verdugo Hills HS - New Baseball/Softball Scoreboard

Cost Ctr or WBS Project #	Func. Area	GL Acct	Colin Project #	Funding Source
1891401	0000-8500-14935		10375279	Measure-RR

Section 3 - Phase 1 & 2 Request Information* *(Note: Failure to attach a scope or drawings may delay assessment)*

Written scope attached? Yes	Scope % Complete: 0 %	DSA drawings attached? No	Drawing % Complete: 0 %
Phase 1 & 2 supplemental form attached? No	Project Pre-Bid Meeting Date: N/A		

Note: *Phase 1 & 2 supplemental form MUST be filled out for ALL phase 1 & 2 requests! See page 2 of this form.

Section 4 - Phase 3 Request Information *(Note: You must attach a copy of FETU approved "Request to Advertise" form)*

WO # on RTA:	RTA Approver Name:

Section5 - Water Intrusion/Mold Remediation, Insulation, or Other Request Information

Describe the Problem:

Section 6 - Asbestos Assistance Request Information

Room/Area Requiring Assistance:		
Asbestos Management Plan has been reviewed? No	Work Order #:	
Bulk sample has been completed on:	Requesting FETU to sample suspect materials? No	
Name Building Material in Question:	Asbestos Present? No	
Description of Material(s) to be Abated:		
Quantity of Material to be Abated:	Abatement Type Requested:	
Tentative Start Date of Requestor's Project:	Abatement is required for:	

FOR FETU USE ONLY

FETU Received Date:	Senior Assigned:	Date Assigned:
Parent WO #	Ph. 1 & 2 WO #:	Ph. 3 WO #:
Crew I&P WO #:	Crew Removal WO #:	Crew Lab. WO #:
Date Assigned for Samples:	Date Assigned for Abatement:	
Date Requestor Contacted with Bulk Sample Results:	By:	
Date Requestor Notified of Abatement Completion:	By:	

ENVIRONMENTAL ASSESSMENT (PHASE 1) & ABATEMENT DESIGN (PHASE 2) SUPPLEMENTAL FORM

Purpose of Form: This form will assist the Requestor to determine the proper asbestos and lead requirements by identifying the project as a NO, MINIMAL OR MAJOR IMPACT PROJECT. In turn, information the Requestor provides herein will assist FETU to expeditiously process request for no or minimal impact projects that don't necessarily require a Phase 1 Environmental Assessment.

Date: 10/10/2025	**Requestor:** Michael Toubi	**School:** Verdugo Hills HS
Official Project Name: Verdugo Hills HS - New Baseball/Softball Scoreboard		

Directions: Based on the project scope of work, please identify if this Project is a No, Minimal or Major Impact Project by checking the corresponding box below. Also, please check the appropriate sub-box(es) under each main category as appropriate and include any other information that substantiates this project, as No, Minimal or Major Impact Project in the COMMENTS section below.

☒ **THIS IS A NO IMPACT PROJECT**

- ☒ This project does not impact any structures/buildings. (*For example, new stand-alone shade structure.)*
- ☐ Materials to be impacted by this project are not coated with paint, varnish, glazing or any other coating, and are not suspect, known or assumed to be asbestos-containing. In addition, this project does not require working in or exposing any ceiling spaces, attics, crawl spaces or other building interstitial areas. *In the COMMENTS section below, identify the material (e.g., unpainted concrete floor, unpainted metal duct, unpainted concrete walls, unpainted brick wall, etc.).*
- ☐ This project includes work in a building(s) but does not impact any coated surfaces or building materials and does not require working in or exposing any ceiling spaces, attics, crawl spaces or other building interstitial areas. *Elaborate in COMMENTS section below. For example, the scope only includes the re-programming of the fire alarm system or only includes new utilities point of connection at existing conduit and pull box at exterior of building.*
- ☒ This project includes excavation.
- ☐ This project does not include excavation.
- ☐ New construction. Construction Date:
- ☐ Other. *Explain in COMMENTS section below.*

☐ **THIS IS A MINIMAL IMPACT PROJECT**

- ☐ This project requires minimal disturbance or removal of building materials and meets the following criteria:
  - Disturbance or removal of building materials, are less or equal to three (3) square feet per impact area.
  - Total quantity of building material impact does not exceed 99 square feet.
  - No ceiling spaces, attics, crawl spaces or other building interstitial areas are required to be worked in or exposed.
- ☐ This project impacts coated surfaces only.
- ☐ This project does not impact coated surfaces.

An example of a project, which may be a minimal impact project, is a fire alarm upgrade project, which only requires coring, installing surface mounted conduits/raceways and replacing existing surface-mounted fire alarm devices.

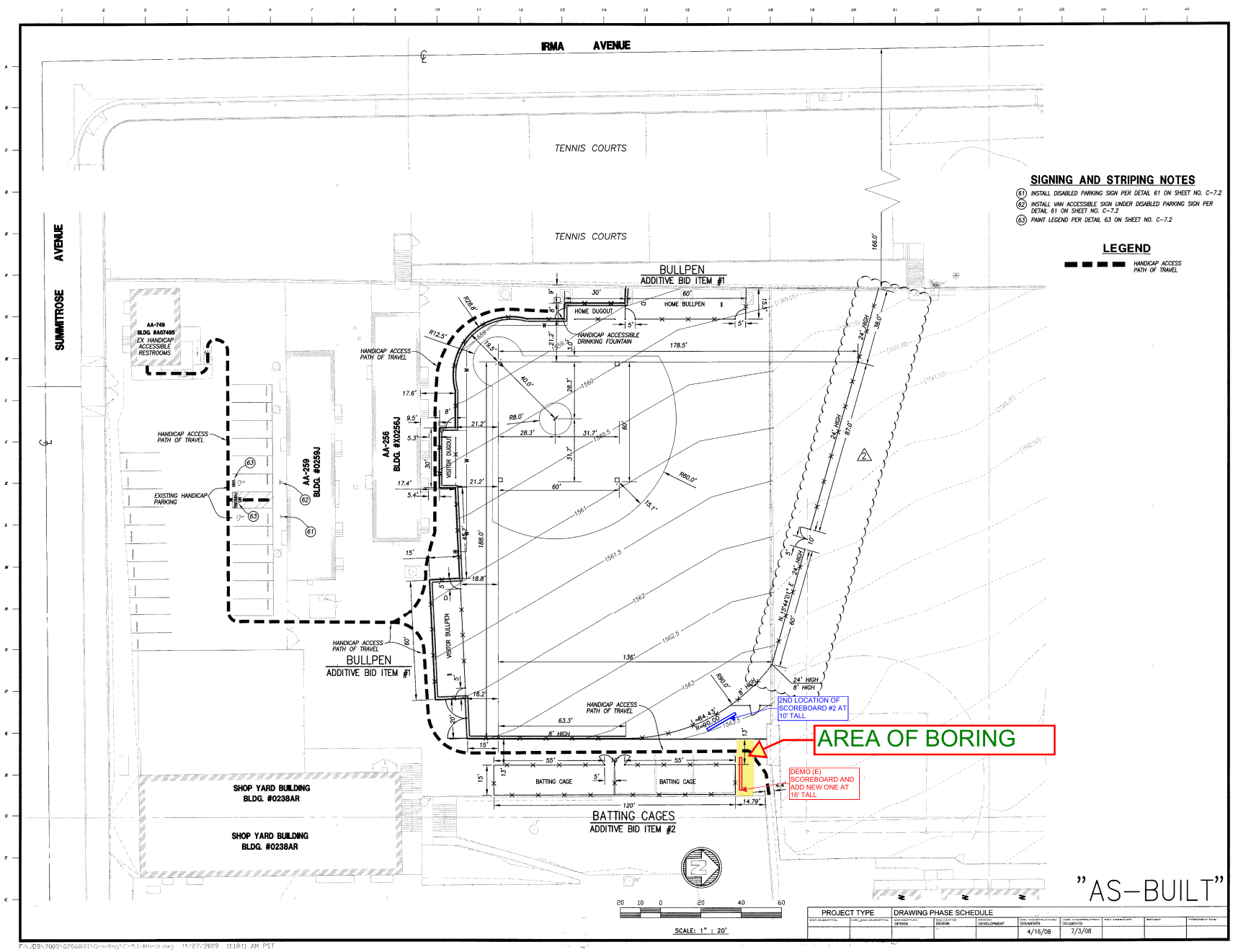
☐ **THIS IS A MAJOR IMPACT PROJECT**

- ☐ This project requires major impacts to building materials and/or work in ceiling spaces/attics/crawl spaces/other interstitial building areas. Major impacts to building materials are those that are greater than three (3) square feet for any impact area or total quantity of building material to be impacted exceeds 99 square feet total.

☒ **BASED ON THE SCOPE OF WORK, I AM NOT ABLE TO DETERMINE IF THE PROJECT IS A NO, MINIMAL OR MAJOR IMPACT PROJECT**

COMMENTS (Include supplemental information regarding the scope of this project and/or additional information regarding no, minimal or major impacts to building materials)

This request is just for Boring testing.



PROJECT TYPE	DRAWING PHASE SCHEDULE									
					4/16/08	7/3/08				

LOS ANGELES UNIFIED SCHOOL DISTRICT
DESIGN AND A/E TECHNICAL SUPPORT
FACILITIES SERVICES DIVISION
333 S. BEAUDRY AVENUE, 25RD FLOOR
LOS ANGELES, CALIFORNIA 90017
TEL: (213) 241-4254
FAX: (213) 241-4199

PROJECT TITLE AND SCHOOL LOCATION

VERDUGO HILLS HIGH SCHOOL SOFTBALL FIELD RENOVATION
PIC # 23.07171
VERDUGO HILLS HIGH SCHOOL
10625 PLAINVIEW AVENUE
TUJUNGA, CA 91042

COMMISSIONED ENGINEER
PENCO ENGINEERING, INC.
CIVIL ENGINEER
ONE TECHNOLOGY PARK
BLDG. J-725
IRVINE, CA 92618
TEL: 949-753-8111
FAX: 949-753-0775

CONSULTANTS
TURPIN & RATTAN, INC.
ELECTRICAL ENGINEER
OLEA LANDSCAPE ARCH
LANDSCAPE ARCHITECT
P.A. ARCA ENGINEERING, INC.
SURVEYOR

STAMPS/SEALS

REGISTERED PROFESSIONAL ENGINEER — BRENT CHAMBERLAIN — No. 41889 — Exp. 3-31-10 — CIVIL — STATE OF CALIFORNIA

DIVISION OF THE STATE ARCHITECT

2	AS-BUILT	11/27/09

SHEET TITLE:

HORIZONTAL CONTROL ADA PATH OF TRAVEL SIGNING AND STRIPING PLAN

PROJECT NO.:	23.07171	PROJECT ENG:	BWC
DRAWN:	AA	CHECKED:	ON

SHEET NUMBER

C-5.1

DATE: 7/3/08 SHEET: 5 OF 15

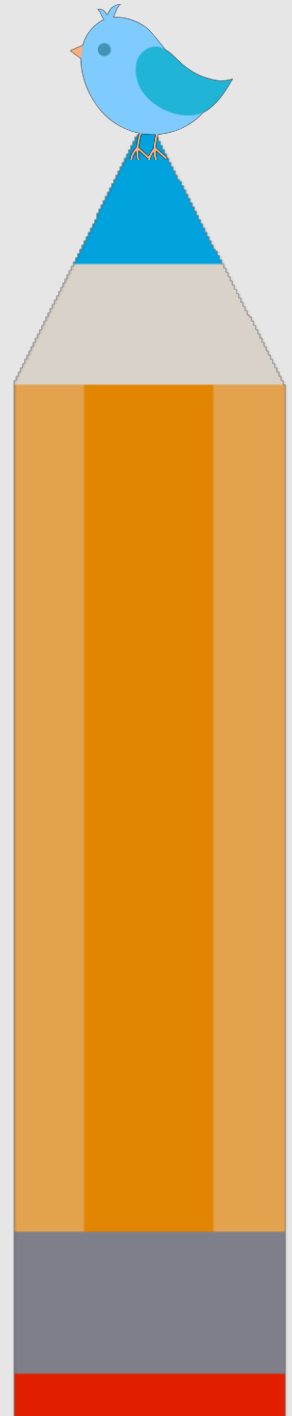
"JANUARY 2007 VERSION"

8914.30.000


B S
0 IN
AWAY
DONS
R H E

OEHS
Bird Nesting

February 1 – August 31 Yearly



OEHS Nesting Bird Training Agenda

1. Laws and Regulations
2. OEHS Process
3. Case Studies from District sites

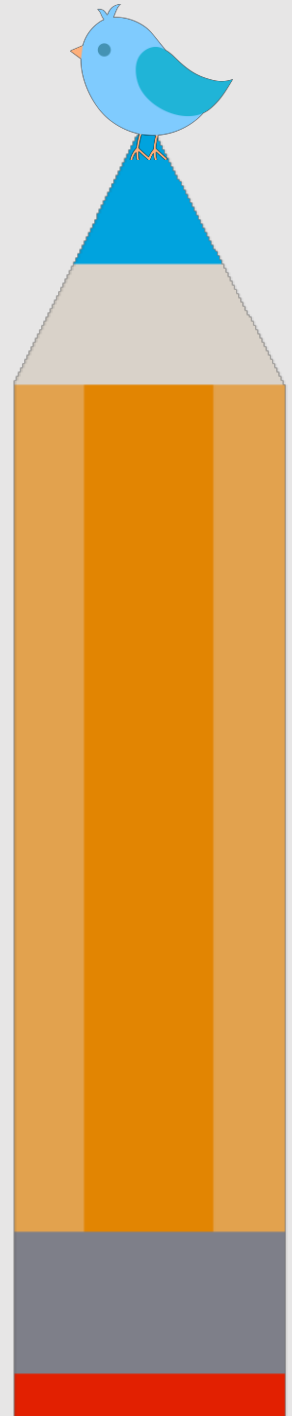


Working Around Birds

- It doesn't matter where you work, in the city, suburbs, or country. Birds are everywhere.
- OEHS implements federal and international requirements to protect most bird nests and baby birds. These federal and international requirements make it illegal to collect and keep them.
- OEHS also implements LAUSD's Standard Conditions of Approval for District Construction, Upgrade, and Improvement Projects.



Laws and Regulations



Laws and Regulations

Migratory Bird Treaty Act of 1918 (MBTA)

- The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712) implements four international conservation treaties that the U.S. entered into with different countries. It is intended to ensure the sustainability of populations of all protected migratory bird species.

Migratory Bird Treaty Reform Act of 2004

- The Migratory Bird Treaty Reform Act of 2004 (MBTRA) amended the MBTA by stating the MBTA applies only to migratory bird species that are native to the United States or U.S. territories, and that a native migratory bird species is one that is present as a result of natural biological or ecological processes.



Laws and Regulations

The Migratory Bird Treaty Act (MBTA) prohibits the disturbance and/or take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service.

- *Statute: 16 U.S.C. 707(a) Misdemeanor Offense*
  - Any person, association, partnership, or corporation who violates or fails to comply with any provisions or regulations of the MBTA shall be deemed guilty of a misdemeanor.

- *Statute: 16 U.S.C. 707(b) Felony Offense*
  - Any person who knowingly takes any migratory bird with intent to sell, offer to sell, barter, or offer to barter any migratory bird shall be guilty of a felony.



Laws and Regulations - Penalty

- **Misdemeanor offenses**
  - *Individuals* shall be fined a maximum of $5,000 and/or imprisoned for up to six months
  - *Organizations* shall be fined a maximum of $10,000
- **Felony offenses**
  - *Individuals* shall be fined maximum of $250,000 and/or imprisoned for up to two years
  - *Organizations* shall be fined a maximum of $100,000

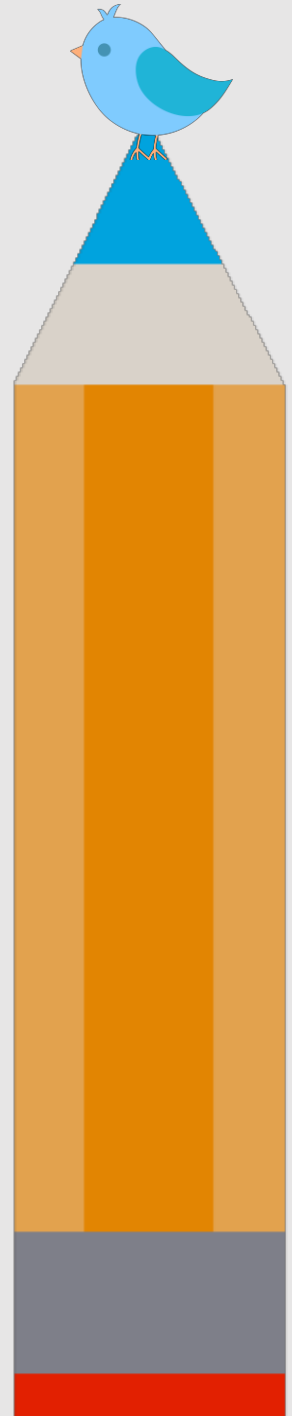


LAUSD Standard Conditions of Approval

- LAUSD Standard Conditions of Approval for District Construction, Upgrade, and Improvement Projects (Standard Conditions; SCs) are uniformly applied development standards.
- SC-BIO-3 Bird and Bat Nesting Sites
  - Is implemented when construction activities within native habitat; that has the potential to disturb birds or bats; or during construction / demolition / removal of trees /vegetation during nesting season (February 1 through August 31).



OEHS Process



LAUSD Tree Trimming and Tree Removal Procedure

- LAUSD adheres to the MBTA and OEHS implements its requirements by ensuring nesting bird surveys are conducted prior to all tree removals between **February 1st and August 31st**
- All tree trimming and removal conducted on District property is required to adhere to the procedures described in the LAUSD OEHS Tree Trimming and Removal Procedure available at: https://www.lausd.org/ceqa
- Tree trimming or removal should be avoided during the avian breeding and nesting season, when feasible.

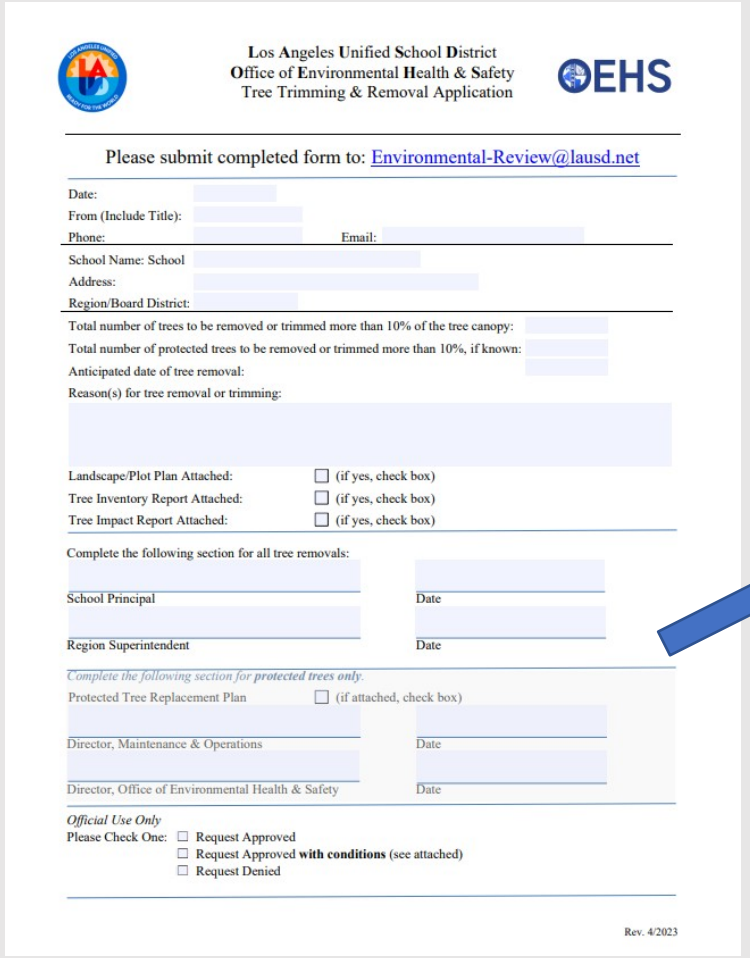


LAUSD Tree Trimming and Tree Removal Applications

- The LAUSD Tree Trimming and Tree Removal Application is available on our website: https://www.lausd.org/ceqa.
- The application requires sign off by the Principal and Region Superintendent for all tree removal on District property.
- If the trees are a protected species, the application requires additional sign off by both the M&O Director and OEHS Director.
- Trees may not be removed until the completed application is submitted to OEHS (Environmental-Review@lausd.net).



Tree Trimming and Tree Removal Application



Los Angeles Unified School District
Office of Environmental Health & Safety
Tree Trimming & Removal Application

OEHS

Please submit completed form to: Environmental-Review@lausd.net

Date:
From (Include Title):
Phone: Email:
School Name: School
Address:
Region/Board District:
Total number of trees to be removed or trimmed more than 10% of the tree canopy:
Total number of protected trees to be removed or trimmed more than 10%, if known:
Anticipated date of tree removal:
Reason(s) for tree removal or trimming:

Landscape/Plot Plan Attached: ☐ (if yes, check box)
Tree Inventory Report Attached: ☐ (if yes, check box)
Tree Impact Report Attached: ☐ (if yes, check box)

Complete the following section for all tree removals:

School Principal — Date
Region Superintendent — Date

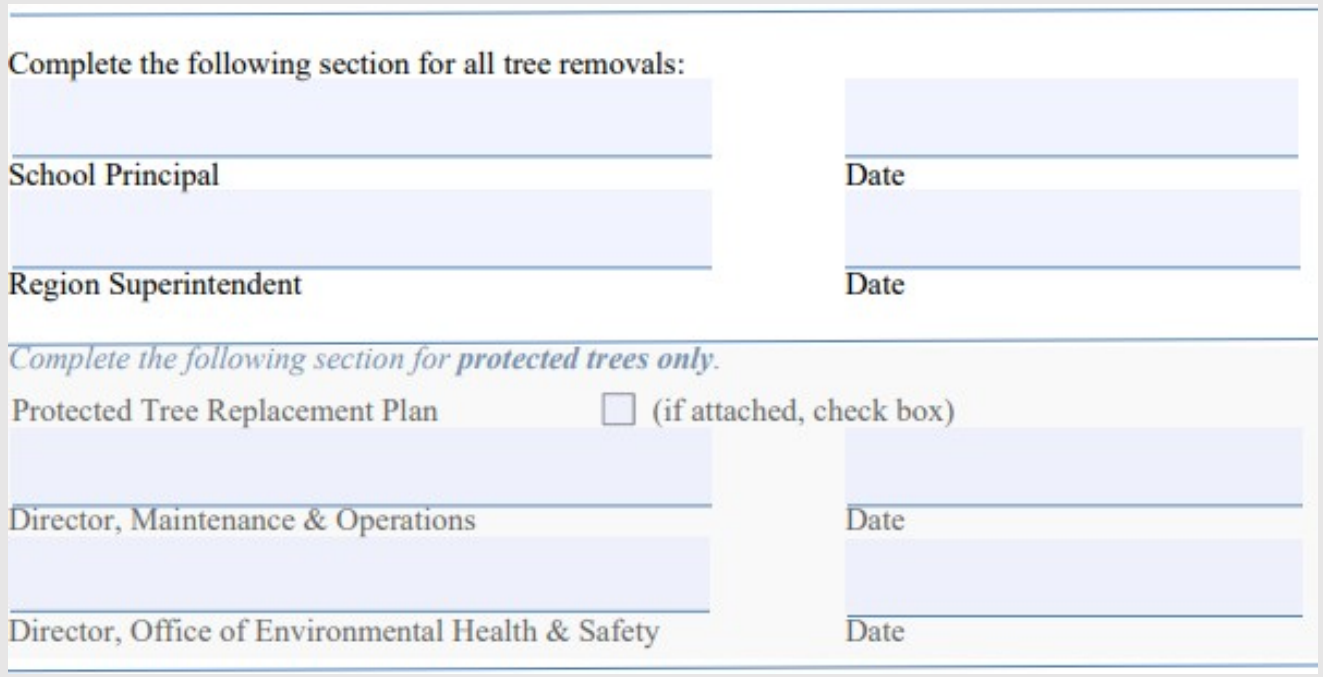
*Complete the following section for **protected trees only**.*

Protected Tree Replacement Plan ☐ (if attached, check box)

Director, Maintenance & Operations — Date
Director, Office of Environmental Health & Safety — Date

Official Use Only
Please Check One: ☐ Request Approved
☐ Request Approved **with conditions** (see attached)
☐ Request Denied

Rev. 4/2023



Complete the following section for all tree removals:

School Principal — Date

Region Superintendent — Date

*Complete the following section for **protected trees only**.*

Protected Tree Replacement Plan ☐ (if attached, check box)

Director, Maintenance & Operations — Date

Director, Office of Environmental Health & Safety — Date



Scheduling a Nesting Bird Survey

Contact OEHS as soon as you have a confirmed date for removing tree(s).

Survey needs to occur within 3 days prior to the tree removal.

If the tree removal is delayed past the three day window, an updated survey will need to be conducted.



An Active Nest was found… What now?

If the nesting bird survey identifies one or more active nests of a protected species on your job site, you will be required to:

- Stop all work in the vicinity of the nest.
- Protect the nest in place until it is no longer active by creating a no-work zone around it, the perimeter of which will be determined based on the species of bird.
- Contractors should be made aware of the active nest.



An Active Nest was found… What now?

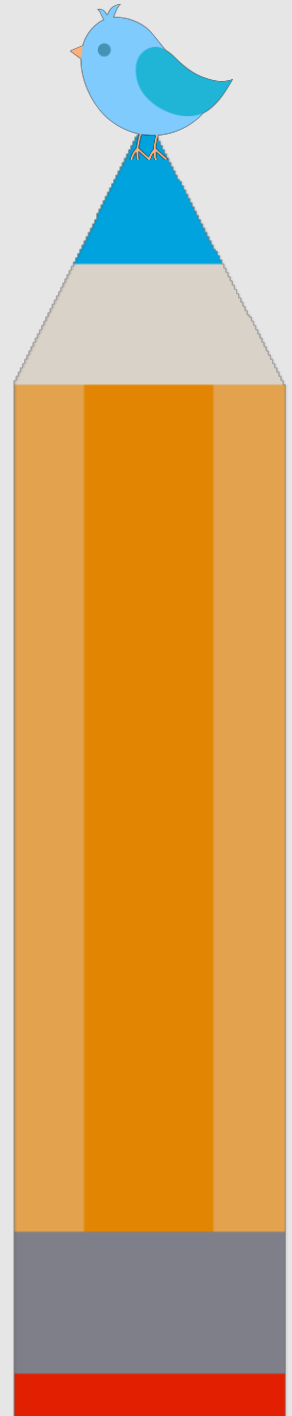
If a contractor identifies one or more active nests on your job site, you will be required to:

- Contact OEHS immediately.
- Stop all work in the vicinity of the nest.
- Protect the nest in place until it is no longer active by creating a no-work zone around it, the perimeter of which will be determined based on the species of bird.
- Everyone on the job site should be made aware of the active nest.

Following these steps will ensure adherence to MBTA.



Case Studies from District Sites



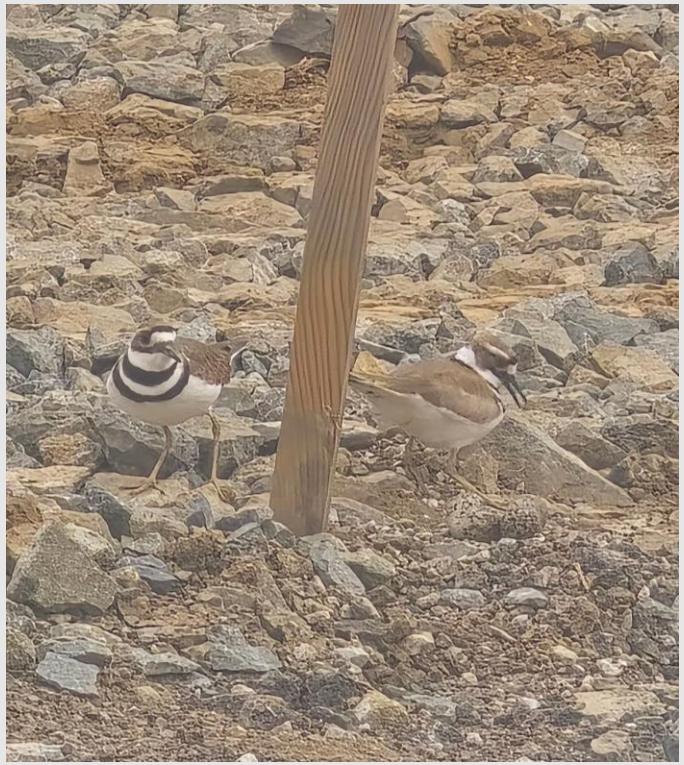
Unsuccessful fledging on a LAUSD Job Site







Unsuccessful fledging on a LAUSD Job Site







Successful fledging on a LAUSD Job Site







Successful fledging on a LAUSD Job Site







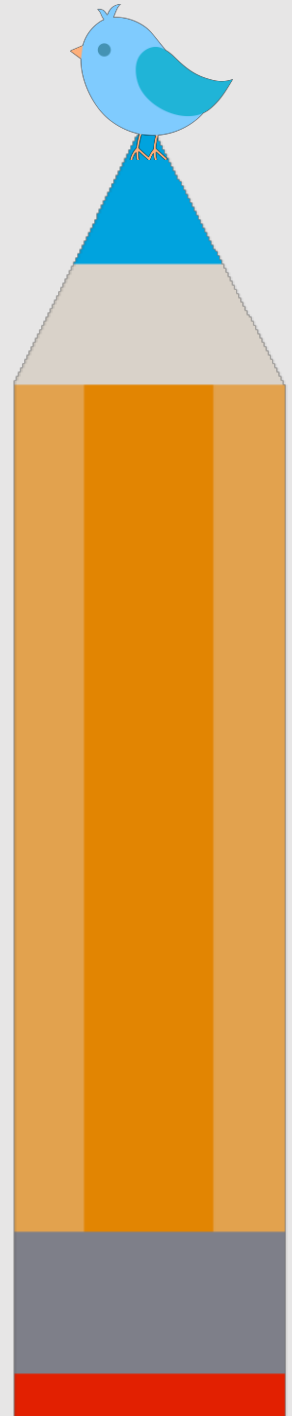
Successful fledging on a LAUSD Site







QUESTIONS?



DSA

103-25

LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

☑ Project has a geotechnical report or construction documents require special inspection by a geotechnical engineer.
☐ Project does NOT have and does NOT require a geotechnical report.

	TYPE	BY
S1 | SOILS - GENERAL		
☑ S1a: Site Preparation	Periodic	GE
S2 | COMPACTION AND FILL		
☑ S2a: Fill Materials	Test	LOR*
☑ S2b: Fill Placement	Continuous	GE*
☑ S2c: Compaction	Test	LOR*
S3 | DRIVEN DEEP FOUNDATIONS (PILES)		
☐ S3a: Materials and Members	Continuous	GE*
☐ S3b: Pile Capacity	Test	LOR*
☐ S3c: Driving Operations	Continuous	GE*
☐ S3d: Pile Installation	Continuous	GE*
☐ S3e: Specialty Piles	*	*
S4 | CAST-IN-PLACE DEEP FOUNDATIONS (PIERS)		
☑ S4a: Drilling Operations	Continuous	GE*
☑ S4b: Pier Construction	Continuous	GE*
☐ S4c: Bearing Strata	Continuous	GE*
S5 | RETAINING WALLS		
☐ S5a: Backfill Placement	Continuous	GE*
☐ S5b: Soil Reinf. and Drainage	Continuous	GE*
☐ S5c: Segmental Retaining Walls	Continuous	GE*
S6 | OTHER SOILS		
☐ S6a: Soil Improvement Test	Test	GE*
☐ S6b: Soil Improvement Inspection	Continuous	GE*
☐ S6c: Not used.	N/A	N/A
☐ S6d: Not used.	N/A	N/A
☐ S6e: Not used.	N/A	N/A
☐ S6f: Not used.	N/A	N/A
☐ S6g: Not used.	N/A	N/A
☐ S6h: Not used.	N/A	N/A
☐ S6i: Not used.	N/A	N/A
☐ S6j: Not used.	N/A	N/A
☐ S6k: Not used.	N/A	N/A
☐ S6l: Not used.	N/A	N/A
☐ S6m: Not used.	N/A	N/A
☐ S6n: Not used.	N/A	N/A

* See Appendix for additional information.

	TYPE	BY
C1 | CAST-IN-PLACE CONCRETE		
☑ C1a: Mix Design	Continuous	SI
☑ C1b: Reinforcing Steel	Test	LOR
☑ C1c: Concrete Material	Test	LOR
☑ C1d: Strength Test	Test	LOR
☑ C1e: Batch Plant Inspection	Continuous	SI
C2 | PRESTRESSED CONCRETE		
☐ C2a: Tendons and Anchorage	Test	LOR
☐ C2b: Tendon Placement	Periodic	SI
☐ C2c: Concrete Strength	Periodic	SI
☐ C2d: Stressing Operations	Continuous	SI
C3 | PRECAST CONCRETE		
☐ C3a: General Fabrication	Continuous	SI
☐ C3b: General Erection	Periodic	SI*
☐ C3c: Diaphragm Connections	Continuous	SI
☐ C3d: Diaphragm Tolerances	Periodic	SI
C4 | SHOTCRETE		
☐ C4a: Placement	Continuous	SI
☐ C4b: Shotcrete Material	Test	LOR
C5 | POST-INSTALLED ANCHORS		
☐ C5a: Inspection	See notes	SI*
☐ C5b: Test	Test	LOR
C6 | OTHER CONCRETE		
☐ C6a: Not used.	N/A	N/A
☐ C6b: Not used.	N/A	N/A
☐ C6c: Not used.	N/A	N/A
☐ C6d: Not used.	N/A	N/A
☐ C6e: Not used.	N/A	N/A
☐ C6f: Not used.	N/A	N/A
☐ C6g: Not used.	N/A	N/A
☐ C6h: Not used.	N/A	N/A
☐ C6i: Not used.	N/A	N/A
☐ C6k: Not used.	N/A	N/A
☐ C6l: Not used.		
Not used.		

* See Appendix for additional information.

Project Name: **VERDUGO HILLS HIGH SCHOOL** Application No.: **03-126041** Increment:
School District: **LOS ANGELES UNIFIED SCHOOL DISTRICT** File No.: **19-H16**

LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

	TYPE	BY
M1 | STRUCTURAL MASONRY		
f'm PSI:		
☐ M1a: Mill Certificates - Reinf.	Periodic	SI*
☐ M1b: Material Certificates	Test	LOR
☐ M1c: Strength Test	Test	LOR
☐ M1d: Mortar Proportions	Periodic	SI
☐ M1e: Grout Proportions	Periodic	SI
☐ M1f: Batch Plant Inspection		SI
☐ M1g: Core Tests	Test	LOR
☐ M1h: Prisms	Continuous	SI
☐ M1i: Dowels and Supports	Periodic	SI
☐ M1j: Reinforcement and Members	Periodic	SI
☐ M1k: Reinforcement Placement	Continuous	SI
☐ M1l: Grout Placement	Continuous	SI
☐ M1m: Unit Layup and Joints	Periodic	SI*
☐ M1n: Cold/Hot Weather Work	Periodic	SI
☐ M1o: Anchors and Embeds	Continuous	SI
☐ M1p: Grout Cavity	Continuous	SI
M2 | VENEER OR GLASS BLOCK PARTITIONS		
☐ M2a: Mortar and Grout	Periodic	SI
☐ M2b: Unit Layup and Joints	Periodic	SI
☐ M2c: Wires and Connector	Periodic	SI
☐ M2d: Anchors and Embeds	Periodic	SI
☐ M2e: Cold/Hot Weather Work	Periodic	SI*
☐ M2f: Adhered Veneer Bond	Test	LOR
M3 | POST-INSTALLED ANCHORS		
☐ M3a: Inspection	Varies*	SI*
☐ M3b: Test	Test	LOR
M4 | OTHER MASONRY		
☐ M4a: Not used.	N/A	N/A
☐ M4b: Not used.	N/A	N/A
☐ M4c: Not used.	N/A	N/A
☐ M4d: Not used.	N/A	N/A
☐ M4e: Not used.	N/A	N/A
☐ M4f: Not used.	N/A	N/A
☐ M4g: Not used.	N/A	N/A
☐ M4h: Not used.	N/A	N/A
☐ M4i: Not used.	N/A	N/A
☐ M4j: Not used.	N/A	N/A
☐ M4k: Not used.		
☐ M4l: Not used.		
☐ M4m: Not used.		
Not used.		

* See Appendix for additional information.

	TYPE	BY
S/A1 | STEEL AND ALUMINUM		
☑ S/A1a: Material Identification	Periodic	*
☑ S/A1b: Unidentified Material	Test	LOR
☑ S/A1c: Steel Fabrication	Periodic	SI
☐ S/A1d: Buckling Restrained Brace	Test*	LOR
S/A2 | HIGH-STRENGTH BOLTS		
☑ S/A2a: Product Verification	Periodic	SI
☑ S/A2b: Bolts, Nuts, and Washers	Test	LOR
☑ S/A2c: Snug Tight	Periodic	SI
☐ S/A2d: Pretensioned / Slip-Critical	*	SI
S/A3 | WELDING		
☑ S/A3a: Weld Material	Periodic	SI
☑ S/A3b: Certificate of Compliance	Periodic	SI
☑ S/A3c: WPS and Qualifications	Periodic	SI
S/A4 | SHOP WELDING		
☐ S/A4a: Weld Category A	Continuous	SI
☑ S/A4b: Weld Category B	Periodic	SI
☐ S/A4c: Stairs and Railing	Periodic	SI
☐ S/A4d: Reinf. Steel Weldability	Periodic	SI
☐ S/A4e: Reinforcing Steel	Continuous	SI
S/A5 | FIELD WELDING		
☐ S/A5a: Weld Category A	Continuous	SI
☑ S/A5b: Weld Category B	Periodic	SI
☐ S/A5c: End Welded Studs	Periodic	SI
☐ S/A5d: Deck Welds	Periodic	SI
☐ S/A5e: Cold-Formed Steel	Periodic	SI
☐ S/A5f: Stairs and Railing	Periodic	SI
☐ S/A5g: Reinf. Steel Weldability	Periodic	SI
☐ S/A5h: Reinforcing Steel	Continuous	SI
S/A6 | NONDESTRUCTIVE TESTING		
☐ S/A6a: Ultrasonic	Test	LOR
☐ S/A6b: Magnetic Particle	Test	LOR
☐ S/A6c:Not used.	N/A	N/A
☐ S/A6d:Not used.	N/A	N/A
☐ S/A6e:Not used.	N/A	N/A
S/A7 | STEEL JOISTS AND TRUSSES		
☐ S/A7a: Fabrication	Continuous	SI
S/A8 | METAL BUILDING		
☐ S/A8a: Inspection	Periodic	SI
S/A9 | SPRAYED FIRE-RESISTANT MATERIALS		
☐ S/A9a: Surface and Installation	Periodic	SI
☐ S/A9b: Density	Test	LOR
☐ S/A9c: Bond: Adhesion/Cohesion	Test	LOR

* See Appendix for additional information.

Project Name: **VERDUGO HILLS HIGH SCHOOL** Application No.: **03-126041** Increment:

School District: **LOS ANGELES UNIFIED SCHOOL DISTRICT** File No.: **19-H16**

LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

	TYPE	BY
S/A10 | ANCHOR BOLTS AND ANCHOR RODS		
☐ S/A10a: Anchor Rods and Bolts	Test	LOR
☐ S/A10b: Other Threaded Rods	Test	LOR
S/A11 | STORAGE RACK SYSTEMS		
☐ S/A11a: Material Verification	Periodic	SI
☐ S/A11b: Fabrication	Periodic	SI
☐ S/A11c: Anchorage	Periodic	SI
☐ S/A11d: Completed System	Periodic	SI*
S/A12 | OTHER STEEL AND ALUMINUM		
☐ S/A12a: Not used.	N/A	N/A
☐ S/A12b: Not used.	N/A	N/A
☐ S/A12c: Not used.	N/A	N/A
☐ S/A12d: Not used.	N/A	N/A
☐ S/A12e: Not used.	N/A	N/A
☐ S/A12f: Not used.	N/A	N/A
☐ S/A12g: Not used.	N/A	N/A
☐ S/A12h: Not used.	N/A	N/A
☐ S/A12i: Not used.	N/A	N/A
☐ S/A12j: Not used.	N/A	N/A
W1 | PREFABRICATED WOOD TRUSSES		
☐ W1a: Open Web Truss Fabrication	Continuous	SI
☐ W1b: Metal Plate Truss Fabrication	Continuous	SI
W2 | MANUFACTURED WOOD ELEMENTS		
☐ W2a: GL Timber Fabrication	Continuous	SI
☐ W2b: CLT Fabrication	Continuous	SI
☐ W2c: Mass Timber Erection	Periodic	SI
☐ W2d: Connections Type A	Periodic	SI
☐ W2e: Connections Type B	Continuous	SI
☐ W2f: Sealants	Periodic	SI
W3 | OTHER WOOD		
☐ W3a: Not used.	N/A	N/A
☐ W3b: Not used.	N/A	N/A
☐ W3c: Not used.	N/A	N/A
☐ W3d: Not used.	N/A	N/A
☐ W3e: Not used.	N/A	N/A
☐ W3f: Not used.	N/A	N/A
☐ W3g: Not used.	N/A	N/A
☐ W3h: Not used.	N/A	N/A

* See Appendix for additional information.

	TYPE	BY
X | OTHER		
☐ X01: Product Load Test*	Test	LOR
☐ X02: Non-HSB Installation Torque	Continuous	SI*
☐ X03: Not used.	N/A	N/A
☐ X04: Not used.	N/A	N/A
☐ X05: Not used.	N/A	N/A
☐ X06: Not used.	N/A	N/A
☐ X07: Not used.	N/A	N/A
☐ X08: Not used.	N/A	N/A
☐ X09: Not used.	N/A	N/A
☐ X10: Not used.	N/A	N/A

EXEMPTIONS

Those items identified on the DSA-approved construction documents with a note indicating they are not part of the DSA approval or those items checked below are exempt from test and special inspection requirements. The project inspector shall verify all construction complies with the approved construction documents.

- ☐ Soils: Eligible shallow foundation elements**.
- ☐ Soils: Eligible deep foundation elements - type 1**.
- ☐ Soils: Eligible deep foundation elements - type 2**.
- ☐ Concrete/Masonry: Eligible post-installed anchors**.
- ☐ Concrete: Batch plant inspection for items listed in and complying with CBC Section 1705A.3.3.2.
- ☐ Concrete: Epoxy shear dowels in nonstructural slab-on-grade per CBC Section 1910A.5.4, Exception #4.
- ☐ Concrete/Masonry: Reinforcing bar testing for items listed in and complying with CBC Section 1910A.2.
- ☐ Masonry: Freestanding site walls and retaining walls per DSA IR 21-1.

Concrete: Eligible precast elements**.

- ☐ Welding: Eligible fences and gates**.
- ☐ Welding: Eligible railing and ramps**.
- ☐ Welding: Eligible interior cold-formed steel framing**.
- ☐ Welding: Eligible equipment curbs**.
- ☐ Welding: Eligible components supporting MEP distribution systems**.
- ☐ Welding: Eligible mounts and recreational equipment**.
- ☐ Welding: Eligible nonstructural components**.

** See Appendix for eligibility requirements.

Project Name: **VERDUGO HILLS HIGH SCHOOL** Application No.: **03-126041** Increment:

School District: **LOS ANGELES UNIFIED SCHOOL DISTRICT** File No.: **19-H16**

DSA 103 - 25

LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Any items indicated on the approved construction documents with a note stating that the items are not part of the DSA approval are not considered in this form. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The exemption appendix at the end of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of nonstructural components, etc., per Title 24, Part 2, Chapter 17A.

Legend to TYPE and BY Columns:

Continuous - Indicates continuous special inspection is required.

Periodic - Indicates periodic special inspection is required.

Test - Indicates a test is required.

GE – Indicates special inspection shall be performed by a registered geotechnical engineer or his/her authorized representative, usually associated with the Laboratory of Record.

LOR – Indicates test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program (i.e., the Laboratory of Record for the project). See CAC Section 4-335.

PI - Indicates special inspection may be performed by a project inspector when specifically approved by DSA.

SI - Indicates special inspection shall be performed by an appropriately qualified/approved special inspector.

Required Verified Reports:

1. Soils Testing and Inspection: Form DSA 293
2. Structural Testing and Inspection: Form DSA 291
3. Concrete Batch Plant Inspection: Form DSA 291
4. Shop Welding Inspection: Form DSA 291 or DSA 292
5. Field Welding Inspection: Form DSA 291 or Form DSA 292
6. High-Strength Bolting Inspection: Form DSA 291 or DSA 292

Verified reports are required on the following DSA forms:

DSA 291: Laboratory of Record Verified Report

DSA 292: Special Inspectors Employed Directly by the District Verified Report

DSA 293: Geotechnical Verified Report

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

Name of Design Professional in General Responsible Charge:

Herrick Au

Name of Structural Engineer of Record (when applicable):

Young Nam

Signature of Architect or Structural Engineer: **Date:**

05/29/2026

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-126041 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/24/2026

Project Name: **VERDUGO HILLS HIGH SCHOOL**
School District: **LOS ANGELES UNIFIED SCHOOL DISTRICT**

Application No.: **03-126041** Increment:
File No.: **19-H16**

Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

NOTE: Undefined sections and table references found in this appendix are from the CBC, or California Building Code

S1. GENERAL:	
Test or Special Inspection	**Code References and Notes**
S1a: Site Preparation | Verify that: • Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations. • Foundation excavations are extended to proper depth and have reached proper material. • Materials below footings are adequate to achieve the design bearing capacity.	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) form for exemptions.)

S2. SOIL COMPACTION AND FILL:	
Test or Special Inspection	**Code References and Notes**
S2a: Fill Materials | Perform classification and testing of fill materials.	* Under the supervision of the geotechnical engineer.
S2b: Fill Placement | Verify use of proper materials, densities and inspect lift thicknesses, placement and compaction during placement of fill.	* By geotechnical engineer or his or her qualified representative. (Refer to specific items identified in the Appendix (end of this form) form for exemptions where soils SI and testing may be conducted under the supervision of a geotechnical engineer or LOR's engineering manager. In such cases, the LOR's form DSA 291 shall satisfy the soil SI and test reporting requirements for the exempt items.)
S2c: Compaction | Compaction testing.	* Under the supervision of the geotechnical engineer. (Refer to specific items identified in the Appendix (end of this form) for exemptions where soils testing may be conducted under the supervision of a geotechnical engineer or LOR's engineering manager. In such cases, the LOR's form DSA 291 shall satisfy the soil test reporting requirements for the exempt items.)

S3. DRIVEN DEEP FOUNDATIONS (PILES):	
Test or Special Inspection	**Code References and Notes**
S3a: Materials and Members | Verify pile materials, sizes and lengths comply with the requirements.	* By geotechnical engineer or his or her qualified representative.
S3b: Pile Capacity | Determine capacities of test piles and conduct additional load tests as required.	* Under the supervision of the geotechnical engineer.
S3c: Driving Operations | Inspect driving operations and maintain complete and accurate records for each pile.	* By geotechnical engineer or his or her qualified representative.

S3d: Pile Installation | Verify locations of piles and their plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and record any pile damage.	* By geotechnical engineer or his or her qualified representative.
S3e: Specialty Piles | For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.	* As defined on drawings or specifications.

S4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):	
Test or Special Inspection	**Code References and Note**
S4a: Drilling Operations | Inspect drilling operations and maintain complete and accurate records for each pier.	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)
S4b: Pier Construction | Verify pier locations, diameters, plumbness, bell diameters (if applicable), lengths and embedment into bedrock (if applicable); record concrete or grout volumes.	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)
S4c: Bearing Strata | Confirm adequate end strata bearing capacity.	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)

S5. RETAINING WALLS:	
Test or Special Inspection	**Code References and Notes**
S5a: Backfill Placement | Placement, compaction and inspection of backfill.	1705A.6.1. * By geotechnical engineer or his or her qualified representative. (See section S2 above).
S5b: Soil Reinf. and Drainage | Placement of soil reinforcement and/or drainage devices.	* By geotechnical engineer or his or her qualified representative.
S5c: Segmental Retaining Walls | Segmental retaining walls; inspect placement of units, dowels, connectors, etc.	* By geotechnical engineer or his or her qualified representative. See DSA IR 18-2.

S6 | OTHER SOILS	
Test or Special Inspection	**Code References and Notes**
S6a | Soil Improvements	Submit a comprehensive report documenting final soil improvements constructed, construction observation and the results of the confirmation testing and analysis to CGS (California Geological Survey) for final acceptance. * By geotechnical engineer or his or her qualified representative.
S6b | Inspection of Soil Improvements	* By geotechnical engineer or his or her qualified representative.
S6c. | Not used.	N/A
S6d. | Not used.	N/A
S6e. | Not used.	N/A
S6f. | Not used.	N/A
S6g. | Not used.	N/A
S6h. | Not used.	N/A
S6i. | Not used.	N/A
S6j. | Not used.	N/A
S6k. | Not used.	N/A
S6l. | Not used.	N/A
S6m. | Not used.	N/A
S6n. | Not used.	N/A

C1. CAST-IN-PLACE CONCRETE	
Test or Special Inspection	**Code References and Notes**
C1a: Mix Design | Verify use of required design mix.	**Table 1705A.3 Item 5, 1903A.4, 1904A.1, 1904A.2, 1910A.1 ; ACI 318 Ch. 19, 26.4, 26.13.3.2.**
C1b: Reinforcing Steel | Identify, sample, and test reinforcing steel.	**Table 1705A.3 Item 1, 1705A.3.9, 1908A.1, 1910A.2; ACI 318 Ch. 20 and Sections 25.2, 25.3, 25.5.1, 26.6.1; DSA IR 17-10 and BU 24-02. (See Appendix (end of this form) for exemptions.)**
C1c: Concrete Material | During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	**Table 1705A.3 Item 6, 1705A.3.9, 1905A.1.16; ASTM C31, ASTM C172; ACI 318 Sections 26.4, 26.5 & 26.12.**
C1d: Strength Test | Test concrete (f'c).	**1905A.1.16; ACI 318 Section 26.12.**
C1e: Batch Plant Inspection | Batch plant inspection: Continuous	**Default of "Continuous" per 1705A.3.3. If approved by DSA, batch plant inspection may be reduced to "Periodic" subject to requirements in Section 1705A.3.3.1, or not required per 1705A.3.3.2. See IR 17-13. (See Appendix (end of this form) for exemptions.)**

C2. PRESTRESSED / POST-TENSIONED CONCRETE (IN ADDITION TO SECTION C1):	
Test or Special Inspection	**Code References and Notes**
C2a: Tendons and Anchorage | Sample and test prestressing tendons and anchorages.	**1705A.3.4, Table 1705A.3 Item 1, 1910A.3; ACI 318 Ch. 20 and Sections 25.2, 26.6.1.**
C2b: Tendon Placement | Inspect placement of prestressing tendons.	**1705A.3.4, Table 1705A.3 Items 1 & 9; ACI 318 Ch. 20 and Sections 25.2, 26.6.1-26.6.3.**
C2c: Concrete Strength | Verify in-situ concrete strength prior to stressing of post-tensioning tendons.	**Table 1705A.3 Item 13; ACI 318 Sections 26.10.2, 26.11.2, 26.13.3.3. Special inspector to verify specified concrete strength test prior to stressing.**
C2d: Stressing Operations | Inspect application of post-tensioning or prestressing forces and grouting of bonded prestressing tendons.	**1705A.3.4, Table 1705A.3 Item 9; ACI 318 Sections 26.10.2, 26.13.1, 26.13.3.2.**

C3. PRECAST CONCRETE (IN ADDITION TO SECTION C1):	
Test or Special Inspection	**Code References and Notes**
C3a: General Fabrication | 1. Inspect fabrication of precast concrete members. * 2. Inspect reinforcement of the following precast concrete elements or system(s): a. special moment frames. b. boundary elements of special structural walls. c. coupling beams.	**1705A.3 Item 1, 7.** See Appendix for exemptions. *May be periodic where fabrication occurs in a PCI-certified plant. For underground structures, NPCA plant certification is acceptable. PCI MNL-116-21; PCI MNL-117-13; NPCA Quality Control Manual (QCM) 17th Edition. See IR A-15.

C3b: General Erection | Inspect erection of precast concrete members.	**Table 1705A.3 Item 10**.
C3c: Diaphragm Connections | For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDE or HDE) in structures assigned to Seismic Design Category D, E or F, inspect such connections and reinforcement in the field for: 1. Installation of the embedded parts. 2. Completion of the continuity of reinforcement across joints. 3. Completion of connections in the field.	**Table 1705A.3 Item 11**.
C3d: Diaphragm Tolerances | Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5.	**Table 1705A.3 Item 12**

C4. SHOTCRETE (IN ADDITION TO SECTION C1):	
Test or Special Inspection	**Code References and Notes**
C4a: Placement | Inspect shotcrete placement for proper application techniques.	**1705A.3.9, Table 1705A.3 Item 7, 1908A.1, 1908A.2, 1908A.3. See ACI 506.2 Section 3.4, and ACI 506R.**
C4b: Shotcrete Material | Sample and test shotcrete (f'_c).	**1908A.1 and 1705A.3.9.**

C5. POST-INSTALLED ANCHORS:	
Test or Special Inspection	**Code References and Notes**
C5a: Inspection | Inspect installation of post-installed anchors	**1617A.1.19, Table 1705A.3 Item 4a (Continuous) & 4b (Periodic), 1705A.3.8** (See Appendix (end of this form) for exemptions). ACI 318 Sections 26.7.2, 26.13.1, 26.13.3.2, 26.13.3.3. * May be performed by the project inspector when specifically approved by DSA.
C5b: Test | Test post-installed anchors.	**1910A.5.** (See Appendix (end of this form) for exemptions.)

C6. OTHER CONCRETE:	
Test or Special Inspection	**Code References and Notes**
C6a. | Not used.	N/A
C6b. | Not used.	N/A
C6c. | Not used.	N/A
C6d. | Not used.	N/A
C6e. | Not used.	N/A
C6f. | Not used.	N/A
C6g. | Not used.	N/A
C6h. | Not used.	N/A
C6i. | Not used.	N/A
C6j. | Not used.	N/A
C6k. | Not used.	Not used.
C6l. | Not used.	Not used.

Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

M1. STRUCTURAL MASONRY:	
Test or Special Inspection	**Code References and Notes**
M1a: Mill Certificates - Reinf. | Mill certificate indicates compliance with requirements for reinforcement, anchors, ties, fasteners and metal accessories. See item C1(b) for identification, sampling and testing of reinforcing steel.	**2103A.4**; TMS 602-16 Article 1.5B.2 & 2.4. * To be performed by qualified LOR representative. Applicable testing by LOR. See IR 17-10 for unidentified reinforcing steel.
M1b: Material Certificates | Producer's certificate of compliance for masonry units, mortar and grout materials.	**1705A.4, 2103A.2, 2103A.3, 2103A.5;** TMS 602 Articles 1.5B.2, 2.1, 2.2, 2.6A and 2.6B, and Table 7 footnote 3.
M1c: Strength Test | Test masonry (f'm).	**1705A.4. For Unit Strength: 2105A.3**; TMS 602 Articles 1.4B.2 ,1.5B.1 & 1.5B.2. **For Prism (required when f'_m > 2000 psi):2105A.2;** TMS 602 Articles 1.4B.3, 1.4B.4, 1.5B.1 & 1.5B.2.
M1d: Mortar Proportions | Verify proportions or properties of site-prepared, premixed or preblended mortar.	TMS 602, Table 3 (row 5), Table 4 Item 1a. DSA PR 20-01. (See Appendix (end of this form) for exemptions.)
M1e: Grout Proportions | Verify proportions or properties of site-prepared, premixed or preblended grout.	TMS 602, Table 3 (row 5), Table 4 Item 2d. (See Appendix (end of this form) for exemptions.)
M1f: Batch Plant Inspection | Batch plant inspection: Periodic	Default of **'Continuous'** per **1705A.3.3**. If approved by DSA, batch plant inspection may be reduced to **'Periodic'** subject to requirements in Section **1705A.3.3.1,** or not required per **1705A.3.3.2.** See IR 17-13. Refer to TMS 602 Table 3 and Table 4, Item #3a. (See Appendix (end of this form) for exemptions.)
M1g: Core Tests | Test core-drilled samples.	**2105A.4**. (See Appendix (end of this form) for exemptions.)
M1h: Prisms | Inspect preparation of prisms.	TMS 602 Articles 1.4.B.3 & 1.4.B.4 & Table 4 Item 4.
M1i: Dowels and Supports | Verify size, location and condition of all dowels, construction supporting masonry, etc.	
M1j: Reinforcement and Members | Verify size, grade and type of reinforcement, connectors, and anchor bolts. Verify size and location of structural members.	TMS 602 Table 4, Items 1c & 3c.
M1k: Reinforcement Placement | Inspect placement of reinforcement, anchor bolts, and connectors.	TMS 602 Table 4 Item 2c.
M1l: Grout Placement | Placement, consolidation, and reconsolidation of grout.	TMS 602 Table 4 Item 3h.
M1m: Unit Layup and Joints | Inspect placement of masonry units and construction of mortar joints.	TMS 602 Table 4 Item 3b.
M1n: Cold/Hot Weather Work | Verify preparation, construction and protection of masonry during cold weather (temperature below 40º F) or hot weather (temperature above 90º F).	TMS 602 Table 4 Item 3f. * May be performed by the project inspector when specifically approved by DSA.
M1o: Anchors and Embeds | Inspect type, size and location of anchors and all other items to be embedded in masonry including other details of anchorage of masonry	TMS 602 Table 4 Item 3d.

to structural members, frames and other construction.	
M1p: Grout Cavity | Inspect grout space, including mortar protrusions, prior to placement of grout.	TMS 602 Table 4 Item 2a.

M2. VENEER OR GLASS BLOCK PARTITIONS:	
Test or Special Inspection	**Code References and Notes**
M2a: Mortar and Grout | Verify proportions of site prepared mortar and grout and/or verify certification of premixed mortar.	TMS 602 Table 3 (row 5) and Table 4 Items 1a & 2d.
M2b: Unit Layup and Joints | Inspect placement of units and construction of mortar joints.	TMS 602 Table 4 Item 3b.
M2c: Wires and Connector | Inspect placement of wire, connectors and anchors	TMS 602 Table 4 Item 2c.
M2d: Anchors and Embeds | Inspect type, size and location of anchors and all other items to be embedded in masonry veneer including details of anchorage of masonry to veneer backing, frames and other construction.	TMS 602 Table 4 Item 3d.
M2e: Cold/Hot Weather Work | Verify preparation, construction and protection of masonry during cold weather (temperature below 40º F) or hot weather (above 90º F).	TMS 602 Table 4 Item 3f. * May be performed by the project inspector when specifically approved by DSA.
M2f: Adhered Veneer Bond | Test adhered veneer bond strength.	**1413.2.1 (Field-constructed mock-up using specified unit, mortar, and substrate, laboratory tested in accordance with ASTM C1823).**

M3. POST-INSTALLED ANCHORS IN MASONRY:	
Test or Special Inspection	**Code References and Notes**
M3a: Inspection | Inspect installation of post-installed anchors	**1617A.1.19, 1705A.4, Table 1705A.3 Item 4a (Continuous) & 4b (Periodic);** ACI 318 Section 26.13. * May be performed by the project inspector when specifically approved by DSA. (See Appendix (end of this form) for exemptions.)
M3b: Test | Test post-installed anchors.	**1705A.4, 1910A.5.** (See Appendix (end of this form) for exemptions.)

M4. OTHER MASONRY:	
Test or Special Inspection	**Code References and Notes**
M4a. | Not used.	N/A
M4b. | Not used.	N/A
M4c. | Not used.	N/A
M4d. | Not used.	N/A
M4e. | Not used.	N/A
M4f. | Not used.	N/A
M4g. | Not used.	N/A
M4h. | Not used.	N/A
M4i. | Not used.	N/A
M4j. | Not used.	N/A
M4k. | Not used.	Not used.
M4l. | Not used.	Not used.

Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

S/A1. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES	
Test or Special Inspection	**Code References and Notes**
S/A1a: Material Identification | Verify identification of all materials and: • Mill certificates indicate material properties that comply with requirements. • Material sizes, types and grades comply with requirements.	**Table 1705A.2.1 Item 3a–3c.** 2201A.2**;** AISI S100 Section A3.1 & A3.2, AISI S240 Section A3 & A5, AISI S220 Sections A4 & A6. *By special inspector or qualified technician when performed off-site.
S/A1b: Unidentified Material | Test unidentified materials	**2201A.2.**
S/A1c: Steel Fabrication | Verify and document steel fabrication per DSA- approved construction documents.	Not applicable to cold-formed steel light-frame construction, except for trusses (**1705A.2.5**).
S/A1d: Buckling Restrained Brace | Verify and document steel fabrication per DSA-approved construction documents.	Testing and special inspections in accordance with IR 22-4. For DSA accepted fabrication shops, BRB manufacturer's Certificate of Compliance in lieu of testing and special inspections. See IR 22-4.

S/A2. HIGH-STRENGTH BOLTS:	
Test or Special Inspection	**Code References and Notes**
S/A2a: Product Verification | Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA-approved documents.	**Table 1705A.2.1 Items 1a & 1b, 2201A.2;** AISC 360 Section A3.3, J3.1, and N3.2; RCSC Section 1.5 & 2.1; DSA IR 17-8 & DSA IR 17-9.
S/A2b: Bolts, Nuts, and Washers | Test high-strength bolts, nuts and washers.	**Table 1705A.2.1 Item 1c, 2216A.1**; RCSC Section 7.2; DSA IR 17-8.
S/A2c: Snug Tight | Bearing-type ("snug tight") connections.	**Table 1705A.2.1 Item 2a, 1705A.2.8, 2201 A.4**; AISC 360 J3.1, J3.2, M2.5 & N5.6; RCSC Section 9.1; DSA IR 17-9.
S/A2d: Pretensioned / Slip-Critical | Pretensioned and slip-critical connections.	**Table 1705A.2.1 Items 2b & 2c, 1705A.2.8, 2201A.4;** AISC 360 J3.1, J3.2, M2.5 & N5.6; RCSC Sections 9.2 & 9.3; DSA IR 17-9 *"Continuous" or "Periodic" depends on the tightening method used.

S/A3. WELDING:	
Test or Special Inspection	**Code References and Notes**
S/A3a: Weld Material | Verify weld filler material identification markings per AWS designation listed on the DSA-approved documents and the WPS.	**1705A.2.7, Table 1705A.2.1 Items 4 & 5**; AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel; DSA IR 17-3.
S/A3b: Certificate of Compliance | Verify weld filler material manufacturer's certificate of compliance.	DSA IR 17-3.
S/A3c: WPS and Qualifications | Verify WPS, welder qualifications and equipment.	DSA IR 17-3.

S/A4. SHOP WELDING (IN ADDITION TO SECTION S/A3):	
Test or Special Inspection	**Code References and Notes**
S/A4a: Weld Category A | Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	**Table 1705A.2.1 Items 5a.1–4;** AISC 360 & 370 (and AISC 341 as applicable); DSA IR 17-3.
S/A4b: Weld Category B | Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds.	**1705A.2.3, Table 1705A.2.1 Items 5a.5 & 5a.6;** AISC 360 & 370 (and AISC 341 as applicable); DSA IR 17-3.
S/A4c: Stairs and Railing | Inspect welding of stairs and railing systems.	**1705A.2.1**; AISC 360 & 370 (and AISC 341 as applicable); AWS D1.1 & D1.3; DSA IR 17-3.
S/A4d: Reinf. Steel Weldability | Verification of reinforcing steel weldability other than ASTM A706.	**1705A.3.1**; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
S/A4e: Reinforcing Steel | Inspect welding of reinforcing steel.	**Table 1705A.2.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.5;** AWS D1.4; DSA IR 17-3.

S/A5. FIELD WELDING (IN ADDITION TO SECTION S/A3):	
Test or Special Inspection	**Code References and Notes**
S/A5a: Weld Category A | Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	**Table 1705A.2.1 Items 5a.1–4;** AISC 360 & 370 (AISC 341 as applicable); DSA IR 17-3.
S/A5b: Weld Category B | Inspect single-pass fillet welds ≤ 5/16".	**Table 1705A.2.1 Item 5a.5;** AISC 360 & 370 (AISC 341 as applicable); DSA IR 17-3.
S/A5c: End Welded Studs | Inspect end-welded studs (ASTM A-108) installation (including bend test).	**2216A.2**; AISC 360 & 370 (AISC 341 as applicable); AWS D1.1; DSA IR 17-3.
S/A5d: Deck Welds | Inspect floor and roof deck welds.	**1705A.2.3, Table 1705A.2.1 Item 5a.6;** AISC 360 & 370 (AISC 341 as applicable); AWS D1.3; DSA IR 17-3.
S/A5e: Cold-Formed Steel | Inspect welding of structural cold-formed steel.	**1705A.2.7;** AWS D1.3; DSA IR 17-3. The quality control provisions of AISI S240 Chapter D shall also apply. * May be performed by the project inspector when specifically approved by DSA.
S/A5f: Stairs and Railing | Inspect welding of stairs and railing systems.	**1705A.2.1;** AISC 370 (AISC 341 as applicable); AWS D1.1 & D1.3; DSA IR 17-3. * May be performed by the project inspector when specifically approved by DSA.
S/A5g: Reinf. Steel Weldability | Verification of reinforcing steel weldability.	**1705A.3.1**; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
S/A5h: Reinforcing Steel | Inspect welding of reinforcing steel.	**Table 1705A.2.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.5;** AWS D1.4; DSA IR 17-3.

S/A6. NONDESTRUCTIVE TESTING:	
Test or Special Inspection	**Code References and Notes**
S/A6a: Ultrasonic | Ultrasonic	**1705A.2.1, Table 1705A.2.1 Item 4c, 1705A.2.7;** AISC 341 J6.2, AISC 360 N5.5; AWS D1.1, AWS D1.8; DSA IR 17-2.
S/A6b: Magnetic Particle | Magnetic Particle	**1705A.2.1, Table 1705A.2.1 Item 4c, 1705A.2.7;** AISC 341 J6.2, AISC 360 N5.5; AWS D1.1, AWS D1.8; DSA IR 17-2.
S/A6c: Not used.	N/A
S/A6d: Not used.	N/A
S/A6e: Not used.	N/A

S/A7. STEEL JOISTS AND TRUSSES:	
Test or Special Inspection	**Code References and Notes**
S/A7a: Fabrication | Verify size, type and grade for all chord and web members as well as connectors and weld filler material; verify joist profile, dimensions and camber (if applicable); verify all weld locations, lengths and profiles; mark or tag each joist.	**1705A.2.4, Table 1705A.2.4;** AWS D1.1; DSA IR 22-3 for steel joists only. **1705A.2.5;** AWS D1.3 for cold-formed steel trusses.

S/A8. METAL BUILDING:	
Test or Special Inspection	**Code References and Notes**
S/A8a: Inspection | Inspect: • Installation of rafter/beam flange braces and column flange braces. • Installation of purlins and girts, including specified lapping. • Purlin and girt restraint/bridging/bracing. • Installation of X-bracing, tightened to remove any sag	**1705A.2.6, Table 1705A.2.6, 1705A.2.1, 1705A.2.3, 1705A.2.4 and 1705A.2.5**

S/A9. SPRAYED FIRE-RESISTANT MATERIALS:	
Test or Special Inspection	**Code References and Notes**
S/A9a: Surface and Installation | Examine structural steel surface conditions, inspect application, take samples, measure thickness and verify compliance of all aspects of application with DSA-approved documents.	**1705A.15, 1705A.15.1, 1705A.15.2, 1705A.15.3, 1705A.15.4, 1705A.15.5, 1705A.15.6.**
S/A9b: Density | Test density.	**1705A.15.1, 1705A.15.5, ASTM E605**
S/A9c: Bond: Adhesion/Cohesion | Bond strength adhesion/cohesion.	**1705A.15.1, 1705A.15.6, ASTM E736**

S/A10. ANCHOR BOLTS AND ANCHOR RODS:	
Test or Special Inspection	**Code References and Notes**
S/A10a: Anchor Rods and Bolts | Anchor Bolts and Anchor Rods	Identify, sample and test anchor bolts and anchor rods **not** meeting exemptions identified in Section 1 of IR 17-11.
S/A10b: Other Threaded Rods | Threaded rod not used for foundation anchorage.	Identify, sample and test threaded rods **not** meeting exemptions identified in Section 1 of IR 17-11.

S/A11. STORAGE RACK SYSTEMS:	
Test or Special Inspection	**Code References and Notes**
S/A11a: Material Verification | Materials used, to verify compliance with one or more of the material test reports in accordance with the approved construction documents.	Table 1705A.13.7
S/A11b: Fabrication | Fabricated storage rack elements.	1704A.2.5; Table 1705A.13.7
S/A11c: Anchorage | Storage rack anchorage installation.	ANSI/MH16.1 Section 7.3.2; Table 1705A.13.7
S/A11d: Completed System | Completed storage rack system to indicate compliance with the approved construction documents.	Table 1705A.13.7; * May be performed by the project inspector when specifically approved by DSA.

S/A12. Other Steel	
Test or Special Inspection	**Code References and Notes**
S/A12a. | Not used.	N/A
S/A12b. | Not used.	N/A
S/A12c. | Not used.	N/A
S/A12d. | Not used.	N/A
S/A12e. | Not used.	N/A
S/A12f. | Not used.	N/A
S/A12g. | Not used.	N/A
S/A12h. | Not used.	N/A
S/A12i. | Not used.	N/A
S/A12j. | Not used.	N/A
S/A12k. | Not used.	Not used.
S/A12l. | Not used.	Not used.

Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

W1. PREFABRICATED WOOD TRUSSES:	
Test or Special Inspection	**Code References and Notes**
W1a: Open Web Truss Fabrication | Inspect fabrication of manufactured open-web trusses.	**1705A.5.6;** DSA IR 23-8.
W1b: Metal Plate Truss Fabrication | Inspect fabrication of manufactured metal-plate- connected trusses.	**1705A.5.6, 1705A.5.7;** DSA IR 23-4.

W2. MANUFACTURED WOOD STRUCTURAL ELEMENTS:	
Test or Special Inspection	**Code References and Notes**
W2a: GLS Timber Fabrication | Inspect fabrication of structural glued-laminated timber.*	* See **1705A.5.5** for exceptions
W2b: CLT Fabrication | Inspect fabrication of cross-laminated timber.	**1705A.5.5**
W2c: Mass Timber Erection | Inspect erection of mass timber.	**Table 1705A.5.3**, Item 2
W2d: Connections Type A | Inspect mass timber connections with threaded fasteners, bolts, and/or adhesive anchors other than described in item e below. Inspect concealed mass timber connections.	**Table 1705A.5.3**, Items 3.1, 3.3, 3.4, 3.5. For threaded fasteners: Verify use of proper installation equipment. Verify use of pre-drilled holes where required. Inspect screws, including diameter, length, head type, spacing, installation angle, and depth.
W2e: Connections Type B | Inspect mass timber connections with adhesive anchors installed in a horizontal or upward orientation.	**Table 1705A.5.3**, Item 3.2
W2f: Sealants | Inspect application of sealants or adhesives applied to mass timber elements.	**1705A.20**

W3. OTHER Wood:	
Test or Special Inspection	**Code References and Notes**
W3a. | Not used.	N/A
W3b. | Not used.	N/A
W3c. | Not used.	N/A
W3d. | Not used.	N/A
W3e. | Not used.	N/A
W3f. | Not used.	N/A
W3g. | Not used.	N/A
W3h. | Not used.	N/A
W3i. | Not used.	N/A
W3j. | Not used.	N/A
W3k. | Not used.	Not used.
W3l. | Not used.	Not used.

Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

X1. OTHER:	
Test or Special Inspection	**Code References and Notes**
X01. | Load test for identified product(s):	1709A.2, 1709A.3. Testing is not required for: 1) a product with a valid evaluation service report per DSA IR A-5, or 2) a product that can be justified by structural calculation.
X02. | Installation torque for non-HS bolts on communication tower identified as essential service facility projects (ESFP).	Calibrated wrench use required, verified by SI during installation. DSA Policy PL 18-01: Communication Towers, Poles and Buildings Utilized by State Agencies for Essential Services Communications. *EXCEPTION: Non-ESFP may use PI without need for notification to DSA.
X03. | Not used.	N/A
X04. | Not used.	N/A
X05. | Not used.	N/A
X06. | Not used.	N/A
X07. | Not used.	N/A
X08. | Not used.	N/A
X09. | Not used.	N/A
X10. | Not used.	N/A

EXEMPTIONS

SOILS - EXEMPTIONS:
Soils: Eligible shallow foundation elements | Shallow foundations, are exempt from special inspections and testing by a Geotechnical Engineer for the following cases: A) buildings without a geotechnical report and meeting the exception Item #1 criteria in CBC Section 1803A.2 supported by native soil (any excavation depth) or fill soil (not exceeding 12" depth per CBC, Section 1804A.6), B) soil scarification/recompaction not exceeding 12" depth, C) native or fill soil supporting exterior non-structural flatwork (e.g., sidewalks, site concrete ramps, site stairs, parking lots, driveways, etc.), D) unpaved landscaping and playground areas, or E) utility trench backfill with depth not exceeding 12". These exempt structures shall be identified on the approved construction documents.
Soils: Eligible deep foundation elements, Type 1 | Deep foundation acting as cantilever footing with a design based on minimum allowable pressures per CBC Table 1806A.2 and without a geotechnical report are exempt from special inspection and testing by a Geotechnical Engineer for the following cases: A) free standing sign or scoreboard, B) cell or antenna towers and poles less than 35'-0" tall (e.g., lighting poles, flag poles, poles supporting open mesh fences, etc.). These exempt structures shall be identified on the approved construction documents.
Soils: Eligible deep foundation elements Type 2 | Deep foundation acting as cantilever footing with a design based on minimum allowable pressures per CBC Table 1806A.2 and without a geotechnical report are exempt from special inspection and testing by a Geotechnical Engineer for the following cases: A) single-story open fabric shade structure, or B) covered walkway structure with an apex height less than 10'-0" above adjacent grade. These exempt structures shall be identified on the approved construction documents.

CONCRETE/MASONRY - EXEMPTIONS:
Concrete/Masonry: Eligible post-installed anchors | Post-installed anchors for the following: A) exempt non-structural components (e.g., mechanical, electrical, plumbing equipment – see item 7 for "Welding" in the Appendix below) given in CBC Section 1617A.1.18 or B) interior nonstructural wall partitions meeting criteria listed in exempt item 3 for "Welding" in the Appendix below.
Concrete: Batch plant inspection for items listed in and complying with CBC Section 1705A.3.3.2. | Concrete batch plant inspection is not required for items given in CBC Section 1705A.3.3.2 subject to the requirements and limitations in that section.
Concrete: Epoxy shear dowels in nonstructural slab-on-grade per CBC Section 1910A.5.4, Exception #4. | Epoxy shear dowels in site flatwork and/or other nonstructural concrete.
Concrete/Masonry: Reinforcing bar testing for items listed in and complying with CBC Section 1910A.2. | Testing of reinforcing bars is not required for items given in CBC Section 1910A.2 subject to the requirements and limitations in that section. These exempt structures shall be identified on the approved construction documents.
Masonry: Freestanding site walls and retaining walls per DSA IR 21-1. | Freestanding and site retaining masonry walls may be exempt from certain DSA masonry testing and special inspection items as allowed per DSA IR 21-1.
Eligible precast elements | Structural tests and special inspections are not required for the following concrete precast elements. Provide a certificate of compliance at delivery. Exemptions shall be identified on the approved construction documents. 1. Underground vaults no greater than 5 feet x 5 feet x unlimited height and pipe manufactured to an ASTM standard, 5 foot or less in diameter. 2. Elements manufactured in a PCI or NPCA certified manufacturing plant:

A. Underground vaults no greater than 16 feet in both length and width, of unlimited height, not subject to loading greater than HS 20-44. B. Pipe. C. Stair treads, landing planks.

WELDING - EXEMPTIONS:
Welding: Eligible fences and gates | Fences, gates with maximum leaf span of 10', and gates with a maximum rolling section of 10' all having an apex height less than 8'-0" above lowest adjacent grade.
Welding: Eligible railing and ramps | Handrails, guardrails, and modular or relocatable ramps associated with walking surfaces less than 30" above adjacent grade; fillet welds shall not be ground flush.
Welding: Eligible interior cold-formed steel framing | Non-bearing non-shearwall interior cold-formed steel framing spanning less than 15'-0" in height and header less than 10'-0" in opening width, such as in interior partitions, interior soffits, etc.
Welding: Eligible equipment curbs | Manufactured support frames and curbs using hot rolled or cold-formed steel (i.e., light gauge) for mechanical, electrical, or plumbing equipment weighing less than 2000# (equipment only) (connections of such frames to superstructure elements using welding will require special inspection.)
Welding: Eligible components supporting MEP distribution systems | Manufactured components (e.g., Tolco, B-Line, Afcon, etc.) for mechanical, electrical, or plumbing hanger support and bracing (connections of such components to superstructure elements using welding will require special inspection.)
Welding: Eligible mounts and recreational equipment | TV Brackets, projector mounts with a valid listing (see DSA IR A-5) and recreational equipment (e.g., playground structures, basketball backstops, etc.) (connections of such elements to superstructure elements using welding will require special inspection.)
Welding: Eligible nonstructural components | Any support for exempt non-structural components given in CBC Section 1617A.1.18 meeting the following: A) when supported on a floor/roof, <400# or resulting composite center of mass (including component's center of mass) ≤4' above supporting floor/roof, B) when hung from a wall or roof/floor, and <20# for discrete units or <5 plf for distributed systems.

SECTION 00 3148

PROJECT DIRECTORY

1.01 GENERAL

A. This Section provides contact information relative to the Work of the Project.

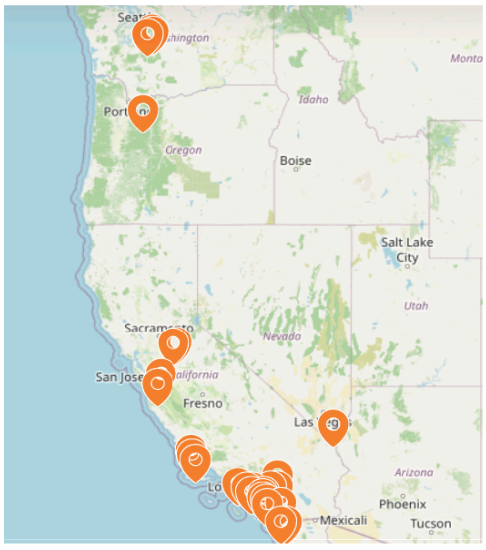
1.02 SPECIFIC

A.	Name of Project: Project Number(s): Project Description:	Verdugo Hills High School 10375279 / 234467 / 2710060 New Scoreboards for Softball and Baseball
B.	Location(s):	10625 Plainview Ave. Tujunga, CA 91042
C.	OWNER:	Los Angeles Unified School District (LAUSD) Facilities Services Division 333 South Beaudry Avenue, 23rd Floor Los Angeles, CA 90017
D.	OWNER Authorized Representative (OAR):	Shelia Taylor, PEX - North Phone: 1 (310) 890-9728 Email: cp-shelia.taylor@lausd.net
E.	All Pre-Bid Clarifications shall be directed to:	Shelia Taylor, PEX - North Phone: 1 (310) 890-9728 Email: cp-shelia.taylor@lausd.net
F.	OWNER Consultants:	Geocon West, Inc. Rex Panoy, Senior Staff Engineer 500 N Victory Blvd. Burbank, CA 91502 Phone: 1 (818) 841-8388
G.	ARCHITECT:	LAUSD Herrick Au 333 S Beaudry Ave. Los Angeles, CA 90017 Phone: (213) 241-3952 Email: herrick.au@lausd.net
H.	ARCHITECT Consultants:	VCA Engineers Young Nam, Structural Engineer 2401 E Katella Ave. Suite 430 Anaheim, CA 92806 Phone: (949) 679-0870 LAUSD Joel Mendoza, Electrical Engineer 333 S Beaudry Ave. Los Angeles, CA 90017 Phone: (213) 241-0346 Email: joel.mendoza@lausd.net
I.	Distribution of Bidding Documents:	Crisp Imaging 1235 E. 6th St. Los Angeles, CA 90021 Business Hours: 7:00AM – 6:00PM Phone: (213) 741-9560 Additional locations are listed at https://www.crispimg.com/locations/

J.	Prequalification/ Safety Requirements/ Bidding Information/ Addenda/ Notices to Proceed/ Stop Notices:	LAUSD – Facilities Construction Contracts 333 S. Beaudry Ave., 28th Floor Los Angeles, CA 90017 Business Hours: 7:30 AM – 4:00PM Phone: (213) 241-1188
K	OCIP Administrator	LAUSD – Division of Risk Management & Insurance Services 333 South Beaudry Avenue, 28th Floor Los Angeles, CA 90017-5141 Phone: (213) 241-1843 Fax: (213) 241-8956
L.	Prevailing Wage Issues / Information:	LAUSD – Labor Compliance Program 333 South Beaudry Avenue, 21st Floor Los Angeles, CA 90017 Phone: (213) 241-4665
M.	Project Stabilization Agreement	LAUSD – Project Stabilization Agreement Administration 333 South Beaudry Avenue, 23rd Floor Los Angeles, CA 90017 Fax: (213) 241-8356 Email: psa@lausd.net
N.	Filing of Claims/ Copies	Los Angeles Unified School District Executive Officer of the Board 333 S. Beaudry Avenue, 24th Floor Los Angeles, CA 90017 Copies to: OAR as listed in item D. above. Office of the General Counsel – FSD Los Angeles Unified School District 333 South Beaudry Avenue, 23rd Floor Los Angeles, CA 90017 LAUSD – Construction Claims Unit 333 South Beaudry Avenue, 23rd Floor Los Angeles, CA 90017
0.	Owner contact as per Section 00 2113, 1.06, C.	Los Angeles Unified School District Facilities Environmental Technical Unit 1240 South Naomi Avenue Los Angeles CA 90021 (213) 745-1450
P.	Owner contact as per Section 08 7100, 2.03, C, 1, b.	Los Angeles Unified School District Central Lock Shop 1240 South Naomi Avenue Los Angeles CA 90021 (213) 745-1650

CRISPIMAGING

Reprographics	Color	Digital Solutions
Construction Plans	Design Studio	Sorting
Spec Manuals	Project Management	Scanning
Marketing Materials	Site Survey/Consultation	Data Merge
On-Site Solutions	Printing/Fabrication	Shredding
Job-Site Signage	Nationwide Installation	Archival Software



PRODUCTION FACILITIES

CRISP Orange County Stores

Costa Mesa - HUB
3180 Pullman Street
Costa Mesa, CA 92626
866-632-8329

Anaheim
4875 E La Palma Ave Ste 604
Anaheim, CA 92807
714-279-3088

Irvine
23172 Alcalde Dr, Suite A
Laguna Hills, CA 92653
949-768-8066

Orange
1330 N. Glassell St, Suite G
Orange, CA 92867
714-532-2571

San Juan
33091 Calle Perfecto, Suite B.
San Juan Capistrano, CA 92675
949-240-9911

CRISP Inland Empire Stores

Colton
898 Via Lata, Suite L
Colton, CA 92324
909-514-0704

Ontario
3939 East Guasti Road, Unit B
Ontario, CA 91761
909-390-4839

Temecula
27715 Jefferson Av., Suite 111
Temecula, CA 92590
951-676-5300

CRISP LA County Stores

Culver City
9401 Venice Blvd.
Culver City, CA 90232
310-981-4090

Los Angeles
1235 E. 6th Street
Los Angeles, CA 90021
213-741-9560

Santa Monica
910 Broadway Suite 104
Santa Monica, CA 90401
310-395-3291

Torrance
2221 W. 190th St., Unit A
Torrance, CA 90504
310-327-3776

Westlake Village
31332 Via Colinas, Suite 101
Westlake Village, CA 91362
818-483-7100

866.632.8329 | crispimg.com

CRISP High Desert/Las Vegas Stores

Hesperia
9390 Hesperia Rd. #4
Hesperia, CA 92345
760-948-5525

Las Vegas
6645 S. Eastern Ave, Suite 101
Las Vegas, NV 89119
702-798-2055

CRISP Northern California Stores

Livermore
355 Earhart Way
Livermore, CA 94551
925-449-3486

Sacramento
4823 Auburn Blvd.
Sacramento, CA 95841
916-344-6742

Orangevale
9267 Greenback Ln c5
Orangevale, CA 95662
916-941-1895

Santa Clara
3448 De La Cruz Blvd.
Santa Clara, CA 95054
408-970-8551

CRISP San Diego Stores

Lakeside
11440 Riverside Dr # H
Lakeside, CA 92040
619-562-3660

San Diego
9240 Trade Place, Suite 300
San Diego, CA 92126
858-535-0607

CRISP Central Coast Stores

Arroyo Grande
618 E. Grand Ave
Arroyo Grande, CA 93420
805-481-1655

San Luis Obispo
880 Via Esteban, Suite B
San Luis Obispo, CA 93401
805-543-5247

Santa Maria
2295 A Street
Santa Maria, CA 93455
805-928-7469

CRISP Pacific Northwest Stores

Redmond (DRSI)
14736 NE 95th Street
Redmond, WA 98052
425-882-2600

Portland
5541 NE 122nd Av., #320
Portland, OR 97230
503-257-7175

Seattle (G & H Signs)
2370 Eastlake Ave E
Seattle, WA 98102
206-329-9888

Piedmont Directional Signs
13426 NE 177th Pl
Woodinville, WA 98072
425-482-9022

866.632.8329 | crispimg.com

END OF SECTION

SECTION 00 4001

REQUIRED BID FORMS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. As stated in Section 00 2113 – Instructions to Bidders, this Section contains the original bid forms and supplemental bid forms that shall be utilized by the bidder in preparing and submitting the bid, except for the document referenced in section 1.02B below.

1.02 ORIGINAL BID FORMS FOR USE BY BIDDER

A. Fill out and submit the following original bid forms for your **electronic** bid:

1. Document 00 4100 - Bid and Acceptance Form (signature required)
(Lump Sum, Unit Price, Multiple Sites/Multiple Funding)

2. Document 00 4313 - Bid Security Form (signatures required)

3. Document 00 4336 - Subletting and Subcontracting Fair Practices Act List

4. Exhibit A – LAUSD Board Resolution Questions

5. Document 00 4519 - Non-Collusion Affidavit (signature required)

B. Bidder shall submit Small Business Enterprises compliance requirements and additional supplemental subcontractor information within five (5) days from the date of OWNER request. The document for actual use by the bidder will be provided to the bidder by the OWNER. Failure to submit within five (5) days may render the bid non-responsive.

END OF SECTION

DOCUMENT 00 4100

BID AND ACCEPTANCE FORM

Bidder Name: _____

1.01 BID SUBMISSION INSTRUCTIONS

A. **Submit this form, along with all other required bid forms, electronically as indicated in Section 00 2113 - Instructions to Bidders. The bid shall be submitted by the Bid Due Date.**

B. Bidders shall keep the Bid and Acceptance Form intact and return all pages when submitting bid.

C. Failure to submit the complete Bid and Acceptance Form may invalidate the bid.

1.02 **BID DUE DATE:** Before 2:00 P.M. on **November 2, 2026.**

The only acceptable time of receipt is the date/time stamp imprinted upon the bid package by the representative of Facilities Contracts.

1.03 PROJECT IDENTIFICATION:

A. The undersigned, is familiar with the terms of the Contract, the local conditions affecting performance of Contract, the cost of the Work at the place where the Work is to be done, and with the Drawings, Specifications and all other Bidding Documents. The undersigned hereby proposes and agrees to perform, within the Contract Time stipulated, the Work including all of its component parts; and to provide and furnish any and all of the labor, materials, tools, apparatus, facilities, expendable equipment, and all utility and transportation services necessary to perform the Work in accordance with the Contract and complete all Work in a workmanlike manner for: **Verdugo Hills High School – New Scoreboards for Softball & Baseball (PSA) – CONTRACT #2710060 COLIN #10375279 / Scope ID #234467**

in strict conformity with the Drawings and Specifications prepared by:

Facilities Services Division
Los Angeles Unified School District

1.04 Bidder acknowledges the following Addendum:

Number Number Number Number Number Number Number Number Number Number Number Number
_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____

1.05 BASE BID (MUST BE FULLY COMPLETED BY BIDDER)

A. Bidder will complete the Work in accordance with the Contract Documents for the following base bid amount:

NEW SCOREBOARDS FOR SOFTBALL & BASEBALL ($_____)
(numeric figures)

1.06 BID ITEMS

1.07 The base bid amount includes all Contract Allowances, if any, as set forth in the Specifications or as described in Section 01 2100 - Allowances. **N/A.**

1.08 The base bid amount includes all applicable taxes and does not include Federal Excise Tax as set forth in Article 6.38 of the General Conditions.

1.09 BASIS OF AWARD OF CONTRACT:

A. If additive or deductive bid items are not set forth in the Bidding Documents, the lowest responsive bid shall be determined by the lowest bid amount for the base bid.

B. If the Bidding Documents contain additive or deductive bid items, the lowest responsive bid will be determined pursuant to Public Contract Code Section 20103.8 (a). That statute requires the lowest bid

shall be the lowest bid price on the lowest base bid without consideration of the prices on the additive or deductive bid items. The use of Section 20103.8 (a) to determine the lowest bid price does not preclude the OWNER from adding to, or deducting from, the Contract to be awarded any of the additive or deductive bid items identified in the bid solicitation.

C. OWNER RESERVES THE RIGHT TO REJECT ANY AND ALL BIDS.

Article 1 - Scope of Work

The CONTRACTOR shall perform, within the time stipulated in the Contract Documents, all of which are incorporated herein and shall provide all labor, materials, equipment, tools, utility services, transportation and everything else necessary to complete in a workmanlike manner, and in exact compliance with the terms of the Contract Documents, all of the Work required in connection with the following titled Project:

VERDUGO HILLS HIGH SCHOOL - NEW SCOREBOARDS FOR SOFTBALL & BASEBALL
2710060 / 10375279 / 234467

_____

[Contract Number/Project Number(s) – to be filled in by Facilities Contracts]

Article 2 - Time for Completion

The Work shall be commenced on the date stated in the OWNER Notice to Proceed. The time period for Contract Completion of the Work shall be 224 calendar days from the date set forth in the Notice to Proceed issued by the OWNER, and in accordance with the Contract regarding milestones and liquidated damages.

TIME IS OF THE ESSENCE.

Article 3 - Hold Harmless, Defense and Indemnification

To the fullest extent permitted by law, the CONTRACTOR, even if it is without fault itself, shall indemnify, defend and hold harmless the OWNER, the Board, the OCIP Administrator, and its and their respective officers, employees, program administrators, representatives, agents and consultants, from every liability, claim, loss, cause of action, action, demand, penalty, cost, expense (including without limitation, attorneys' fees) related to or arising from:

1. Any injury to person or property sustained by the CONTRACTOR or by any person, firm, or corporation, employed directly or indirectly by it upon or in connection with the Work;

2. Any injury to person or property sustained by any person, firm, or corporation, caused by any act, neglect, default, or omission of the CONTRACTOR or any person, firm, or corporation, directly or indirectly employed by it upon or in connection with the Work, whether the injury or damage occurs upon or adjacent to the Work;

3. The furnishing or use of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article, or appliance under the Contract Documents; and

4. As otherwise provided in the Contract Documents.

The CONTRACTOR at its own cost, expense, and risk, shall defend all legal proceedings that may be brought against all such potential indemnities for any such liability, claim, loss, cause of action, action, demand, penalty, cost and expense, and satisfy any resulting judgment that may be rendered against any of them whether or not the liability, claim, loss, cause of action, action, demand, penalty, cost and expense (including without limitation, attorneys' fees) was actually or allegedly caused wholly or in part through the negligence or other tortious conduct of any of them. OWNER shall have the right to approve counsel proposed for any such defense and shall be consulted with regard to any proposed settlement. This Article 3 is not meant to require the CONTRACTOR to defend, indemnify or hold harmless the potential indemnities from their own active negligence, such as is prohibited by Civil Code Section 2782.

Article 4 - Insurance

The OWNER maintains an Owner Controlled Insurance Program (OCIP). The specific provisions of that program are set forth in the General Conditions. CONTRACTOR will provide its own insurance coverage as to all types of insurance not provided for in the program and relevant to the Project in amounts of coverage and by carriers approved by the OWNER.

Article 5 - Bonding

If the amount of original award of the Contract exceeds TWENTY-FIVE THOUSAND DOLLARS ($25,000.00), the CONTRACTOR shall furnish to the OWNER a Payment Bond (Material and Labor). CONTRACTOR shall also provide a Faithful Performance Bond. Both Bonds shall be for 100% of the Contract Amount and contain the terms and conditions required by Articles 5.16 through 5.17 of the General Conditions. The CONTRACTOR is also required to submit all other bonds as required by the Contract Documents.

Article 6 - Provisions Required by Law Deemed Inserted

Each and every provision of law and clause required by law to be inserted in the Contract Documents shall be deemed to be inserted and the Contract Documents shall be read and enforced as though it were included in the Contract Documents. If through mistake or otherwise any such provision is not inserted, or is not correctly inserted, upon application of either party the Contract Documents shall forthwith be physically amended to make such insertion or correction.

Article 7 - Lead Renovation, Repair & Paint (RRP) Rule Requirements

A. Bidder Requirement

1. The below requirement applies to all District projects at all District sites regardless of the construction date of the building and/or building occupant's age.
2. Bidder must have a valid USEPA Lead-Safe Renovator Firm Certificate.
3. Firms cannot advertise or perform renovation activities covered by RRP Rule without firm certification.
4. Firms that are paid to perform work that disturb paint must be certified. This includes all firms, even sole proprietorships. Firms covered under this requirement are General Contractors, sub-contractors, and Special trade contractors, including but not limited to painters, plumbers, carpenters, electricians, window installers and replacers, telecommunication, remodeling, and repair/maintenance firms.

B. General Requirement

1. The below requirement applies to all District projects at all District sites regardless of the construction date of the building and/or building occupant's age.
2. Contractor (Firm) performing lead-related construction work must possess a current US EPA Lead-Safe Renovator Firm training completion certificate and provide a copy of the USEPA Lead-Safe Renovator Firm Certificate. *The certificate must be submitted prior to starting work.*
3. Each laborer/journeyperson level worker performing lead-related construction work must possess a current USEPA Lead Renovation, Repair and Paint ("RRP") Rule training completion certificate and *provide a copy* of the USEPA Lead Renovation, Repair and Paint ("RRP") Rule Certificate. *The certificate must be submitted prior to starting work.*

Article 8 - Internal Revenue Code Section 179D

For the purposes of this section, the term "CONTRACTOR" shall refer to the Architect-Engineer or other entity with whom the OWNER has entered into the Contract and that would qualify as the entity primarily responsible for designing certain energy efficient improvements for property owned by a Federal, State, or local government or a political subdivision as defined by Internal Revenue Code Section 179D, as amended ("Section 179D").

If this contract pertains to a project that includes energy-efficiency improvements to (a) the interior lighting systems, (b) the heating, cooling, ventilation, and hot water systems, or (c) the building envelope, and CONTRACTOR qualifies as a "Designer" of these improvements, CONTRACTOR may opt to be treated as the taxpayer for the purposes of Section 179D, and if so, shall coordinate the allocation of that deduction as follows:

1. LAUSD has retained an Energy Policy Act ("EPAct") Coordinator to act on its behalf in connection with the allocation of the Section 179D tax deduction. No other companies or individuals are authorized to represent LAUSD in relation to this allocation; only the District's EPAct Coordinator is authorized.

2. LAUSD intends to allocate a portion of the tax deduction to CONTRACTOR, following third-party certification of the required energy savings under Section 179D. In exchange, CONTRACTOR shall provide cash compensation (sometimes referred to as a "rebate") to LAUSD in an amount calculated to yield equal net values for both parties, where net value is defined as the value of the benefit remaining after relevant adjustments are made. (See paragraph 5 below.) The form of the rebate will be a check payable to Los Angeles Unified School District issued within 45 days of CONTRACTOR's receipt of the tax refund or other realization of the tax savings generated by CONTRACTOR's claim of the Section 179D deduction on CONTRACTOR's federal tax return for the year the energy efficiency improvements were placed in service.

3. CONTRACTOR will arrange, at its own expense, for certification by a qualified third party that the installed energy-efficiency property meets the requirements established by Section 179D, and will submit that certification to LAUSD's Facilities Legislation, Grants and Funding office (FLGF) within 15 days of obtaining it.

4. FLGF will submit the certification to the LAUSD Chief Facilities Executive (CFE) along with a completed allocation statement (template attached), which the CFE will sign and submit to CONTRACTOR within 15 days of FLGF's receipt of the certification.

5. CONTRACTOR will submit to the U.S. Internal Revenue Service a tax return (or amended tax return) that includes the Section 179D deduction. Within 15 days of receiving the tax refund or other benefit of the tax deduction, CONTRACTOR will provide all information necessary for EPAct Coordinator to calculate the gross and net values of the tax benefit, where the gross value to LAUSD will be the amount of the check to be issued by CONTRACTOR to LAUSD (i.e. the rebate); the net value, which will be equal for both parties, will be the value of the benefit remaining after all relevant adjustments for each party have been made. CONTRACTOR's information needed for the calculation just mentioned will consist of invoices for legal, accounting, and certification services; an adjustment will also be made for the value of the tax deductibility of CONTRACTOR's rebate to LAUSD. LAUSD's relevant adjustment will consist of its fee and expenses for the EPAct Coordinator. (See attached Sample 179D Assumptions and Calculations.)

6. EPAct Coordinator will provide this calculation to CONTRACTOR so that CONTRACTOR can submit the rebate check to LAUSD. The check must be delivered to FLGF within 45 days of CONTRACTOR's receipt of the tax refund or other realization of the tax savings generated by CONTRACTOR's claim of the Section 179D deduction on CONTRACTOR's federal tax return.

7. CONTRACTOR will remain solely liable for any penalties, interest, or costs that might result from the preparation, submittal, or any other future disposition of its claim of the Section 179D tax deduction. If this contract pertains to a project that includes energy-efficiency improvements to be installed in a building as part of (a) the interior lighting systems, (b) the heating, cooling, ventilation, and hot water systems, or (c) the building envelope, and CONTRACTOR does not qualify as a "Designer" of these improvements according to Section 179D, then CONTRACTOR will identify its Designer subcontractors and the energy-efficiency improvements for which each subcontractor is responsible so that LAUSD can contact them directly regarding possible allocation of LAUSD's Section 179D tax deduction benefits.

BID DATE:_____, 20_____

By_____ (CORPORATE SEAL)
(Firm Name as it appears on Contractor's State License)

_____
(Authorized person to sign bid – print name)

_____
(Signature of authorized person to sign bid)

Business Address: _____

_____

Phone No._____

Fax No._____

Email Address_____

FOR FC USE ONLY
Contract Number _____
☐ **with Plans** ☐ **with Specs**

1.10 ACCEPTANCE

This Contract is made and entered into on the date set forth on Page 4 of this Contract, by and between the Los Angeles Unified School District, by and through its Board of Education (hereinafter the "OWNER"), and

_____,
{Name as it appears on Contractor's State License – to be filled in by OWNER / Facilities Contracts }
_____, a _____.
{sole ownership, partnership, corporation, joint venture, or other}

This Contract is for the purpose of constructing that Project identified as **Verdugo Hills High School** and commonly referred to as **NEW SCOREBOARDS FOR SOFTBALL & BASEBALL.**

CONTRACTOR is the lowest responsible bidder in response to an Invitation to Bid issued by the OWNER and represents that it is qualified to perform all of the terms, covenants, promises and conditions of this Contract.

Article 9 - Contract Amount

The OWNER shall pay, and the CONTRACTOR shall accept, in full payment for performance as required by the Contract Documents, the sum of _____
(To be filled in by OWNER / Office of Facilities Contracts)
($_____), subject to any additions or deductions, if any, as provided in the Contract Documents. It is understood and agreed that all applicable taxes are included in the Contract Amount and that the Federal Excise Tax, from which the OWNER is exempt, is not included. The OWNER, upon request, will furnish the CONTRACTOR such Tax Exemption Certificates as may be required by the Manufacturer or Dealer.

All of the above-named Contract Documents are intended to be complementary. Work required by one of the above-named Contract Documents and not by others shall be done as if required by all.

Executed on _____, 20_____ at Los Angeles, California.
(To be filled in by Chief Procurement Officer, Deputy Chief Procurement Officer (Facilities) (up to $20M), Director of Facilities Contracts (up to $10M), Contract Administration Manager (up to $5M), Assistant Contract Administration Manager (up to $2.5M), or Contract Administration Analyst (up to $500K))

LOS ANGELES UNIFIED SCHOOL DISTRICT

By:_____
CHIEF PROCUREMENT OFFICER, DEPUTY CHIEF PROCUREMENT OFFICER (FACILITIES), DIRECTOR OF FACILITIES CONTRACTS, CONTRACT ADMINISTRATION MANAGER, ASSISTANT CONTRACT ADMINISTRATION MANAGER, OR CONTRACT ADMINISTRATION ANALYST

BLUE INK SIGNATURE REQUESTED
FAILURE TO SUBMIT THIS FORM OR ANY MODIFICATION(S) TO THIS FORM SHALL RENDER THE BID NON-RESPONSIVE

END OF DOCUMENT

ADDENDUM OF PROVISIONS REQUIRED OF FEDERALLY FUNDED CONTRACTS - FEMA AWARDS[1]

This addendum ("Addendum"), agreed to by both [INSERT CONTRACTOR NAME] ("Contractor") and the Los Angeles Unified School District ("District") (referred to jointly as "the Parties"), is effective as of the last date of signature by the Parties, below ("Effective Date"). The Parties agree that modifications to Contract No. ____, effective _____ (the "Agreement"), are necessary to ensure compliance with the laws, regulations, and/or policies affecting the District. This Addendum is made a part of and incorporated into the Agreement.

Unless otherwise specified herein, all terms provided in this Addendum shall apply. Should any terms and conditions of this Addendum, unless inapplicable as stated herein or as expressly stated in the Agreement or Addendum thereto, conflict with terms of the original Agreement or any subsequent Amendment, the terms and conditions of this Addendum shall govern.

Contractor acknowledges and agrees that should the District seek federal funds to pay for or reimburse expenses for equipment or services under that certain Agreement, the applicable clauses provided in Appendix II to Part 200-Uniform Administrative Requirements, Cost Principles, and Audits Requirements for Federal Awards (Contract Provisions for Non-Federal Entity Contracts Under Federal Awards) under 2 C.F.R. § 200.326 in addition to certain contract clauses recommended by FEMA shall apply to the Agreement. A list of the required contract provisions and their applicability are provided in Exhibit A, which is attached hereto and incorporated herein. Contractor and the District agree to the following terms and conditions:

1. EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this contract, the Contractor agrees as follows:

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees

[1] Created 2/2025, based on guidance provided in *Contract Provisions Guide: Navigating Contract Provisions for Recipient and Subrecipient Contracts Under FEMA Awards*, Version 2, Effective October 1, 2024 (FI-21-0001), Procurement Under Grants Division, Federal Emergency Management Agency (FEMA), Department of Homeland Security. https://www.fema.gov/sites/default/files/documents/fema_contract-provisions-guide_fy24.pdf

placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

(4) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may

direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: *Provided,* That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

2. DAVIS-BACON ACT

a. All transactions regarding this contract shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29 C.F.R. pt. 5 as may be applicable. The Contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable.

b. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made

by the Secretary of Labor.

c. Additionally, Contractors are required to pay wages not less than once a week.

3. COPELAND ANTI-KICKBACK ACT

a. Contractor. The Contractor shall comply with 18 U.S.C. §874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

b. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

c. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 C.F.R. §5.12."

4. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

a. *Overtime requirements*. No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

b. *Violation; liability for unpaid wages; liquidated damages*. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

c. *Withholding for unpaid wages and liquidated damages.* The (write in the name of the Federal agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the

Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

d. *Subcontracts*. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

5. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

a. Standard. If the FEMA award meets the definition of "funding agreement" under 37C.F.R. § 401.2(a) and the non-Federal entity wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the non-Federal entity must comply with the requirements of 37 C.F.R. Part 401 (Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements), and any implementing regulations issued by FEMA. See 2 C.F.R. Part 200, Appendix II (F).

b. Applicability. This requirement applies to "*funding agreements*," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

c. Funding Agreement Definition. The regulation at 37 C.F.R. § 401.2(a) defines "funding agreement" as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any Contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

6. CLEAN AIR ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT

Clean Air Act

a. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

b. The Contractor agrees to report each violation to the District and understands and agrees that the District will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

c. The Contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

Federal Water Pollution Control Act

a. The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

b. The Contractor agrees to report each violation to the District and understands and agrees that the District will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

c. The Contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

7. DEBARMENT AND SUSPENSION

Suspension and Debarment

(1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the Contractor is required to verify that none of the Contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

(2) The Contractor must comply with 2 C.F.R. pt. 180, subpart C and2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

(3) This certification is a material representation of fact relied upon by the District. If it is later determined that the Contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the District, the Federal Government may pursue available remedies, including but not limited to suspension and/or

debarment.

(4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

8. BYRD ANTI-LOBBYING AMENDMENT 31 U.S.C. § 1352

Contractors who apply or bid for an award of $100,000 or more shall file the required certification as shown on Exhibit B to this Addendum. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

9. PROCUREMENT OF RECOVERED MATERIALS

a. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—
   1. Competitively within a timeframe providing for compliance with the contract performance schedule;
   2. Meeting contract performance requirements; or
   3. At a reasonable price.

b. Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site, https://www.epa.gov/smm/comprehensive- procurement-guideline-cpg-program.

c. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

10. PROHIBITION ON CONTRACTING FOR COVERED TELECOMMUNICATIONS EQUIPMENT OR SERVICES

a. Definitions. As used in this clause, the terms backhaul; covered foreign country; covered telecommunications equipment or services; interconnection arrangements; roaming; substantial or essential component; and telecommunications equipment or services have the meaning as defined in FEMA Policy 405-143-1, Prohibitions on Expending

FEMA Award Funds for Covered Telecommunications Equipment or Services, as used in this clause—

b. Prohibitions.

1) Section 889(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, and 2 C.F.R. § 200.216 prohibit the head of an executive agency on or after Aug.13, 2020, from obligating or expending grant, cooperative agreement, loan, or loan guarantee funds on certain telecommunications products or from certain entities for national security reasons.

2) Unless an exception in paragraph (c) of this clause applies, the contractor and its subcontractors may not use grant, cooperative agreement, loan, or loan guarantee funds from the Federal Emergency Management Agency to:

i. Procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;

ii. Enter, extend, or renew a contract to procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;

iii. Enter, extend, or renew contracts with entities that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system; or 56 2 C.F.R. Part 200, Appendix II, § K (citing 2 C.F.R. § 200.216).

iv. Provide, as part of its performance of this contract, subcontract, or other contractual instrument, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

c. Exceptions.

1) This clause does not prohibit contractors from providing—

i. A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

ii. Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

2) By necessary implication and regulation, the prohibitions also do not apply to: i. Covered telecommunications equipment or services that: a. Are not used as a substantial or essential component of any system; and b. Are not used as critical technology of any system. ii. Other telecommunications equipment or services that are not considered covered telecommunications equipment or services.

d. Reporting requirement.

1) In the event the contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any

system, or as critical technology as part of any system, during contract performance, or the contractor is notified of such by a subcontractor at any tier or by any other source, the contractor shall report the information in paragraph (d)(2) of this clause to the recipient or subrecipient, unless elsewhere in this contract are established procedures for reporting the information.

2) The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause:

i. Within one business day from the date of such identification or notification: The contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

ii. Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: Any further available information about mitigation actions undertaken or recommended. In addition, the contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

e. Subcontracts. The Contractor shall insert the substance of this clause, including this paragraph (e), in all subcontracts and other contractual instruments."

11. DOMESTIC PREFERENCE FOR PROCUREMENTS

The Contractor should, to the greatest extent practicable and consistent with law, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States. This includes, but is not limited to, iron, aluminum, steel, cement, and other manufactured products. For purposes of this clause: Produced in the United States means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

12. BUILD AMERICA, BUY AMERICA ACT (BABAA)

Contractors and their subcontractors who apply or bid for an award for an infrastructure project subject to the domestic preference requirement in the Build America, Buy America Act shall file the required certification with each bid or offer for an infrastructure project, unless a domestic preference requirement is waived by FEMA. Contractors and subcontractors certify that no federal financial assistance funding for infrastructure projects will be provided unless all the iron, steel, manufactured projects, and construction materials used in the project are produced in the United States. BABAA, Pub. L. No. 117-58, §§ 70901-52. Contractors and subcontractors shall also disclose any use of federal financial assistance for infrastructure projects that does not ensure compliance with BABAA domestic preference requirements. Such disclosures shall be

forwarded to the recipient who, in turn, will forward the disclosures to FEMA, the federal agency; subrecipients will forward disclosures to the passthrough entity, who will, in turn, forward the disclosures to FEMA.

13. ACCESS TO RECORDS

a. The following access to records requirements apply to this Agreement:

(1) The Contractor agrees to provide the District, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

(2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

(3) The Contractor agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.

(4) In compliance with the Disaster Recovery Act of 2018, the District and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

14. DHS SEAL, LOGO, AND FLAGS

The Contractor must obtain written permission from DHS prior to using the DHS seals, logos, crests, or reproductions of flags, or likenesses of DHS agency officials. This includes use of DHS component (e.g., FEMA, CISA, etc.) seals, logos, crests, or reproductions of flags, or likenesses of component officials.

15. COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS

This is an acknowledgement that FEMA financial assistance may be used to fund all or a portion of the contract. The Contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives.

16. NO OBLIGATION BY FEDERAL GOVERNMENT

The Contractor hereby acknowledges and accepts that the Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, Contractor, or any other party pertaining to any matter resulting from the contract.

17. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract.

18. SOCIOECONOMIC CONTRACTING

The Contractor is encouraged to take all necessary steps identified in 2 C.F.R. § 200.321(b)(1)- (5) to ensure small businesses, minority businesses, women's business enterprises, veteran owned businesses, and labor surplus area firms are considered when possible and in accordance with applicable law.

19. LICENSE AND DELIVERY OF WORKS SUBJECT TO COPYRIGHT

If applicable, the Contractor grants to the District, a paid-up, royalty-free, nonexclusive, irrevocable, worldwide license in data first produced in the performance of this contract to reproduce, publish, or otherwise use, including prepare derivative works, distribute copies to the public, and perform publicly and display publicly such data. For data required by the contract but not first produced in the performance of this contract, the Contractor will identify such data and grant to the District or acquires on its behalf a license of the same scope as for data first produced in the performance of this contract. Data, as used herein, shall include any work subject to copyright under 17 U.S.C. § 102, for example, any written reports or literary works, software and/or source code, music, choreography, pictures or images, graphics, sculptures, videos, motion pictures or other audiovisual works, sound and/or video recordings, and architectural works. Upon or before the completion of this contract, the Contractor will deliver to the District data first produced in the performance of this contract and data required by the contract but not first produced in the performance of this contract in formats acceptable by the District.

20. PROVIDING GOOD, SAFE JOBS TO WORKERS

Creating Good Jobs

Pursuant to FEMA Information Bulletin No. 520, the contractor will comply with all applicable federal labor and employment laws. To maximize cost efficiency and quality of work, the contractor commits to strong labor standards and protections for the project workforce by creating an effective plan for ensuring high-quality jobs and complying with federal labor and employment laws. The contractor acknowledges applicable minimum wage, overtime, prevailing wage, and health and safety requirements, and will incorporate Good Jobs Principles wherever appropriate and to the greatest extent practicable

21. BUY CLEAN

The District encourages the use of environmentally friendly construction practices in the performance of this Agreement. In particular, the District encourages that the performance of this agreement include considering the use of low-carbon materials which have substantially lower levels of embodied greenhouse-gas emissions associated with all relevant stages of production, use, and disposal, as compared to estimated industry averages of similar materials or products as demonstrated by their environmental product declaration.

IN WITNESS WHEREOF, Contractor and the District have executed this Addendum on the date set forth below.

Signed:	_____	Signed:	_____
Name:	_____	Name:	_____
Title:	_____	Title:	_____
Date:	_____	Date:	_____

Exhibit A

	Provision	Contract Criteria	Required/Applicability
1.	Equal Employment Opportunity	Construction work	Yes, exact language required. 41 CFR Part 60-1.4(b)
2.	Davis Bacon Act	Construction work	**Not required for PA or HGMP grants**
3.	Copeland Anti-Kickback Act	Construction work > $2k	**Not required for PA or HGMP grants**
4.	Contract Work Hours and Safety Standards Act	> $100k + mechanics or laborers	Yes. 29 CFR 5.5(b)
5.	Rights to inventions made under a contract or agreement	Funding agreement	**Not required for PA or HGMP grants**
6.	Clean Air Act and Federal Water Pollution Control Act	>$150k	Yes
7.	Debarment and Suspension	All (>$25k)	Yes
8.	Byrd Anti-Lobbying Amendment	All (>$100k: Certification)	Yes. Exact language and certification (certification required for contracts exceeding $100,000)
9.	Prohibition on Contracting for Covered Telecommunications Equipment or Services	Contracts and subcontracts under FEMA declaration or grant award issued on or after November 12, 2020.	Yes.
10.	Domestic Preferences for Procurements	Contracts under FEMA declaration or grant award issued on or after November 12, 2020	Yes.
11.	Build America, Buy America Act (BABAA)	Infrastructure projects under applicable grant awards issued on or after January 2, 2023.	**Not applicable for PA or HGMP grants**
12.	Procurement of Recovered Materials	All	Yes
13.	Access to Records	All	Recommended by FEMA and deemed incorporated unless otherwise stated in the Agreement or amendment thereto.
14.	DHS Seal, Logo, and Flags	All	Recommended by FEMA and deemed incorporated unless otherwise stated in the Agreement or amendment thereto.
15.	Compliance with Federal Law, Regulations and Executive Orders	All	Recommended by FEMA and deemed incorporated unless otherwise stated in the Agreement or amendment thereto.
16.	No Obligation by Federal		Recommended by FEMA and deemed incorporated unless otherwise stated in

	Provision	Contract Criteria	Required/Applicability
	Government	All	the Agreement or amendment thereto.
17.	Program Fraud and False or Fraudulent Statements or Related Acts	All	Recommended by FEMA and deemed incorporated unless otherwise stated in the Agreement or amendment thereto.
18.	Socioeconomic Contracting	All	Recommended by FEMA and deemed incorporated unless otherwise stated in the Agreement or amendment thereto.
19.	Copyright	All contracts that may involve creation of copyrightable material	Recommended by FEMA and deemed incorporated to contracts that involve creation of copyrightable material, unless otherwise stated in the Agreement or amendment thereto.
20.	Providing Good, Safe Jobs to Workers	All	Recommended by FEMA and deemed incorporated unless otherwise stated in the Agreement or amendment thereto.
21.	Buy Clean	All	Recommended by FEMA and deemed incorporated unless otherwise stated in the Agreement or amendment thereto

Exhibit B

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor,_____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

_____
Signature of Contractor's Authorized Official

_____
Name and Title of Contractor's Authorized Official

Date _____

LOS ANGELES UNIFIED SCHOOL DISTRICT

Facilities Services Division

Internal Revenue Code Section 179D Allocation Statement

OWNER INFORMATION

Property owner	Los Angeles Unified School District
Authorized representative	Krisztina Tokes
Title	Chief Facilities Executive
Address	333 South Beaudry Avenue, 23rd Floor, Los Angeles, California 90017
Phone	213-241-4811

DESIGNER INFORMATION

Designer	
Authorized representative	
Title	
Address	
Phone	

BUILDING INFORMATION

Building & school names and addresses	
Qualifying capital cost	
Square footage	
Date placed in service	

ALLOCATION TO DESIGNER

Dollar amount	
Percentage of deduction	

Under penalties of perjury, I declare that I have examined this allocation, including accompanying documents, and to the best of my knowledge and belief, the facts presented in support of this allocation are true, correct, and complete.

LAUSD Chief Facilities Executive **Date**

Designer Authorized Representative **Date**

Los Angeles Unified School District - Facilities Services Division:
333 S. Beaudry Ave., 23rd Floor, Los Angeles, CA 90017
Telephone (213) 241-4811 ● Fax (213) 241-8384

SAMPLE 179D ASSUMPTIONS AND CALCULATIONS

ASSUMPTIONS:

- Building area = 100,000 SF
- Building systems affected: 3 (interior lighting, HVAC & hot water, and building envelope)
- Each building system meets the criteria for the maximum tax deduction of $0.60 per square foot
- Designer tax rate: 35%
- Certification, legal, and accounting fees: $9,000

CALCULATIONS:

		Building Area		100,000	square feet
		x 179D Deduction/SF	x	$1.80	per square foot
		= 179D Deduction Total	=	$180,000	
		x Designer Tax Rate	x	35%	
		= Tax Benefit Gross Value (Total)	=	$63,000	

Tax Benefit Gross Value to LAUSD ("Rebate")	$36,000		Tax Benefit Gross Value to Designer		$27,000
Minus: EPAct Coordinator Fee and Expenses	- $5,400		Minus: Certification, Legal, & Accounting Fees	-	$9,000
			Plus: Rebate Deductibility	+	$12,600
Tax Benefit Net Value to LAUSD	= $30,600	=	Tax Benefit Net Value to Designer	=	$30,600

LOS ANGELES UNIFIED SCHOOL DISTRICT
POLICY BULLETIN

TITLE: Fingerprinting and Criminal Background Compliance for Contractors

NUMBER: BUL-3872.2

ISSUER:
Melissa Hollingsworth
Deputy Chief Risk Officer
Risk Management Department

Matthew A. Friedman
Chief Procurement Officer
Procurement Services Division

Francisco J. Serrato, Ed.D.
Chief Human Resources Officer
Human Resources Division

ROUTING
All Employees
All Locations

DATE: August 11, 2025

POLICY: This bulletin outlines Los Angeles Unified School District ("District") policy, guidelines, and procedures for conducting criminal background checks on contractors who provide services to the District. In accordance with the requirements of California Education Code ("Education Code") sections 45125.1 and 45125.2.

MAJOR CHANGES: This bulletin replaces BUL-3872.1 Fingerprinting and Criminal Background Compliance for Contractors, dated December 16, 2024. This version provides an update on the process by which Contractor's become authorized to conduct criminal offender record information background checks. Contractors may no longer submit paper applications, rather applications must be submitted virtually.

PURPOSE: The primary objective of this policy is to ensure the safety and well-being of students, school employees, and the school community by evaluating the criminal history of contractors before allowing them to interact with students.

BACKGROUND: This policy bulletin reflects changes in the law through the implementation of AB 949, AB 130, and SB 531.

AB 949 amended Education Code section 45125.1 to mandate that a sole proprietor contracting with a school district be considered an employee of the district for purposes of criminal background checks. As a result, a school district is required to collect and submit fingerprints of any employee of a sole proprietor to the Department of Justice for background screening.

Effective January 1, 2022, AB 130 revised Section 45125.1 to require all school district contractors to ensure that any contractor who interacts with students, outside of the immediate supervision and control of the student's parent or guardian or a school employee, is subjected to a criminal background check. This extends to providers of online/virtual services.

AB 130 also eliminated the "limited contact" standard from the law. Nevertheless, school districts may still avail themselves of the pupil safety alternatives in Education Code section 45125.2 for contracts involving construction, reconstruction, rehabilitation, or repair of a school facility.

Finally, SB 531 exempts an employee of any entity, contracting with a school district, that offers work experience opportunities or workplace placements as part of transition services identified in a student's individualized education plan (IEP), from the requirement to have a valid criminal records summary if certain requirements are met. These conditions include at least one supervisor in the workplace who has direct contact with the student has a valid criminal records summary and that the student's parent/guardian has signed a consent form regarding the student's work placement.

GUIDELINES: The following are guidelines for fingerprinting and background checks for contractors.

I. INTRODUCTION

A. Education Code section 45125.1 requires any Contractor with the District ensure that its employees who interact with students outside the immediate supervision and control of the student's parent or guardian or school employee are fingerprinted and background checked in a manner authorized by the Department of Justice ("DOJ"). The District requirements for compliance with Education Code section 45125.1 are outlined

in this bulletin. This policy also applies to affiliated charter schools.

B. Definitions

1. Contract: For the purpose of this bulletin, "contract" refers to any service agreement, Memorandum of Understanding (MOU), or purchase order.

2. Construction Contract: Contract for construction, reconstruction, rehabilitation, or repairs ("CRRR").

3. Contract Sponsor: The District School or Office requesting the contract for services to be performed either on a school site or directly to students.

4. Contractor/Vendor/Entity: A person or business that enters into a contract with the District to perform a service or provide materials.

5. California Department of Justice (DOJ): The DOJ is mandated to maintain the statewide criminal record repository for the State of California. The DOJ disseminates these records for use in law enforcement and employment, among other purposes. This criminal background information serves as a critical tool for evaluating applicants in positions of trust, especially those working with vulnerable populations in California, such as students.

6. Sole Proprietor: An individual who is the exclusive owner of an unincorporated business that has a contract with the District. A sole proprietor, contracting with the District, is considered an employee of the district for purposes of criminal background checks. As a result, the District is required to collect and submit fingerprints of any employee of a sole proprietor to the Department of Justice for background screening.

7. Originating Agency Identifier (ORI): ORI is a unique code assigned by the DOJ to identify the specific organization that is requesting or submitting fingerprint or criminal background information. The ORI ensures that the criminal

history information is routed to the correct organization, such as the Contractor/Vendor or the District, in the case of a sole proprietor.

8. Custodian of Record: The Custodian of Record for a contractor ensures compliance with laws regarding background checks, maintains, and secures the required records, and serves as the contact point for all issues related to the background check process for that entity. This includes confirming that employees with criminal history prohibitions are not assigned to work in positions where they might interact with students. The Custodian of Record communicates with the District regarding the clearance status of employees as required by the contract.

II. STATUTORY REQUIREMENTS

A. Contracts (Non-Construction)

The School/Office requesting the contract ("Contract Sponsor") shall ensure that the contracting entity ("Contractor") certifies via the Fingerprint and Criminal Background Check Certification form (Attachment A) that any of its employees who may interact with students outside of the immediate supervision and control of a parent/guardian or school employee, have been fingerprinted and have not been convicted of a serious or violent felony (Education Code section 45125.1, Penal Code sections 667.5 and 1192.7), unless the employee has received a certificate of rehabilitation and a pardon.

B. Construction, Reconstruction, Rehabilitation, or Repair Contracts ("CRRR")

1. All District Contractors performing construction, reconstruction, rehabilitation, or repair of a school facility, where the employees of the entity will have contact, other than limited contact (see 2, below), shall ensure the safety of students by one or more of the following methods (see Education Code section 45125.2):

   a. The installation of a physical barrier at the worksite to limit contact with students.

b. Continual supervision and monitoring of all employees of the entity by an employee of the entity whom the DOJ has verified has not been convicted of a violent or serious felony. The Custodian of Records shall submit their fingerprints to the DOJ for processing.

c. Surveillance of employees of the entity by school personnel.

2. An entity that contracts with the District for CRRR services is not required to comply with the requirements of Education Code section 45125.1 (section IIA, above) if one or more of the methods described in section IIB1, above, is used.

3. Upon determination that the contractor performing CRRR services satisfies the requirements of this section, the Contract Sponsor shall confirm the exemption in writing, using the *Attachment A – Fingerprint and Criminal Background Check Certification* and take appropriate steps to protect the safety of any students that may come in contact with the Contractor's employees.

C. Exemptions to Sections II, A and B above
The fingerprinting requirements shall not apply if the Contract Sponsor determines and confirms in writing, via *Attachment A – Fingerprint and Criminal Background Check Certification*, that the Contractor provides services in an emergency or exceptional situation, such as when student health or safety is endangered or when repairs are needed to make school facilities safe and habitable.

III. PROCEDURES AND RESPONSIBILITIES FOR BACKGROUND CHECKS

A. Entity Type - Corporation (all forms), Partnership, or Limited Liability Company:

1. Contract Sponsor Responsibilities
   a. Submit a Request for Procurement Action (RFPA) or Purchase Requisition (PR) or MOU to Procurement Services Division ("Procurement") to initiate the contract.

b. Obtain the *Attachment A – Fingerprint and Criminal Background Check Certification* from the contractor, prior to services being performed, and retain a copy of the form on site. Or, alternatively, ensure that the Contractor/Vendor is supervised at all times and certify it by completing *Attachment B – Certification of Vendor Supervision* and submitting a copy to Procurement and Risk Management.

c. Ensure that only contractors and their employees, volunteers, and agents, who have passed the background check and are listed on *Attachment A – Fingerprint and Criminal Background Check Certification*, enter the school site or interact with students in performance of their contract duties (including those through online services such as tutoring).

2. Procurement Services Division Responsibilities:
   a. Provide *Attachment A – Fingerprint and Criminal Background Check Certification* to the Contractor.

   b. Receive a copy of the signed *Attachment A – Fingerprint and Criminal Background Check Certification* from Contractor and upload to the specified vendor account in Ariba.

   c. Update Ariba as changes to Contractor employee clearance occur.

3. Contractor/Vendor Responsibilities:
   a. Contractors should refer to the DOJ guidelines at: https://oag.ca.gov/fingerprints/agencies for information, including instructions on obtaining an Organization Record Identifier ("ORI") number. Contractors must use the DOJ Agency Authorization Portal to submit applications (https://aajc.doj.ca.gov/aapportal/).

   b. Contractors other than sole proprietors are responsible for conducting background checks on their employees

and subcontractors, who will be performing the work under a contract with the District.

c. The Contractor shall execute and return *Attachment A – Fingerprint and Criminal Background Check Certification* to the Contract Sponsor, school site where services are performed, and Procurement Services Division ("Procurement"), ensuring that only those employees, volunteers, and agents who have passed the background check and are listed on *Attachment A – Fingerprint and Criminal Background Check Certification* enter the school site or interact with students (including through online services such as tutoring).

d. Contractors are required by law to apply for subsequent arrest notifications with the DOJ to receive subsequent background reports for their employees and immediately provide any subsequent arrest or conviction information it receives to the District. It is the responsibility of the Contractor to update *Attachment A – Fingerprint and Criminal Background Check Certification* and submit the changes to the Contract Sponsor, school site where services are performed, and Procurement when employee changes occur.

e. A Contractor engaged in the construction, reconstruction, rehabilitation, or repair of a school facility is not required to complete employee background checks if the Contractor qualifies for one or more of the preventive methods, which are only applicable to CRRR contracts:
   i. Installation of a physical barrier.
   ii. Continuous supervision and monitoring of all employees of the Contractor by an employee of the Contractor who has not been convicted of a serious or violent felony as ascertained by the DOJ.
   iii. Surveillance of employees of the entity by school personnel (use *Attachment B – Certification of Vendor Supervision*).

B. Entity Type - Sole Proprietor

1. Contract Sponsor Responsibilities
   a. Submit a Request for Procurement Action (RFPA) or Purchase Requisition (PR) to Procurement to initiate the contract. The Contract Sponsor is responsible for notifying the Sole Proprietor of his/her, and employees, of the fingerprinting obligations.

   b. Ensure that only sole proprietors and their employees, volunteers, and agents, who have passed the background check, are permitted to enter the school site or interact with students (including through online services such as tutoring) in performance of their contracts. Or, alternatively, ensure that the sole proprietors and their employees are supervised at all times and certify it by completing the *Attachment B – Certification of Vendor Supervision* and submitting a copy to Procurement and Risk Management.

   c. Upon separation from District service, the Contract Sponsor will notify Procurement that the Sole Proprietor, or their employees, is no longer contracted with the District.

   d. Provide evidence that the Sole Proprietor, their employees, volunteers, and agents have passed the background check prior to entering the school site or interact with students (including through online services such as tutoring).

2. Procurement Responsibilities
   a. Inform the Office of Employee Relations (“Employee Relations”) when a Sole Proprietor is set to enter into a contract with the District.

   b. Notify the Contract Sponsor of the Sole Proprietor and employees that are cleared to provide services.

   c. Upon separation from District service, Procurement will notify Employee Relations so that the DOJ can be

contacted to cease transmission of any subsequent arrest/conviction notifications ("cancel fingerprints") to the District for the Sole Proprietor.

3. Employee Relations Responsibilities
   a. Check for fingerprint clearances in the District's recruitment system as provided in *Attachment C – Sole Proprietor Fingerprint and Background Check Process*. Both DOJ and FBI fingerprint clearances are needed before the Sole Proprietor can commence work at any District site or otherwise interact with students (e.g., providing online services).

   b. Once the Sole Proprietor's fingerprints are received by Employee Relations (i.e., DOJ and FBI clearance, fingerprint delay, fingerprint disqualification). Employee Relations will input the information into the District's background clearance system.

   c. Notify Procurement, Risk Management, and the Sole Proprietor of the fingerprint results.

   d. Upon receiving notice of any subsequent arrest/conviction, Employee Relations will immediately notify Procurement, Risk Management, and the Contract Sponsor of the subsequent arrest/conviction results. The Contract Sponsor shall consult with Risk Management and Procurement to determine whether the Contractor's employee(s) will be allowed to continue to work at District work sites or interact with students or will be barred from both.

4. Sole Proprietor Responsibilities
   a. Create a candidate profile in the District's background clearance system, SuccessFactors system, as required in *Attachment C – Sole Proprietor Fingerprint and Background Check Process*.

   b. Schedule and pay for a fingerprint appointment with their preferred third-party live scan provider listed on the applicant services site.

c. Inform the Contract Sponsor when employee changes occur.

d. Sole Proprietor shall not interact with students until informed by the Contract Sponsor that the contract is signed, and the fingerprints/background check have cleared.

IV. WORK EXPERIENCE PROGRAMS

A. If a contractor provides work experience opportunities for students, including, but not limited to, workplace placements as part of a student's individualized education program (IEP), the employee of the contractor is not required to have a valid criminal records summary pursuant Sections I and II, above if all of the following requirements are met:

1. At least one adult employee in the workplace during the student's work hours, who has direct contact with the student and has been designated by the employer as the employee of record who is responsible for the safety of the student, has a valid criminal record summary as described in Section 44237.

2. A staff representative of the District makes at least one visit every three weeks to consult with the student's workplace liaison, observe the student at the workplace, and check in with the student to ensure the student's health, safety, and welfare, including by addressing any concerns the student has raised.

3. The parent or guardian of the student has signed a consent form regarding the student's work placement, attesting that the parent or guardian understands the duties assigned to the student and the nature of the workplace environment.

B. The specific types of educational programs that are included in this provision are listed in Subsection (b)(2) of Section 45125.1.

V. INDEPENDENT STUDY AND TUTORING PROGRAMS

If a student participates in services provided by a contractor as part of an independent study or tutoring program and the student is under the immediate supervision and control of his or her parent or guardian during the provision of those services, the Contract Sponsor shall verify completion of a valid criminal records summary for all employees of the contractor who interact with the student by obtaining a copy of the completed *Attachment A – Fingerprint and Criminal Background Check Certification* from the contractor and keeping a copy on file at the school.

VI. OTHER EXEMPTIONS

The Superintendent or designee may determine that criminal background checks will not be required if the Superintendent or designee determines that the contracting entity is providing services in an emergency or exceptional situation, such as when student health or safety is endangered or when repairs are needed to make school facilities safe and habitable.

On a case-by-case basis, the District may require an entity with whom it has a contract, other than those identified in Education Code section 45125.1, to undergo fingerprinting and a background check following the procedures outlined in Sections III, IV, and V, above, as applicable.

VII. ADDITIONAL INFORMATION

A. Contractors Living Outside of California

If living outside California, Contractors must submit rolled fingerprints on paper fingerprint cards obtained through a local law enforcement agency and pay all appropriate fees. The following steps should be followed:

1. Contractors must contact the local law enforcement agency for fingerprinting services and

2. Execute and submit a completed fingerprint hard card to an authorized agency.

3. The authorized agency will review the card for completeness and accuracy, and then mail the fingerprint card, appropriate forms, and fees to the DOJ.
4. For more information, please see the following link: https://oag.ca.gov/fingerprints/agencies

B. Fingerprinting Services Information

Fingerprinting services are available at most local police departments, sheriff's offices, or any public Live Scan sites. To find the site nearest to you and a listing of fees, see Applicant Live Scan Sites on the DOJ website.

The application instructions and procedures for subsequent arrest notifications are available at the following link: https://oag.ca.gov/fingerprints/agencies

For DOJ contact information, please follow the link below: https://oag.ca.gov/fingerprints/contactus

AUTHORITY: This is a policy of the Board of Education of the City of Los Angeles.

RELATED RESOURCES:

- Education Code sections 45125.1, 45125.2, and 44237
- Assembly Bill AB 949 and AB 130
- Senate Bill SB 531
- Penal Code sections 667.5 and 1192.7
- DOJ General Fingerprinting Information and DOJ Applicant Agencies: https://oag.ca.gov/fingerprints/agencies
- Live Scan Sites: https://oag.ca.gov/fingerprints/locations
- DOJ Contact Information: https://oag.ca.gov/fingerprints/contactus
- BUL-6825.0 Records Retention and Destruction (Other than Pupil Records), dated February 13, 2017

ATTACHMENTS:

Attachment A – Fingerprint and Criminal Background Check Certification
Attachment B – Certification of Vendor Supervision
Attachment C – Sole Proprietor Fingerprint and Background Check Process

ASSISTANCE: For assistance or further information please contact:

- Risk Management Department
  (213) 241-0329 or riskfinance@lausd.net
- Procurement Services Division
  (213) 241-3087 or procurement@lausd.net
- Human Resources Division, Office of Employee Relations
  (213) 241-6591 or employeerelations@lausd.net

TO: Los Angeles Unified School District
Procurement Services Branch

333 S Beaudry Ave. 28th Floor, LA, CA 90017

FROM: **Name:** _____
Address: _____
City: _____
State: _____ **Zip:** _____

FINGERPRINT AND CRIMINAL BACKGROUND CHECK CERTIFICATION

In accordance with the Department of Justice (DOJ) fingerprint and criminal background investigation requirements of Education Code section 45125.1 et seq.

Vendor Name: _____ **Contract #:** _____
Subcontractor Name: _____ **ORI #:** _____

With respect to the Agreement (Number _____) between the Los Angeles Unified School District (**"DISTRICT"**) and the individual, _____ the company or contractor named (**"VENDOR"**) for the provision of _____ services.

PLEASE CHECK ALL APPROPIATE BOXES AND SIGN ON PAGE 2:

REQUIREMENTS SATISFIED:

☐ A) The VENDOR hereby certifies to the DISTRICT'S governing board that it has completed the criminal background check requirements of Education Code (EC) sections 45125.1 and 45125.2 and that none of its employees that may interact with DISTRICT students have been convicted of a violent felony listed in Penal Code section 667.5(c) or a serious felony listed in Penal Code section 1192.7(c). The vendor shall report all subsequent arrest notifications to the District Administrator within 24 hours of being notified by the Department of Justice.
List below or attach, all employee(s) names that have successfully completed the fingerprinting and criminal background check clearance in accordance with the law:
Date Subsequent Arrest Notifications were processed: _____

	Last Name	First Name	Date Fingerprints Submitted to DOJ	Date DOJ Clearance Received
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

(CONTINUED ON PAGE 2)

FINGERPRINT AND CRIMINAL BACKGROUND CHECK CERTIFICATION *(CONTINUED)*

EXCEPTIONS
Note: Any exceptions below must be authorized in writing by the Contract Sponsor.

☐ B) The VENDOR qualifies for a waiver of the Department of Justice (DOJ) fingerprint and criminal background investigation for the following reason(s) permitted by Education Code section 45125.1 of 45125.2

- ☐ The VENDOR and its employees will have NO INTERACTION with students (No school services will be provided).
- ☐ The services provided by the VENDOR are for an "EMERGENCY OR EXCEPTIONAL SITUATION," such as when student health or safety is endangered or when repairs are needed to make school facilities safe and habitable" [EC 45125.1(b)].
- ☐ The VENDOR and its employees will have LIMITED CONTACT with students (attach information about length of time on school grounds, proximity of work area to student areas; whether VENDOR/its employees will be working by themselves or with others, and any other factors that substantiate limited contact) [EC 45125.2 (c) – *only applicable for construction, reconstruction, rehabilitation, or repair contracts*].
- ☐ The VENDOR will ensure that ONE (1) OR MORE of the following methods is utilized to ensure student safety [EC 45125.2 (a) - *only applicable for construction, reconstruction, rehabilitation, or repair contracts*].

Check all methods to be used:

- ☐ 1) Installation of a physical barrier at the worksite to limit contact with students.
- ☐ 2) Continual supervision and monitoring of all employees of the VENDOR by an employee of the VENDOR who has not been convicted of a serious or violent felony as ascertained by the DOJ.

Signature of Contract Sponsor is required for any exceptions:

Printed Name	Title	Signature	Date

By signing below, under penalty of perjury, I certify that the information contained on this certification form is accurate. I understand that it is the VENDOR'S sole responsibility to maintain, update, and provide the District with a current "Fingerprint and Criminal Background Check Certification", throughout the duration of VENDOR-provided services.

Printed Name	Title	Signature	Date

ATTACHMENT B

LOS ANGELES UNIFIED SCHOOL DISTRICT
POLICY BULLETIN

CERTIFICATION OF VENDOR SUPERVISION

I, _____shall ensure and hereby certify that at least one school or other District employee will always be present, will provide continuous supervision, and will monitor all employees, subcontractors, and volunteers of the following contractor while interacting with students.

Date(s) of Service:_____

Contract No._____

Location (where services are provided):_____

Contractor Printed Name	Contractor Signature	Date

Site Administrator Printed Name	Site Administrator Signature	Date

Prior to Commencement of Work, submit a copy to:

1. **Procurement: procurement@lausd.net**
2. **Risk Management: riskfinance@lausd.net**
3. **School Contract File**

ATTACHMENT C

LOS ANGELES UNIFIED SCHOOL DISTRICT
POLICY BULLETIN

SOLE PROPRIETOR FINGERPRINT AND BACKGROUND CHECK PROCESS

Step 1. Complete LAUSD's Sole Proprietor Fingerprint and Background Check Form at the following link: https://forms.office.com/r/b2EQS6X8Rw

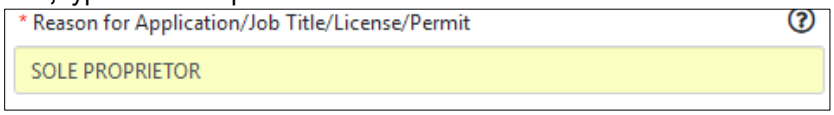
Step 2. Create a candidate profile in the SuccessFactors system.
Link to SuccessFactors system:

https://career41.sapsf.com/sfcareer/jobreqcareerpvt?jobId=727&company=losangel 01&st=AA80BD900D17FDC1F9682E4DF232015867A7E2D2

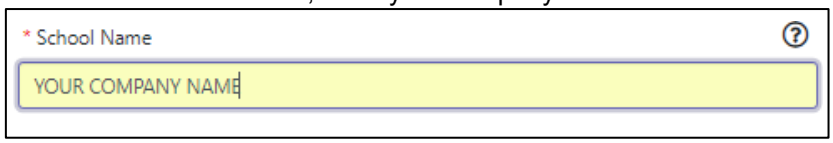
Step 3. Register for your background check, schedule your fingerprint appointment, and pay your fees at the following link:
http://www.ApplicantServices.com/LAUSOL

** **Important instructions when filling out the application form** **

A. In the "Reason for Application/Job Title/License/Permit" field, type "Sole Proprietor."



B. In the "School Name" field, enter your company name.



C. Ensure that you record your ATI number, for reference and to follow up with fingerprinting result if needed.

Step 4. The Contract Sponsor/School will notify you of the employee background check results and when services involving interaction with students can begin.

Step 5. Please inform Procurement Services Department and Risk Management Department if any employee changes occur by sending an email to the procurement contract analyst and riskfinance@lausd.net. Include the District Contract Number in the Subject line.

DOCUMENT 00 4313

BID SECURITY FORM

Bond Number _____

_____ Surety

_____ Bidder

THE LOS ANGELES UNIFIED SCHOOL DISTRICT, acting by and through its BOARD OF EDUCATION OF THE CITY OF LOS ANGELES …….. OWNER/Obligee

TEN PERCENT (10%) OF THE AMOUNT OF THE BASE BID ATTACHED……...Amount of Bond

Project Description: **VERDUGO HILLS HS - NEW SCOREBOARDS FOR SOFTBALL & BASEBALL**
Date of Bid Opening:
Project Number(s): 10375279 / 234467
Contract Number: 2710060

WHEREAS, the bidder is herewith submitting to OWNER the above-described bid, which is attached hereto and made part thereof.

NOW, THEREFORE, the Surety and the bidder are firmly held and bound, jointly and severally, to OWNER in the amount set forth above, lawful money of the United States, for which payment we bind ourselves, our heirs, executors, administrators, and assigns, jointly and severally, by these presents.

If the bid or any part of the bid shall be accepted and a contract awarded to the bidder by OWNER, and if the bidder shall well, truly and fully perform all the terms, conditions, and obligations to be kept and performed on the part of the bidder, and shall within the required time enter into a written contract and shall furnish bond(s) as required by the contract and specifications, or the call for bids, or by law, with a surety acceptable to OWNER, then this obligation shall be void; otherwise, it shall remain in full force and effect for a minimum period of 60 days from the date of the bid, or longer if required by law, or longer through mutual agreement of the OWNER and bidder.

This instrument and the amount of money set forth above shall be applied toward, but shall not be considered a limitation upon, any damages which may be sustained by OWNER if the bidder fails to execute a written contract, or fails to secure the necessary bond(s), or fails to comply with all the terms, conditions and obligations to be kept and performed on the part of the bidder.

The maximum amount of Surety's liability claimable and recoverable under this instrument shall be and hereby is expressly limited to the amount of money set forth above. In addition to the liability of the Surety under this bond, the Court shall award to the prevailing party in any suit brought on this bond reasonable attorneys' fees and costs, even if such amounts exceed the penal sum of this bond.

Dated this _____ day of _____ 20 _____

_____
BIDDER

By (signed) _____
Signature of Authorized Person

Title _____

_____
SURETY

By (signed) _____
Signature of Attorney-In-Fact

Address _____

City, State _____

Telephone _____

ACKNOWLEDGMENT BY AN ATTORNEY-IN-FACT

State of _____ SS

County of _____

On _____, before me,

_____, a Notary Public

Personally appeared _____
Personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to this instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
WITNESS my hand and official seal.

(Notary Seal)

_____
Signature of Notary

ATTACH CERTIFIED COPY OF POWER OF ATTORNEY AND ALL-PURPOSE ACKNOWLEDGMENT.
(THIS DOCUMENT CANNOT BE ALTERED, MODIFIED, OR CHANGED.)
[If you do not submit a certified or cashier's check, failure to submit this form shall render your bid non-responsive]

END OF DOCUMENT

DOCUMENT 00 4336

SUBLETTING AND SUBCONTRACTING FAIR PRACTICES ACT LIST

1.01 GENERAL Bidder Name: _____

A. In performance of Work, bidder is required to comply with the Subletting and Subcontracting Fair Practices Act as set forth in, but not limited to, Public Contract Code Sections 4100 et. seq. Violation of any provision of the Act shall subject the bidder to the penalties and other consequences prescribed in the Act.

B. In compliance with Section 4104 of the Public Contract Code, bidder submits the following complete list of each subcontractor who will perform Work or labor or render service or specially fabricate and install a portion of the Work in an amount in excess of one-half of one percent of the total bid.

C. Bidder shall list only one subcontractor for each portion of the Work. Bidders should note that the OWNER's prequalification requirements include mechanical, electrical, and plumbing contractors (i.e., contractors licensed pursuant to Sections 7056–7059 of the Business and Professions Code, specifically holding A, B, C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, or C-46 licenses pursuant to regulations of the Contractors' State License Board) that contract directly with a bidder to perform any such component work on the Project ("MEP subcontractors"). Bidders that intend to contract with any MEP subcontractors to perform any such component work on the Project shall only select MEP subcontractors that have been prequalified by the OWNER at least five (5) business days before the date fixed for the public opening of bids. Non-MEP subcontractors do not need to be prequalified to perform non-MEP component work on the Project. Bidders and MEP subcontractors shall not be eligible to bid or perform work on the Project if they (a) have not submitted completed prequalification questionnaires and financial statements to the OWNER at least ten (10) business days before the date fixed for the public opening of bids, and (b) have not been prequalified by the OWNER at least five (5) business days before the date fixed for the public opening of bids. The OWNER's list of prequalified contractors can be found online at https://www.laschools.org/new-site/prequalification/additional-resources by clicking on "Safety PQ Program Approved List." The list is updated on an ongoing basis. If an MEP subcontractor does not appear on the list, bidder should verify with the subcontractor to determine if subcontractor has received a notice from OWNER that confirms its prequalification by the above deadline. Unless prohibited by the OWNER, bidders licensed pursuant to Section 7057 of the Business and Professions Code, specifically holding general building contractor B licenses pursuant to regulations of the Contractors' State License Board, may self-perform any work on the Project to the extent permitted by law. Bids that fail to adhere to these requirements will be deemed non-responsive by the OWNER.

D. Bidder, by not listing a subcontractor for a certain portion of the Work, certifies bidder is qualified to perform and will perform said portion of Work itself.

E. Certain penalties may be imposed for the subsequent employment of an unlisted subcontractor.

F. No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations (DIR) pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

TYPE(S) OF WORK	NAME OF SUBCONTRACTOR(S) (Firm Name as it appears on Contractor's State License)	LICENSE NO.	DIR REGISTRATION NO.	LOCATION OF BUSINESS (CITY, STATE)

(THIS DOCUMENT CANNOT BE ALTERED, MODIFIED, OR CHANGED)
[YOU MUST SUBMIT THIS FORM EVEN IF YOU DO NOT INTEND TO LIST SUBCONTRACTORS.
FAILURE TO SUBMIT THIS FORM SHALL RENDER THE BID NON-RESPONSIVE]

END OF DOCUMENT

DOCUMENT 00 4500

CERTIFICATION REQUIREMENTS

1.01 GENERAL Bidder Name: _____

A. Bidder must comply and abide by the certification requirements contained herein by completing this document in its entirety and submitting with the **electronic** bid.

B. Failure to submit this document shall render the bid non-responsive.

C. Bidder is advised that no contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations (DIR) pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the DIR pursuant to Labor Code section 1725.5.

This project is subject to compliance monitoring and enforcement by the DIR and the Los Angeles Unified School District's DIR-approved Labor Compliance Program.

1.02 ETHICS POLICY

A. This certifies and confirms bidder is familiar with and in compliance with all provisions of the OWNER Ethics Policy including: 1) any employees, subcontractors or consultants, who, within the last three (3) years have been or are employees of the OWNER are disclosed below; 2) the bidder or its subcontractors have not compensated any former OWNER employee or consultant to influence any action on a matter pending with the OWNER, if that employee, within the last 12 months, held a OWNER position in which they personally and substantially participated in that matter; 3) the bidder or its subcontractors does not employ a former OWNER employee or consultant who, while serving in a OWNER position within the last two (2) years, substantially participated in the development of the bidding requirements, specifications, or in any part of the contract's contracting process; 4) the bidder has not employed as a lobbyist any former OWNER employee who left the OWNER within the last 12 months; and 5) the bidder did not receive any confidential information in connection with the procurement.

B. The bidder further certifies that set forth below are the names of all former Board of Education Members and employees it intends to employ in connection with the services to be performed by the contract, who have been Board of Education Members or employed by the OWNER **within the last three (3) years**.

(IF THIS SECTION DOES NOT APPLY, PLEASE INDICATE "NONE" OR "N/A" BELOW.)

Former Board of Education Members, Employees, Consultants, Subcontractors:

_____ _____ _____

_____ _____ _____

C. The OWNER Ethics Policy is available online through the following link:

https://achieve.lausd.net/Page/14037

D. Bidder shall answer the questions below to determine its need to register under the OWNER's revamped Lobbying Disclosure Program.

1. Do you or others in your organization do the following: (*please check all that apply*)

- ❑ Attend or arrange meetings with OWNER officials in person or over the phone;
- ❑ Draft recommendations for OWNER officials to consider;
- ❑ Give gifts, meals, event tickets or other benefits to OWNER officials;
- ❑ Introduce or market your organization's products or services to OWNER officials;
- ❑ Provide advice or recommend a strategy to a client on OWNER matters;
- ❑ Seek support or opposition from a third party (e.g. the public) on OWNER matters;
- ❑ Send letters or write emails to OWNER officials in order to influence their decision-making; or
- ❑ Take any action to influence purchasing, contracting, policy, or other decisions under consideration by OWNER officials? (*Outside of the service requirements of a contract or written agreement with OWNER and outside of a specific OWNER-issued bid process*)

❑ **CHECK THIS BOX IF NONE OF THE ABOVE ARE APPLICABLE.**

If the bidder indicated that it performs one or more of the activities above, the bidder shall proceed to the question(s) below. If the bidder checked that none of the activities in question 1 are applicable, the bidder is to skip questions 2 and 3 and note the information for all prospective bidders provided after the instructions below.

2a. Does your organization perform these activities in-house (i.e. with internal staff) on its own behalf?
OR
2b. Does a client pay your organization to conduct these activities on *the client's* behalf?

If the bidder answered "yes" to question 2a, the bidder shall proceed directly to question 3. If the bidder answered "yes" to question 2b, the bidder shall skip question 3 and follow the instructions provided immediately after question 3.

3. Will your organization spend over $10,000 this year performing these activities?
Use the grid below to estimate the total amount of money your organization as a whole expects to spend during the entire calendar year (Jan 1 – Dec 31) to conduct these activities.

Item	Total
Salaries, wages, and commissions for the people who conduct these activities	$
Copies, publications, and other materials	$
Transportation and meals	$
Gifts, meals, and benefits for OWNER officials	$
Media and advertisements	$
Other expenses to support the selected activities	$
Grand Total	$

INSTRUCTIONS
If bidder answered "yes" to question 3 (or question 2b), the bidder apparently meets at least one registration trigger. Bidder is therefore required to visit https://achieve.lausd.net/Page/14037 to access the OWNER's training materials and to register. Answers to various questions can be obtained either at the website referenced above or by calling the Ethics Office at 213-241-3330.

All prospective bidders on OWNER projects are advised of the following:

- Bidder should keep updated about the Lobbying Policy & Program by signing up on our mailing list. Bidder should visit https://achieve.lausd.net/Page/14037 for more information.

- Even if the bidder does not hit the registration trigger now, bidder should keep a mental track of their organization's spending in order to be ready to register when necessary.

- Bidder should review who is lobbying the OWNER by visiting our website and clicking on "Lobbying Disclosure."

1.03 SWEAT-FREE PROCUREMENT POLICY

A. The OWNER has established policies to restrict purchases to only those products and services that have been manufactured without the illegal use of sweatshop (including exploitive, "child", "forced", "convict", and indentured") labor. All sales/goods provided to the OWNER by the bidder and/or their subcontractor shall be in abidance with the OWNER's official policy regarding "sweat-free" schools.

B. The objective of this policy is specifically to discourage and prevent the use of any form of "exploitive labor" but not cause undue and unnecessary economic hardship for laborers. This policy targets those types of child labor that effects the mental, physical, and emotional developments of children such as those types of exploitive labor which fall under the broader category of "sweatshop labor".

C. The Sweat-Free Procurement Policy includes the following principle/requirements:
   a. Safe and healthy working conditions
   b. Prohibition of child labor
   c. Disclosure of manufacturing plant locations
   d. Verification and enforcement mechanisms
   e. Compliance with applicable codes
   f. Penalties for violations
   g. Responsible bidder forms
   h. Non-Poverty wage standard (domestic and international)

D. For the purpose of establishing a non-poverty wage, the OWNER uses the definition of non-poverty wages as formulated by the Union of Needletrades, Industrial and Textile Employees (UNITE), utilizing the Department of Health and Human Services' guidelines to determine non-poverty wages domestically. Internationally, the OWNER recognizes the World Bank's Gross National Income Per Capita Purchasing Power Parity figures to determine comparable wages in other countries.

E. The consequence for any violation by the bidder in the adherence to the aforementioned laws and /or provisions may result in action being taken by the OWNER against the bidder, which may include, but not limited to, contract cancellations, vendor defaults, and/or debarment.

F. Bidder certifies that the products and services provided to the OWNER are manufactured in strict compliance with all applicable sweatshop, child and slave labor laws of this and all other countries of the products origin.

G. This further certifies that the bidder and its subcontractors shall abide by all the provisions of the District's Sweat-Free Procurement Policy as set forth in this section.

1.04 PREVAILING WAGES

A. In compliance with provisions of the California Labor Code, all workers employed by bidder or any bidder subcontractor in the execution of Work shall be paid not less than the general prevailing rate of per diem wages, including payment for travel and subsistence; and not less than the general prevailing rate of per diem wages for holiday and overtime work, as determined by the California State Director of Industrial Relations for each craft, classification or type of worker needed to execute the Work. (See Article 6.48, General Conditions).

B. Copies of the prevailing rate of per diem wages are on file in the following OWNER Office and shall be made available to an interested party on request:

Labor Compliance Program
333 South Beaudry Avenue, 21st Floor
Los Angeles, CA 90017
(213) 241-4665

C. Information on the prevailing rate of per diem wages and the OWNER Labor Compliance Program is available at the following link:

http://www.laschools.org/new-site/labor-compliance/dir

D. Bidder certifies that it will submit the certified payroll records of Bidder and all subcontractors, of any tier, including Non-Performance payroll records, on a weekly basis to the OWNER Labor Compliance Program in the method provided by the OWNER Web-based Certified Payroll Reporting System.

E. Bidder certifies that its bid amount includes funds sufficient to allow Bidder to comply with all applicable local, state and federal laws and regulations governing the labor and services to be provided for the performance of the Work of the Contract and shall indemnify, defend and hold District harmless from and against any and all claims, demands, losses, liabilities and damages arising out of or relating to Bidder's failure to comply with applicable law in this regard.

1.05 PREQUALIFICATION

A. To be considered for award, bidder must (i) abide by and comply with the OWNER Construction Safety Standards, including prime contractor, subcontractor and/or safety prequalification requirements for bidder and all tiers of its subcontractors, as applicable, before tendering the bid to OWNER, and (ii) enroll bidder prior to commencement of the Work, and all eligible subcontractors prior to commencement of their subcontracted Work, in the OWNER Controlled Insurance Program (OCIP) (See Article 5, General Conditions). An experience modification rate exceeding 1.00 at the time of the bid may disqualify subcontractors from enrollment in OCIP.

B. This certifies and confirms that the bidder is in compliance with the OWNER's prime contractor prequalification requirements at the time of bid, and that the bidder has safety pre-qualified in accordance with OWNER safety prequalification requirements all tiers of subcontractors other than mechanical, electrical and plumbing subcontractors (i.e., contractors licensed pursuant to Sections 7056–7059 of the Business and Professions Code, specifically holding A, B, C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, and C-46 licenses pursuant to regulations of the Contractors' State License Board) that contract directly with a bidder to perform any such component work on the Project ("MEP subcontractors"). If the bidder intends to contract with any MEP subcontractors to perform any such component work on the Project, this certifies that the bidder has selected MEP subcontractors in accordance with Document 00 1116 and Document 00 2113 and that all MEP subcontractors have been listed on Document 00 4336.

1.06 DEBARMENT, SUSPENSION, INELIGIBILTY FOR AWARD

A. By signing and submitting this document, bidder certifies:

Neither bidder nor any of its principals is presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency, and;

[ ] Have, [ ] have not, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses.

B. If bidder answers "Have", a responsibility hearing may be held prior to award to determine the eligibility of bidder to remain qualified to bid and perform OWNER projects.

1.07 BIDDER CERTIFICATION

A. "The signature below binds bidder to all the above conditions and bidder certifies under penalty of perjury under the laws of the State of California that the foregoing is true and correct."

Executed on _____, at _____, California.

By: _____
Signature and Title of Bidder Representative

Certification shall be signed by bidder or an authorized representative of bidder.

(THIS DOCUMENT CANNOT BE ALTERED, MODIFIED, OR CHANGED.)
[FAILURE TO SUBMIT THIS FORM SHALL RENDER YOUR BID NON-RESPONSIVE]

END OF DOCUMENT

Andrés E. Chait
Superintendent of Schools

Pedro Salcido
Deputy Superintendent

Matthew Friedman
Chief Procurement Officer

LOS ANGELES UNIFIED SCHOOL DISTRICT
Procurement Services Department
333 S. Beaudry Avenue, 28th Floor
Los Angeles, California 90017
Phone: (213) 241-3087 ◆ Fax: (213) 241-2853

Re: LEVERAGING DISTRICT PURCHASING POWER TO DEFEND IMMIGRANT FAMILIES AND HUMAN DIGNITY

Pursuant to LAUSD Board resolution 044-25/26, Leveraging District Purchasing Power to Defend Immigrant Families and Human Dignity, LAUSD requires you to respond to the following:

☐ Yes. My organization engages in and/or provides services that support detention, surveillance, civil immigration enforcement or data-driven practices conducted by U.S. Immigration and Customs Enforcement (ICE), U.S. Customs and Border Protection (CBP), the U.S. Department of Homeland Security (DHS), or other federal agencies or contractors engaged in or related to civil immigration enforcement, detention, or related surveillance practices, through external contracts, financial contributions, donations, sponsorships, partnerships, or other business activities.

☐ No. My organization does not engage in and/or provide services that support detention, surveillance, civil immigration enforcement or data-driven practices conducted by U.S. Immigration and Customs Enforcement (ICE), U.S. Customs and Border Protection (CBP), the U.S. Department of Homeland Security (DHS), or other federal agencies or contractors engaged in or related to civil immigration enforcement, detention, or related surveillance practices through external contracts, financial contributions, donations, sponsorships, partnerships, or other business activities.

Point of Contact Information:

Company Name: _____ **Contact Name:** _____

DOCUMENT 00 4519

NON-COLLUSION AFFIDAVIT

1.01 GENERAL

A. The following affidavit is required by Section 7106 of the California Public Contract Code.

B. The Non-Collusion Affidavit shall be executed by bidder and submitted with bid.

C. Failure to submit this affidavit, filled out and signed in its entirety, shall result in the bid being deemed non-responsive.

State of California
County of _____ ss.

_____, being first duly sworn, deposes and says that he or she
(Name of person signing bid)

_____ of _____ is the party making the
(Title of Signer) (Name of Licensee Bidding)

foregoing bid, the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; the bid is genuine and not collusive or sham; the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Bidder Name _____ Check One:
Name as it appears on Contractor's State License

Sole Ownership _____

IRS Employers Identification Number: _____

Partnership _____

Contractor's State License: _____ _____
Number Classification(s)

Corporation _____

Name of License Holder: _____ Other _____

Expiration Date: _____

Address _____ Phone (_____) _____

City _____ State _____ Zip Code _____ Fax (_____) _____

"The signature below binds bidder to all the stated conditions and bidder certifies under penalty of perjury under the laws of the State of California the foregoing is true and correct."

By _____ _____
Print Name Signature and Title

(Affidavit shall be signed by bidder or an authorized representative of bidder. Do not type or use rubber stamp.)

Dated this _____ day of _____ 20 _____

(THIS DOCUMENT CANNOT BE ALTERED, MODIFIED, OR CHANGED.)
[FAILURE TO SUBMIT THIS FORM SHALL RENDER THE BID NON-RESPONSIVE]

END OF DOCUMENT

DOCUMENT 00 6113

PAYMENT BOND
(LABOR AND MATERIAL)

WHEREAS, LOS ANGELES UNIFIED SCHOOL DISTRICT BOARD OF EDUCATION,

hereinafter called the OWNER, and _____

hereinafter called the CONTRACTOR, have entered into a Contract

dated _____

for _____

Contract
Amount _____

NOW, THEREFORE, the CONTRACTOR, as Principal, and the following named Surety, _____

are held and firmly bound to the OWNER in the amount set forth under the bond, for the payment whereof in the manner specified, the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns jointly and severally, firmly by these presents:

PAYMENT BOND

In an amount equal to One Hundred Percent (100%) of the above Contract Amount. The condition of this obligation is that if the Contractor or his Subcontractors, fail to pay for any materials, provisions, provender or other supplies, or teams, used in, upon, for or about the performance of the Work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Code with respect to such work or labor, or for any amounts required to be deducted, withheld, and paid over to the Franchise Tax Board from the wages of employees of the CONTRACTOR and his Subcontractors pursuant to Section 18806 of the Revenue and Taxation Code, with respect to such work and labor that the surety will pay for the same, in an amount not exceeding the sum specified above, and also, in case suit is brought upon the bond, a reasonable attorney's fee, to be fixed by the court.

This bond is executed in accordance with the requirements of Section 9550 *et seq.* of the Civil Code and acts amendatory thereof; and shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under and by virtue of the provisions of Section 9100 of the Civil Code and acts amendatory thereof, or to their assigns.
This bond covers claims whether such claims arise before or after the date on which this bond is issued.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed thereunder shall in anywise affect its obligations on the above bonds, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract Documents.

Signed and sealed this _____day of_____20_____

CONTRACTOR/PRINCIPAL

By_____

Title _____

SURETY

By _____
Attorney-in-Fact

Address_____

Telephone Number_____

Bond Number_____

(THIS DOCUMENT CANNOT BE ALTERED, MODIFIED, OR CHANGED)
END OF DOCUMENT

SAMPLE

DOCUMENT 00 6114

PERFORMANCE BOND

WHEREAS, LOS ANGELES UNIFIED SCHOOL DISTRICT BOARD OF EDUCATION,

Hereinafter called OWNER, and _____

hereinafter called CONTRACTOR, have entered into a Contract, which is incorporated by reference herein in its entirety,

denominated as number _____,

described as _____at _____

and is in the Contract Amount of _____,

NOW, THEREFORE, for value received, the receipt and sufficiency of which is hereby deemed acknowledged, CONTRACTOR, as Principal, and _____, as surety (hereafter "SURETY"), for themselves and each of their respective heirs, executors, administrators, successors and assigns, are jointly and severally held and firmly bound to OWNER in the amount of _____ Dollars ($_____), as may be adjusted under paragraph numbered 7 below ("Penal Sum"), for the full and faithful performance of the Contract, subject, however, to the following:

SAMPLE

1. The condition of this obligation is that if the CONTRACTOR shall in a workmanlike manner promptly, competently, and faithfully perform the Work and all of the terms, conditions and provisions of the Contract, in strict conformity therewith, then this Bond shall be null and void; otherwise, this Bond shall remain in full force and effect.

2. In the event CONTRACTOR breaches the Contract and OWNER exercises its right to terminate CONTRACTOR's right to proceed with the Work, and subject to the terms of the Contract, OWNER shall notify CONTRACTOR and SURETY in writing, and SURETY shall promptly:

a. Arrange for CONTRACTOR, with consent of OWNER which OWNER may withhold in its sole discretion, to perform and complete the Contract; or

b. Undertake to perform and complete the Contract itself, through its agents or through independent contractors, provided that OWNER either has prequalified such person or has no reasoned objection to such person performing the Work; or

c. Obtain bids or negotiated proposals from qualified contractors acceptable to and prequalified by OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to OWNER any excess of the amount of the completion contract over the remaining balance of the Contract Amount; or

d. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances, and no later than thirty (30) days of SURETY's receipt of notice of termination from OWNER, or such longer period to which OWNER may agree:

(i) subject to a full reservation of all rights of OWNER, CONTRACTOR and SURETY, deny liability in whole or in part and notify OWNER in writing of the reasons and bases therefore; or

(ii) determine the amount for which SURETY may be liable to OWNER, and thereafter promptly tender payment thereof to OWNER.

During the period in which SURETY determines which of its options to pursue under this paragraph 2, OWNER may take such actions it determines are appropriate to perform the Work and/or protect the Project, and OWNER's costs and expenses of such efforts may be charged against the contract balance.

3. In addition to any costs incurred in meeting its obligations pursuant to paragraph 2 above, SURETY shall pay OWNER any amounts due to Owner or for which Owner has become obligated in connection with the Contract arising from CONTRACTOR's failure to perform in accordance with the Contract, including any liquidated damages or other delay damages recoverable under the Contract; provided, however, that the aggregate liability of SURETY under this Bond, including under paragraph 2 and this paragraph 3, shall not exceed the amount of the Penal Sum as adjusted as provided in paragraph 7.

4. CONTRACTOR and SURETY agree that for purposes of exercising its rights under this Bond after Substantial Completion, OWNER may terminate CONTRACTOR's right to proceed, and call on SURETY to perform pursuant to this Bond, for CONTRACTOR's failure to perform Punch List work, warranty work or other items of work, which might not otherwise constitute a breach justifying termination of the Contract.

SAMPLE

5. OWNER and SURETY shall cooperate with each other to assure prompt completion of the Contract, and, if SURETY exercises its option to proceed under subparagraphs 2a, 2b or 2c, Owner shall perform its obligations under the Contract with respect to any such completion contractor, including payment for work satisfactorily completed, in accordance with applicable law and the terms of the Contract except to the extent the Contract is modified by the OWNER and SURETY.

6. SURETY hereby stipulates and agrees that no adjustment to the Contract Amount or Contract Time, nor any other alteration, addition and/or deletion to the terms of the Contract, or to the Work to be performed thereunder, shall in any way affect its obligations under this Bond, and SURETY waives notice of any such change, adjustment, alteration, addition or deletion to the terms of the Contract Documents.

7. The Penal Sum of this Bond shall automatically increase as the Contract Amount increases; provided, however, the initial Penal Sum shall not increase more than fifteen percent (15%) absent written consent from the SURETY. SURETY's refusal to consent to such an increase in the Penal Sum shall not be a breach of this Bond.

8. SURETY shall be held and firmly bound by this Bond for any breach of CONTRACTOR's obligations, including any warranty of the Work, occurring within two (2) years of Substantial Completion of the entire Work. Any action on this Bond shall be commenced within three (3) years of the date of Substantial Completion.

9. OWNER may name SURETY and demand that SURETY participate in any arbitration authorized by the Contract, or SURETY may elect to intervene in any such arbitration as provided by law, in which case SURETY shall be bound by the arbitration award. If OWNER does not name SURETY or demand SURETY's participation in any arbitration, and SURETY does not elect to intervene, SURETY will not be bound by the arbitration award except to the extent the arbitration award determines CONTRACTOR'S obligations under the Contract and that determination is binding on SURETY under applicable law.

10. In case any suit, arbitration or other action is brought upon this Bond, reasonable attorneys' fees

shall be awarded to the prevailing party, only the amount thereof being within the Court's or arbitrator's discretion.

11. Where they are used herein, the following terms that are specially defined in the Contract shall have the same meaning ascribed to them in the Contract: OWNER, CONTRACTOR, Contract, Work, Contract Documents, Contract Amount, Contract Time, Day, Punch List, and Substantial Completion.

Signed and sealed this _____ day of _____ 20 _____

CONTRACTOR/PRINCIPAL

By_____ Title_____

Surety Name _____

Address of Surety _____

_____

Telephone Number _____

Bond Number _____

By _____
Attorney-in-Fact :

Address _____

_____

Telephone Number _____

SAMPLE

#

(THIS DOCUMENT CANNOT BE ALTERED, MODIFIED, OR CHANGED)
END OF DOCUMENT

SECTION 00 7000

GENERAL CONDITIONS

VERDUGO HILLS HIGH SCHOOL
NEW SCOREBOARDS FOR SOFTBALL & BASEBALL

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS

The terms used in these General Conditions and within the Contract Documents have the following meanings assigned to them applicable in both the singular and plural tense. Certain terms are fully capitalized for no other reason than ease of reading.

1.1 Addenda - Additional written or graphical instructions issued prior to the opening of bids, which clarify, modify, correct, amend, add, delete and/or otherwise change the Division 00 – Bidding Requirements or other Contract Documents.

1.2 Administrative Closeout –All Work required for completion of all Contract requirements after Substantial Completion such as Punch List items, submittal of final warranties and guaranties, and record documents.

1.3 Adverse Impact - A perceived and/or actual delay, disruption, interference, hindrance, labor or wage escalation, material cost escalation, labor inefficiency, loss of productivity and/or acceleration related to the Work, or any portion thereof.

1.4 Applicable Laws – All federal, state, and local statutes, law, ordinance, provision, rule, regulation pertaining to the furnishing of or performance of the Work.

1.5 Application for Payment - The OWNER approved invoice form along with other supportive documentation as specified in the Contract Documents to be certified and submitted by CONTRACTOR in requesting progress and/or final payment.

1.6 ARCHITECT - The person, firm, corporation or entity licensed to practice architecture or engineering in the State of California and identified in the Bidding Documents as the entity recognized by the Division of the State Architect as the Design Professional in General Responsible Charge for the Project.

1.7 Asbestos Containing Construction Material – Means any manufactured construction material, which contains more than 0.1% asbestos by weight.

1.8 "As-Built" – A set of the Drawings marked by the CONTRACTOR during the performance of the Work to indicate completely and accurately the actual as-built condition of the Work. The As-Built Drawings shall be sufficient for a capable and qualified draftsman to modify the Drawings to reflect and indicate the Work actually in place at Contract Completion.

1.9 Bidding Documents – All documents made available to bidders.

1.10 CCR - California Code of Regulations.

1.11 Change Order - A written instrument confirming a change or adjustment to the Contract Amount, Milestones and/or Contract Time and/or an addition, deletion or revision in the Work. A Change Order is only effective upon approval by the OWNER's Board of Education or the Deputy Chief Procurement Officer (Facilities) by delegated authority by the OWNER's Board of Education.

1.12 Change Order Proposal (COP) – A written instrument prepared and issued by CONTRACTOR, setting forth proposed adjustments to the Contract Amount, Milestones or Contract Time, if any, in response to a Construction Directive and/or proposed addition, deletion or revision of the Work.

1.13 Construction Directive (CD) - A written directive issued by OAR, on or after the Effective Date of the Contract, directing CONTRACTOR to proceed regarding an issue of dispute, or requiring CONTRACTOR to take a specified action regarding the Work, Project and/or Contract. A Construction Directive may, but not always will, result in an addition, deletion, and/or revision in the Work, and may contain a proposed basis for adjustments to, if any, the Contract Amount, Milestones and/or Contract Time.

1.14 Contract Completion – When all CONTRACT requirements have been satisfied, including Administrative Closeout.

1.15 Contract Amount – The dollar amount stated in the Contract payable by OWNER to CONTRACTOR. The Contract Amount may be increased or decreased only by Change Order.

1.16 Contract Documents - The Bid and Acceptance Form, Addenda, bid (including documentation accompanying the bid and any post bid documentation submitted after the Notice of Intent to Award) when attached as an exhibit to the Bid and Acceptance Form, the Notice to Proceed, the bonds, these General Conditions, the Supplementary Conditions, the Insurance Manual as further described in Article 5.1, the Safety Standards Manual, the Specifications and the Drawings, together with all Change Orders, Construction Directives, and ARCHITECT written interpretations and clarifications issued pursuant to General Condition Article 9.4. All of the foregoing Contract Documents constitute the "Contract."

Reports, drawings and/or other documents referenced in Section 00 3000, Product Data and Sample submittals reviewed relative to Articles 6.45 and 6.46 are not Contract Documents. In addition, Shop Drawings are not Contract Documents unless they bear the signature and seal of the Project Architect of Record on file with DSA.

1.17 Contract Time - The duration in calendar days, including Change Order adjustments, established by the Contract Documents for achieving completion of the Work.

1.18 CONTRACTOR - The person, firm, corporation or entity with whom the OWNER has entered into the Contract.

1.19 Cost of the Work – All costs incurred by CONTRACTOR in connection with the proper furnishing and/or performance of the Work as defined in Article 1.60 and amended by Change Order as defined in Article 1.11.

1.20 Day - Means calendar day in every case, including all Federal, State and District holidays.

1.21 Defective - When preceding the term Work, it references Work deemed to be unacceptable, faulty, unsuitable, unsightly or otherwise not in compliance with the Contract Documents including any inspection, standard, test, submittal, and/or approvals required by the Contract Documents.

1.22 Deferred Approval Item - Those portions of the design requiring submittals by CONTRACTOR, within the time specified, to ARCHITECT, DSA, and/or others.

1.23 Drawings - Pictorial or graphical portions of the Contract Documents, prepared by or on behalf of the ARCHITECT, generally denoting the scope, design, extent, location, character, and dimensions of the Work to be performed and may include plans, elevations, sections, details, schedules and diagrams, etc., however, Shop Drawings are not Drawings as so defined herein.

1.24 DSA - Division of State Architect.

1.25 Effective Date of the Contract – The date on which OWNER's Board of Education approves and/or ratifies the Contract or if OWNER's Board of Education has delegated such authority in writing to an OWNER employee, then the date on which the designated OWNER employee signs the Contract.

1.26 General Requirements - Division 01 Sections of the Specifications.

1.27 Insurance Manual – The document describing the District's Owner Controlled Insurance Program (OCIP), including its coverages, limits and exclusions.

1.28 Lead Based Paint – Paint or other surface coatings containing an amount of lead equal to or greater than .06% lead dry weight (600 parts per million).

1.29 Liquidated Damages - A set daily amount to compensate OWNER for delay caused by CONTRACTOR. Liquidated Damages do not preclude recovery of direct consequential damages incurred by OWNER during any delay.

1.30 Milestones – Designated events as set forth in the Construction Schedule in which Work or portions thereof are required to be started and/or completed. Supplementary Conditions may provide for the assessment of Liquidated Damages if CONTRACTOR fails to achieve one or more Milestones.

1.31 NCIL – Non-Conformance Items List. A working list of corrective items issued by the Project Inspector to CONTRACTOR prior to Substantial Completion. Once the Certificate of Substantial Completion is executed by the OAR, the Project Inspector issues the Substantial Completion Punch List to the CONTRACTOR and the NCIL is discarded.

1.32 Notice of Award – Notice by OWNER advising the successful bidder that the OWNER has signed the Contract.

1.33 Notice of Intent to Award - Notice by OWNER advising the successful bidder that it is the apparent responsive and responsible low (or most qualified) bidder, contingent on timely compliance with terms and conditions specified in said Notice.

1.34 Notice to Proceed – The written notice issued by OWNER to CONTRACTOR establishing the date of commencement of the Contract Time and authorizing CONTRACTOR to proceed with the Work.

1.35 OCIP - OWNER Controlled Insurance Program.

1.36 Off-Site Work – Any construction Work performed as part of the Project Scope of Work as defined in the Contract Documents, that is outside of the Site, including construction Work in public thoroughfares, rights of way or utility easements.

1.37 OWNER - The Los Angeles Unified School District.

1.38 OWNER Authorized Representative (OAR) - The designated authorized representative of OWNER who shall administer the Contract.

1.39 OWNER forces - Is defined as work for the Project undertaken by OWNER and/or Contract executed in accordance with Sections 20113 & 20114 of the Public Contract Code.

1.40 Partial Use or Occupancy - Use or occupancy by OWNER of a partially completed portion, part, space or area of the Work, prior to Substantial Completion of the Work.

1.41 Product Data - CONTRACTOR furnished literature, illustrations, standard schedules, performance charts, instructions, brochures, diagrams, catalog cuts, color charts, templates, installation and maintenance instructions, test data, agency or regulatory approvals, or other required product information furnished by CONTRACTOR relative to the Work.

1.42 Project - The Project is the public works approved by OWNER's governing board, and for which the Work is being performed.

1.43 Project Inspector – The person approved by the DSA and employed by the OWNER in accordance with the requirements of Title 24 of the California Code of Regulations.

1.44 PSA - Project Stabilization Agreement.

1.45 Punch List – A list of minor, corrective items, which does not include uncompleted Work.

1.46 Request for Clarification (RFC) - A written instrument prepared by CONTRACTOR and issued to ARCHITECT and OAR requesting clarification of the Contract Documents.

1.47 Request for Proposal (RFP) - A written instrument issued by OAR directing CONTRACTOR submission of a written estimate detailing the proposed changes to the Contract Amount, Milestones and/or Contract Time in response to the proposed Work contained therein.

1.48 Samples - CONTRACTOR furnished physical specimens such as swatches, natural materials, materials, fabricated items, equipment, devices, appliances, cuts, containers, color boards, textures, fabrications, finishes, or other required samples furnished by CONTRACTOR relative to the Work.

1.49 Schedule of Values – The line item breakdown of the Contract Amount prepared by the CONTRACTOR and approved by OAR in accordance with Article 2.5.2 and Specification 01 2973 of the General Requirements.

1.50 Separate Work Contract - OWNER contract separate from but in conjunction with the Project and/or Work of this Contract.

1.51 Shop Drawings - CONTRACTOR furnished original drawings such as illustrations, diagrams, schedules, fabrications, erection, coordination, layout, setting, details, standards, performance charts or curves, installation, routing, iso-metric, wiring, control, piping, or other required shop drawings furnished by CONTRACTOR relative to the Work.

1.52 Site - The physical area designated in the Contract Documents for CONTRACTOR's performance, construction and installation of the Work.

1.53 Specifications - Those portions of the Contract Documents consisting of the written technical and/or administrative descriptions of materials, equipment, systems, codes, regulations, procedures, standards, workmanship, services, facilities, supplies, instructions, transportation, quality, etc., as applied to the Work.

1.54 Subcontractor – The person, firm, corporation or entity executing a direct contract with CONTRACTOR or any subcontractor of any tier performing any portion of the Work.

1.55 Substantial Completion - The stage in the progress of the Work when all scope and requirements of the Contract are completed, except minor Punch List items, final warranties and guaranties, and record documents submittals.

1.56 Subsurface Facility - All underground or below grade facilities and/or improvements, including but not limited to, any and/or all encasements such as pipelines, wells, conduits, raceways, duct banks, ducts, cables, conductors, sensors, manholes, valve boxes, metering devices, storage tanks, cisterns, leach fields or other such facilities which collect, furnish, supply, distribute, and/or transport to this or any other Site or property electricity, telephone, data, steam, gases, petroleum, cable or satellite signals, sewage, signal systems, water, storm drainage, traffic signals, or other control systems.

1.57 Supplementary Conditions - The Contract Document amending and/or supplementing these General Conditions.

1.58 Unit Price Work - Work which is measured and paid for by OWNER to CONTRACTOR on a unit price basis.

1.59 Work - All of the terms and conditions set forth in the Contract Documents, including the various separately identifiable parts thereof to be furnished thereunder. The Work shall include, without limitation, all labor, materials, apparatus, supplies, services, facilities, utilities, transportation, manuals, warranties, training, and the like, necessary for CONTRACTOR to faithfully perform and complete all of its obligations under the Contract.

ARTICLE 2 - PRIOR TO CONSTRUCTION

2.1 ***Furnishing of Contract Documents:***

After the Effective Date of the Contract, CONTRACTOR will be furnished copies of the Contract Documents as set forth in the Instructions to Bidders.

2.2 ***Notice to Proceed and Contract Time Commencement:***

The Contract Time will commence on the date specified in the Notice to Proceed. OWNER will issue the Notice to Proceed within sixty (60) days after the Notice of Award. If, for any reason, OWNER does not issue the Notice to Proceed within this sixty (60) day period, OWNER shall have an additional sixty (60) day period to issue the Notice to Proceed. However, OWNER shall pay to CONTRACTOR, as reverse Liquidated Damages, not as a penalty, but rather as a reasonable approximation of all damages to CONTRACTOR, the following sum based on the Contract Amount beginning on the sixty first (61st) day of the date of the Notice of Award until the date that the Notice to Proceed is issued: $100 per day for Contracts less than $1,000,000; $250 per day for Contracts between $1,000,000 and $10,000,000; $500 per day for Contracts between $10,000,001 and $40,000,000; and $1,000 per day for Contracts in excess of $40,000,000. The amount of reverse

Liquidated Damage is CONTRACTOR's exclusive remedy for delay of issuance of the Notice to Proceed. If the Notice to Proceed is not issued within one hundred and twenty (120) days after the Notice of Award, the Contract will be terminated for convenience by OWNER, unless OWNER and CONTRACTOR mutually agree in writing to extend the period within which the Notice to Proceed may be issued.

2.3 ***No Commencement of Work without Insurance and Bonds:***

CONTRACTOR shall not commence Work on the Project Site or elsewhere before the effective date of the insurance and bonds CONTRACTOR is required to obtain by the Contract Documents. The established date of commencement of the Contract Time will not be changed by the effective date of such insurance and/or bonds.

2.4 ***Before Starting Construction of the Work:***

In addition to all pre-bid obligations of CONTRACTOR, and prior to commencing any and each portion of the Work, CONTRACTOR shall carefully examine all of the Contract Documents and any other information available to CONTRACTOR relative to materials and methods of construction of the Work and/or Project requirements. CONTRACTOR shall file any needed Request for Clarification a minimum of nine (9) days prior to the commencement of any Work for any perceived or alleged error, inconsistency, ambiguity, or lack of details or explanation of the intent of the Contract Documents. If CONTRACTOR performs any portion of the Work for which the CONTRACTOR contends the Contract Documents are ambiguous, inconsistent, lack details or are otherwise in error, and CONTRACTOR knew or should have known of such alleged defects in the Contract Documents before commencing the Work in question, then CONTRACTOR shall bear any and all resulting costs including, without limitation, the cost of correction, without a corresponding adjustment to the Contract Amount, Milestones, and/or the Contract Time. If CONTRACTOR performs, permits, or causes the performance of any portion of the Work under those portions of the Contract Documents prepared by or on behalf of CONTRACTOR which is in error, inconsistent or ambiguous, or not sufficiently detailed or explained, CONTRACTOR shall bear any and all resulting costs, including, without limitation, the cost of correction, without a corresponding adjustment to the Contract Amount, Milestones, and/or the Contract Time.

2.5 ***Preliminary Matters:***

2.5.1 Within ten (10) days from Notice to Proceed CONTRACTOR shall submit to OAR for review:

2.5.1.1 the name, address, telephone number, fax number, license number, and classification of all Subcontractors and of all other parties furnishing labor, material, or equipment to CONTRACTOR, along with the amount of each such subcontract or the total price of such labor, material, and equipment needed for each Subcontractor's total portion of the Work;

2.5.1.2 in accordance with applicable Division 01 Requirements, a Preliminary Construction Schedule with Milestones based upon Specification 01 1219 Appendix A, indicating the duration in days of starting and completing the Work, including but not limited to, any and all Milestone dates specified in the Contract Documents;

2.5.1.3 in accordance with applicable Division 01 Requirements and in conjunction with the Preliminary Construction Schedule as specified in Article 2.5.1.2, a preliminary schedule of Shop Drawing, material list, Product Data and Sample submittals setting forth the scheduled durations for submission, review and processing.

2.5.2 At least fourteen (14) days before the Initial Application for Payment, the CONTRACTOR shall submit to the OAR, for review and approval:

2.5.2.1 A Schedule of Values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the OWNER may require. This Schedule of Values, as approved by the OAR, shall be used as the basis for the CONTRACTOR's Applications for Payment. The CONTRACTOR agrees that for the purpose of Applications for Payment, the Schedule of Value items shall correspond to the appropriate construction specification sections and in accordance with applicable Division 01 requirements.

2.5.2.2 If the Schedule of Values is not submitted by the CONTRACTOR and/or approved by the OAR:

2.5.2.2.1 During the first ninety (90) days from Notice to Proceed, the OAR shall use the default percentages (%) as set forth in Schedule of Values form under Specification 01 3239 Project Forms to determine the monthly amounts for the Initial Application for Payments.

2.5.2.2.2 After the expiration of the first ninety (90) days, OWNER reserves the right to refuse to make payments in whole or in part, and/or engage independent estimating and/or scheduling consultants to fulfill these requirements.

Upon notice to CONTRACTOR, OWNER will assess all incurred costs for these additional services against CONTRACTOR.

2.6 ***Job Start Meeting:***

Before issuance of the Notice to Proceed, CONTRACTOR and all Subcontractors listed in bid documents of CONTRACTOR are required to (1) attend a mandatory job start meeting conducted by OAR and further attended by, but not limited to, ARCHITECT and the Project Inspector; and (2) complete the online Pre-Job Conference available at http://www.laschools.org/new-site/labor-compliance/pre-job-conference-video.

2.6.1 OWNER shall, in accordance with Labor Code Section 1771.5, discuss federal and state labor law in addition to OWNER requirements applicable to the Contract. A checklist of the prevailing wage requirements formalizing record keeping responsibilities, requirements for submission of certified payroll records to OWNER, and the prohibition against discrimination in employment is available online at http://www.laschools.org/new-site/labor-compliance/pre-job-conference-video. CONTRACTOR and Subcontractors of all tiers will be required to sign the checklist thereby acknowledging their understanding of an agreement to continuously comply with said requirements. A Pre-Job Conference Checklist will be collected from CONTRACTOR and Subcontractors of all tiers.

2.6.2 OAR, ARCHITECT, and CONTRACTOR shall discuss procedures to develop the Preliminary Construction Schedule as referenced in Articles 2.5.1.2, 2.5.1.3 and the Schedule of Values as referenced in Article 2.5.2.1. OAR, ARCHITECT, CONTRACTOR, and the Project Inspector shall review required procedures for handling submittals, processing of Applications for Payment, and the roles, duties and limitations of OAR, ARCHITECT, CONTRACTOR, and the Project Inspector.

2.6.3 Other related items such as safety requirements as specified in, but not limited to, the Division 01 General Requirements, Contract Documents and/or other topics as determined by OAR may be discussed.

2.7 ***Survey of Existing Conditions:***

In addition to all pre-bid obligations of the CONTRACTOR, and prior to the commencement of any Work, CONTRACTOR shall, in presence of the Project Inspector, perform a thorough existing conditions survey of the Project Site, adjacent sites and public right of way approaches, in order to document, photograph, video record and/or otherwise memorialize existing conditions and/or defects of existing improvements. Once completed and acknowledged in writing by CONTRACTOR and the Project Inspector, it shall be filed with OAR with copies transmitted to ARCHITECT and the Project Inspector.

2.8 ***Baseline Schedule:***

The CONTRACTOR shall submit a complete, detailed Baseline Schedule that includes all the identifiable Work outlined in the Contract Drawings and Specifications. It shall be in full compliance with all related Sections of the Division 01 General Requirements. If CONTRACTOR fails to comply with Article 2.8, OWNER reserves the right to engage independent estimating and scheduling consultants to fulfill these requirements. Upon notice to CONTRACTOR, OWNER will assess all incurred costs for these additional services against CONTRACTOR.

ARTICLE 3 - THE CONTRACT DOCUMENTS

3.1 ***Contract Documents Complementary and Inclusive:***

Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all. The Contract Documents are intended to include all items required for the proper execution and completion of the Work. Any item of Work mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be provided by CONTRACTOR as if shown or mentioned in both.

3.2 ***Intent of the Drawings and Specifications:***

The intent of the Drawings and Specifications is to describe the Work to be performed by CONTRACTOR. The Specifications describe Work, which cannot be readily indicated on the Drawings such as quality of materials, workmanship, and execution whereas the Drawings generally describe dimensions, elevations and general layout of the Work. It is not the intent to specify every item of the Work in the Specifications, which is shown on the Drawings, or to show on the Drawings all items of the Work described or specified in the Specifications even if such items could have been shown and/or specified. All aspects of the Work, on the Drawings or in the Specifications, or which are reasonably inferable therefrom as being necessary to complete the Work, shall be provided by

CONTRACTOR whether or not such aspects of the Work are expressly described or depicted in the Drawings or the Specifications. It is intended the Work be of sound, quality construction, and CONTRACTOR is responsible for the inclusion of all direct and indirect costs and expenses to cover all items indicated, described, or implied in the Work to be performed.

3.3 ***Conformance with Laws:***

In addition to all pre-bid obligations of the CONTRACTOR, and before commencing any portion of the Work, CONTRACTOR shall check and review the Contract Documents from a construction standpoint for conformance and compliance with all laws, ordinances, codes, rules and regulations of all governmental authorities and public utilities affecting the construction and operation of the physical portion of the Project, all quasi-governmental and other regulations affecting the construction and operation of the physical portion of the Project, and other special requirements, if any, designated in the Contract Documents. In the event CONTRACTOR observes any violation of any law, ordinance, code, rule or regulation, or inconsistency with any such restrictions or special requirements of the Contract Documents, CONTRACTOR shall provide notice to ARCHITECT and OAR and shall ensure such violation or inconsistency is corrected in the prescribed manner prior to the commencement of said portion of the Work. Unless specifically stated otherwise in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any violation and/or inconsistency between the provisions of the Contract Documents and the provisions of any laws, ordinances, codes, rules and regulations applicable to the Work, unless such application of the provisions of the Contract Documents would directly result in a violation of such laws, ordinances, codes, rules, and/or regulations. In the event the requirements of Article 3.3 or the written interpretation or clarifications of ARCHITECT do not resolve the violation or inconsistency the decisions and directives of OAR shall be final for the purpose of proceeding with the Work.

3.4 ***Priority of Addenda:***

Addenda shall govern over all other Contract Documents at the time of bid. Addenda subsequently issued shall govern over prior Addenda only to the extent specified. Where applicable, and in accordance with Title 24, California Code of Regulations, Addenda shall be approved by the DSA.

3.5 ***Division of Contract Documents:***

The Contract Documents, including, without limitation, the Specifications, are divided into titled sections for convenience only and not to dictate or determine the trade or craft involved.

3.6 ***Similar Words of Import:***

Where "as shown," "as indicated," "as detailed," or words of similar import are used, reference is made to the Drawings accompanying the Specifications unless otherwise stated. Where “provide,” “furnish,” “install,” “complete,” or words of similar import are used, it shall mean to put in place for the intended use or operation. Where "as directed," "as required," "as permitted," "as authorized," "as accepted," "as selected," or words of similar import are used, the direction, requirement, permission, authorization, approval, acceptance, or selection by ARCHITECT and/or OAR is intended unless otherwise stated.

3.7 ***General Conditions, Supplementary Conditions and General Requirements:***

The General Conditions, Supplementary Conditions and Division 01 General Requirements are a part of each and every section of the Contract Documents.

3.8 ***Brevity in Abbreviations:***

The Contract Documents are written in an abbreviated form and may not include complete sentences. Omission of words or phrases such as "CONTRACTOR shall," "shall be," etc., are intentional. Nevertheless, the requirements of the Contract Documents are mandatory. Omitted words or phrases shall be supplied by inference.

3.9 ***Singular and Plural Tense:***

Words in the singular shall include the plural whenever applicable or the context so indicates or requires.

3.10 ***Metric Units of Measurement:***

The Contract Documents may indicate metric units of measurement as a supplement to U.S. customary units. When indicated thus: 1 " (25 mm), the U. S. customary unit is specific, and the metric unit is nonspecific. When not shown with parentheses, the unit is specific. The metric units correspond to the "International System of Units" (SI) and generally follow ASTM E 380, "Standard for Metric Practice."

3.11 ***Standard Technical Specifications of Societies, Institutes, Associations, Etc.:***

Any reference to standard technical specifications of any society, institute, association, or governmental authority is a reference to the respective organization's standard technical specifications, which are in effect on the date of bid submission for the Work. If applicable standard technical specifications are revised before completion of any part of the Work, CONTRACTOR may, if acceptable to OAR, perform such Work in accordance with the revised standard technical specifications. The standard technical specifications, except as modified in the Contract Documents, shall have full force and effect as though printed in the Contract Documents. Before commencing any portion of the Work, CONTRACTOR shall check and review the Contract Documents from a construction standpoint for conformance and compliance with the provisions of all standard technical specifications, listed or otherwise. In the event CONTRACTOR observes a conflict, ambiguity or discrepancy between the provisions of the Contract Documents and standard technical specifications, CONTRACTOR shall provide notice to ARCHITECT and OAR and shall ensure such conflict, ambiguity or discrepancy is corrected in the prescribed manner prior to the commencement of said portion of the Work. Unless stated otherwise in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, ambiguity or discrepancy between the provisions of the Contract Documents and standard technical specifications. In the event the requirements of Article 3.11 or the written interpretation or clarifications of ARCHITECT do not resolve the conflict, ambiguity or discrepancy the decisions and directives of OAR shall be final for the purpose of proceeding with the Work. If CONTRACTOR believes a Construction Directive establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal within ten (10) days of the date of issuance of the Construction Directive.

3.12 ***Absence of Modifiers:***

In the interest of brevity, the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

3.13 ***Rules of Contract Document Interpretation:***

3.13.1 In case of conflict between the various components of the Contract Documents including the Drawings and Specifications, it is the intent of the Contract Documents that the more stringent, higher quality of material and/or workmanship, and/or greater quantities shall be provided by the CONTRACTOR into the Work.

3.13.2 Where applicable, the requirements approved by the DSA on any item submitted as a Deferred Approval in accordance with Title 24, California Code of Regulations, shall take precedence over any previously issued Addenda, Drawing or Specification.

3.13.3 Except as provided in Article 3.13.1, in the event of conflict between the Drawings, the following shall govern:

3.13.3.1 specific notes shall govern over all other notes;

3.13.3.2 general notes, when identified as such, shall be incorporated into other portions of Drawings;

3.13.3.3 schedules, when identified as such, are complementary with other notes and other portions of Drawings including those identified as general notes;

3.13.3.4 larger scale Drawings shall govern over smaller scale Drawings;

3.13.3.5 calculated, derived, or numerical dimensions shall govern over dimensions obtained by scaling and at no time shall CONTRACTOR perform and/or allow Work to be performed based on dimensions obtained by scaling of the Drawings.

3.14 ***Ownership and Use of Contract Documents:***

Neither CONTRACTOR, Subcontractor, or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications, and other Contract Documents. They are not to be used by CONTRACTOR, Subcontractor, or material or equipment supplier on other jobs.

3.15 ***Contract Document Amendment and Supplements:***

3.15.1 After the Effective Date of the Contract, OWNER may, without breaching this Contract, direct changes in the Contract Documents or Work, including additions, deletions, modifications thereto. However, such changes may be made only by way of Construction Directive and/or Change Order.

3.15.2 In addition, supplements to the requirements of the Contract Documents and/or minor deviations and/or variations in the Work may be authorized and accomplished in one of the following ways:

3.15.2.1 ARCHITECT review of a Shop Drawing, Product Data or Sample subject to the provisions of Articles 6.44 and 6.45;

3.15.2.2 ARCHITECT written interpretation or clarification;

3.15.2.3 OAR written interpretation or directive.

3.15.3 However, a direction or authorization under Articles 3.15.1 or 3.15.2 shall not consequentially entitle CONTRACTOR to any adjustment to the Contract Amount and/or Contract Time.

3.16 ***Document Retention Policy:***

CONTRACTOR shall, at its sole expense, maintain a full set of Project records including plans, Specifications, correspondences, submittals, record documents and all other Project documentation for a period of ten (10) years after the date of Substantial Completion. Such documents may be maintained in hard copy or electronic form and will be produced or made available for review and photocopying or electronic reproduction upon ten (10) days written request by the OWNER or designated agent or representative.

ARTICLE 4 - LAND AVAILABILITY, PHYSICAL AND SUBSURFACE CONDITIONS AND REFERENCES

4.1 ***Availability and Access to Lands:***

OWNER shall, as indicated in the Contract Documents, secure and pay for easements and right of ways to the lands and/or to the Project Site where the Work is to be performed. OWNER shall identify any encumbrances or restrictions not of general application but specifically related to use of lands so furnished with which CONTRACTOR will have to comply in performing the Work. Easements for permanent structures or permanent changes in existing facilities, if any, shall be secured by and paid for by OWNER. CONTRACTOR is responsible for providing any additional lands and access to such lands required by CONTRACTOR for temporary storage of equipment and materials, temporary construction facilities, staging of equipment or materials or parking of vehicles.

4.2 ***Physical and Subsurface Conditions:***

4.2.1 ***Reports, drawings, data and assessments:*** Reference is made to Section 00 3000 – Available Information for identification of:

4.2.1.1 ***Subsurface Conditions:*** Those reports, drawings, data and/or assessments of tests and/or exploration of subsurface conditions at or contiguous to the Project Site that were utilized in preparing the Bidding Documents.

4.2.1.2 ***Physical Conditions:*** Those drawings, descriptions, photographs, reports, assessments and/or mapping of physical conditions, other than Subsurface Facility, relating to existing surface and/or subsurface structures at or contiguous to the Project Site that were utilized in preparing the Bidding Documents.

4.2.2 ***Differing Subsurface or Physical Conditions:*** If CONTRACTOR believes any subsurface or physical condition uncovered, revealed or otherwise exposed at the Project Site is:

4.2.2.1 of such a character and/or nature as to require a change in the Contract Documents;

4.2.2.2 materially different from that shown, indicated or described in the Bidding Documents;

4.2.2.3 of an unusual nature materially different from conditions normally encountered and generally recognized as inherent in Work of the character provided for in the Bidding Documents, then;

4.2.2.4 CONTRACTOR shall, upon discovery, and before further disturbance of conditions or performing Work in connection with, provide notice to OAR and ARCHITECT setting forth a description of such conditions. CONTRACTOR shall not further disturb such conditions until directed to do so by OAR and;

4.2.2.5 OAR and ARCHITECT shall review the described conditions and shall determine the necessity to secure additional explorations and/or tests and shall provide notice to CONTRACTOR of the findings and conclusions.

4.2.3 ***Possible Change in Contract Documents:*** If OAR determines a change in the Contract Documents is warranted as a result of a differing subsurface or physical condition as noted in Articles 4.2.2.1 through 4.2.2.3 a Construction Directive may be issued to reflect and document the change. If CONTRACTOR believes a Construction Directive establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal within ten (10) days of the date of issuance of the Construction Directive.

4.2.4 ***Contract Amount, Milestones and Contract Time Adjustments:*** Adjustment of the Contract Amount, Milestones and/or Contract Time will be allowed to the extent the existence of such revealed conditions directly causes an increase in CONTRACTOR cost and/or time of performance of the Work subject to the following:

4.2.4.1 the condition must meet one or more of the limitations as set forth in Articles 4.2.2.1 through 4.2.2.3, inclusive;

4.2.4.2 a change in the Contract Documents as set forth in Article 4.2.3 shall not necessarily serve as an entitlement to any adjustments to the Contract Amount, Milestones and/or Contract Time;

4.2.4.3 in respect to Work which is paid on a Unit Price basis, any adjustment to the Contract Amount shall be as set forth in Article 11.5;

4.2.4.4 CONTRACTOR shall not be entitled to an adjustment in the Contract Amount, Milestones and/or Contract Time if:

4.2.4.4.1 CONTRACTOR was aware of the condition at the time of bid;

4.2.4.4.2 the existence or discovery of the condition could have been discovered as a result of any examination, investigation, exploration, test and/or examination of the Project Site and areas adjoining the

Project Site as required by the Bidding Documents prior to CONTRACTOR submission of bid;

4.2.4.4.3 CONTRACTOR failed to provide notice in accordance with Article 4.2.2.4.

4.2.4.5 Any adjustment to the Contract Time shall be subject to the requirements of Article 12.

4.3 ***Physical Conditions - Subsurface Facility:***

4.3.1 ***Shown or Indicated in Bidding Documents:*** The information shown or indicated in the Bidding Documents in respect to existing Subsurface Facility at or adjacent to the Project Site is based on information provided to OWNER, OWNER Consultant or ARCHITECT by the owners of such facility or by others. Unless it is specifically expressed otherwise in the Contract Documents:

4.3.1.1 OWNER, OAR, OWNER Consultant, and ARCHITECT shall not be responsible for the accuracy and completeness of any information or data by others;

4.3.1.2 the costs to perform all of the following shall be included in the Contract Amount and CONTRACTOR shall be responsible for: reviewing, checking and verifying all such information and data; locating all Subsurface Facility shown, indicated and/or described in the Bidding Documents; coordination and construction of the Work in conjunction with the owners of all such Subsurface Facility; the continuous operation of all existing Subsurface Facility; the furnishing and maintenance of all temporary in kind and place Subsurface Facility; the safety and protection of all such Subsurface Facility and the repair and/or replacement of any damaged Subsurface Facility resulting from the Work.

4.3.2 ***Not Indicated or Shown:*** If CONTRACTOR reveals and/or uncovers any Subsurface Facility not shown or indicated in the Bidding Documents, CONTRACTOR shall, upon discovery and before further disturbance of such Subsurface Facility, identify the owner of such Subsurface Facility and provide notice to the owner of such Subsurface Facility, OAR and ARCHITECT. OAR and ARCHITECT shall review the Subsurface Facility and determine the extent of any change to the Contract Documents. If OAR determines a change in the Contract Documents is required, a Construction Directive may be issued and CONTRACTOR shall be responsible for the safety and protection of such Subsurface Facility. CONTRACTOR shall only be entitled to an adjustment in the Contract Amount, Milestones and/or Contract Time to the extent they are directly related to the existence of any Subsurface Facility which was not shown and/or indicated in the Bidding Documents and which CONTRACTOR could not have known or could have been reasonably expected to be aware of or could have reasonably expected. If CONTRACTOR believes a Construction Directive establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal within ten (10) days of the date of issuance of the Construction Directive.

4.4 ***Reference Points and Elevations:***

When required by the scope of the Work, OWNER will furnish at its expense, an engineering survey of the Project Site, giving as applicable, benchmark elevation points, property lines and corners. CONTRACTOR shall layout the Work and shall be responsible for the preservation of all established benchmark elevation points, property lines and corners and shall not demolish, relocate and/or change the location of any benchmark elevation point, property line or corner without the prior written approval of OAR. CONTRACTOR shall, upon the loss, destruction and/or relocation of any benchmark elevation points, property line or corner promptly notify ARCHITECT and OAR prior to such replacement and/or relocation of benchmark elevation point, property line or corner. CONTRACTOR shall, at expense of CONTRACTOR, engage the services of State of California licensed surveyor to replace and/or relocate benchmark elevation points, property line or corners lost, destroyed and/or relocated.

4.5 ***Asbestos, PCB's & Mercury Waste, Lead Based Paint, Petroleum or other Hazardous Material:***

4.5.1 If, during construction of the Work in areas where CONTRACTOR is required to perform Work, CONTRACTOR, OAR or ARCHITECT discovers, uncovers and/or otherwise reveals a material reasonably believed to be:

4.5.1.1 Asbestos

4.5.1.2 polychlorinated biphenyl's (PCB's)

4.5.1.3 mercury waste

4.5.1.4 Lead Based Paint

4.5.1.5 petroleum

4.5.1.6 hazardous material

4.5.1.7 hazardous substance

4.5.1.8 hazardous waste

4.5.1.9 radioactive materials, or

4.5.1.10 ground water

which was not identified, described, shown or indicated in the Bidding Documents to be within the scope of the Work, CONTRACTOR shall immediately stop Work in the affected area and provide notice to OAR and ARCHITECT, advising of the circumstances of such discovery, Work stoppage and whether or not such material was generated by CONTRACTOR, OWNER or others.

4.5.2 OWNER shall retain an independent testing laboratory to determine the nature of the material encountered and whether corrective measures or remedial action is required.

4.5.3 If test results indicate and/or otherwise confirm the material to be any of the materials listed in Articles 4.5.1.1 through 4.5.1.10 and requiring treatment and/or removal, OAR may issue a Construction Directive for the legal treatment and/or removal and disposal thereof.

4.5.3.1 CONTRACTOR shall be responsible for treatment and/or removal of any discovered, uncovered and/or otherwise revealed materials listed in Articles 4.5.1.1 through 4.5.1.10 at the Project Site brought to or otherwise introduced to the Project Site by CONTRACTOR, Subcontractor, material supplier or anyone else for whom CONTRACTOR is directly or indirectly responsible.

4.5.3.2 OWNER shall be responsible for treatment and/or removal of any discovered, uncovered and/or otherwise revealed materials listed in Articles 4.5.1.1 through 4.5.1.10 at the Project Site which were not identified, described, shown or indicated in the Bidding Documents to be within the scope of the Work and not introduced to the Project Site by CONTRACTOR, Subcontractor, material supplier or anyone else for whom CONTRACTOR is directly or indirectly responsible.

4.5.3.3 If CONTRACTOR believes the Construction Directive establishes a basis for a Change Order for treatment and/or removal of any discovered, uncovered and/or otherwise revealed materials at the Project Site listed in Articles 4.5.1.1 through 4.5.1.10 and not introduced to the Project Site by CONTRACTOR, Subcontractor, material supplier or anyone else for whom CONTRACTOR is directly or indirectly responsible, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal within ten (10) days of the date of issuance of the Construction Directive.

4.5.4 For the legal treatment and/or removal and disposal of asbestos material, CONTRACTOR, or Subcontractor that performs the Work, shall be on the list of OWNER approved asbestos abatement Contractors available from OWNER's Facilities Environmental Technical Unit.

4.5.5 After treatment and/or removal of the material by CONTRACTOR or others, the independent testing laboratory shall test and certify the material has been removed and/or controlled to within legal limits and requirements. Upon receipt of such test results, OAR will provide notice to CONTRACTOR to proceed with construction in affected Work areas.

4.5.6 The provisions as set forth in Articles 4.2 and 4.3 are not intended to apply to any materials listed in Articles 4.5.1.1 through 4.5.1.10 that are uncovered, revealed and/or otherwise exposed at the Project Site.

4.6 ***Indemnification by OWNER for Presence of Materials Not Caused by CONTRACTOR:***

In the event the presence of the materials as set forth in Article 4.5.1 is not caused solely by CONTRACTOR or some person or entity directly or indirectly performing under CONTRACTOR or its Subcontractors, OWNER shall pay for all costs of testing and remediation, if any. In addition, OWNER shall defend, indemnify and hold harmless CONTRACTOR and its agents, officers, directors and employees from and against any and all claims, damages, losses, costs and expenses incurred in connection with or arising out of, or relating to, the performance of the Work in the area affected by such materials.

4.7 ***Indemnification by CONTRACTOR for Presence of Materials Caused by CONTRACTOR:***

In the event the presence of the materials as set forth in Articles 4.5.1.1 through 4.5.1.10 are caused by CONTRACTOR, Subcontractors, suppliers, or anyone else who would otherwise be a "claimant" under Civil Code § 9100, CONTRACTOR shall pay for all costs of testing and remediation, if any, and shall satisfy its defense, indemnity and hold harmless obligations pursuant to the provisions of Article 6.53 arising out of or relating to the presence of such materials even if CONTRACTOR itself is without fault. OWNER shall have the right to assess any and all costs against Contract funds and the CONTRACTOR.

4.8 ***Survival of Provisions:***

The terms of these material provisions as set forth in Articles 4.6 and 4.7 shall survive Administrative Closeout, Contract Completion and/or any termination of this Contract.

ARTICLE 5 - INSURANCE AND BONDS

5.1 ***General:***

OWNER has arranged with its insurance company administrator (the "OCIP Administrator") for insurance under an OWNER Controlled Insurance Program ("OCIP"). The OCIP, including its coverages, limits and exclusions, is described in the Insurance Manual that is set forth in Section 00 7316. All entities performing labor or services at the Project Site, including CONTRACTOR and Subcontractors of all tiers, must enroll in the OCIP unless they are an "Excluded Party" as defined below. The OCIP will provide to Enrolled Parties, as defined below, the coverages described in the Insurance Manual ("OCIP Coverages"). CONTRACTOR and all parties enrolling in the OCIP are exclusively responsible for carefully reviewing the Insurance Manual. OWNER assumes no obligation to provide insurance other than that specified in the Insurance Manual. The OCIP shall not be construed to limit OWNER's rights under the Contract Documents or at law including OWNER's indemnity rights. OWNER reserves the right, at its discretion, to discontinue the OCIP coverage or furnish other insurance coverage of various types and limits provided that such coverage is not less than that specified in the Contract Documents.

5.1.1 OCIP Coverages shall apply only to those operations of each Enrolled Party performed at the Project Site in connection with the Work and only to Enrolled Parties that are eligible for the OCIP, even if erroneously enrolled in the OCIP. An enrolled Party's "off-site" operations, including product manufacturing, assembling, or otherwise, shall only be covered if such "offsite" operations are identified and approved by the OCIP Administrator and are dedicated solely to the Work. OCIP Coverage shall not cover such "off-site" operations until receipt by CONTRACTOR and/or its Subcontractor(s) of written acknowledgement of such coverage from the OCIP Administrator.

5.1.2 The OCIP shall provide the following insurance:

5.1.2.1 Workers' Compensation insurance and Employer's Liability.
5.1.2.2 Commercial General Liability.
5.1.2.3 Excess Liability.
5.1.2.4 Builder's Risk.
5.1.2.5 Pollution Liability.

The OCIP Coverages and exclusions are set forth in full in their respective insurance policy forms. Summary descriptions of OCIP Coverages in these General Conditions or the Insurance Manual are not intended to be complete or to alter or amend any provision of the actual OCIP policies. In the event any provision of these General Conditions, the Insurance Manual or the Contract Documents conflict with the OCIP insurance policies, the provisions of the actual OCIP insurance policies shall govern.

5.1.3 OWNER will purchase and maintain Builder's Risk insurance in the amount of the initial Contract Amount (and thereafter adjusted pursuant to any Change Orders issued to CONTRACTOR) for the full replacement value of the Work. The Builder's Risk insurance will cover the interests of OWNER, CONTRACTOR and Subcontractors of every tier covering for all risk of direct physical loss, excluding earthquake and flood, and insuring against fire, extended coverage, theft, vandalism, and malicious mischief at limits and sublimits determined by OWNER. CONTRACTOR will be provided a detailed Certificate of Insurance for the Work. CONTRACTOR shall be responsible for payment of a $10,000 deductible for each occurrence. CONTRACTOR is exclusively responsible, at its sole expense, for obtaining any additional insurance to protect its interests including coverages for CONTRACTOR'S $10,000 deductible per occurrence required by the OCIP Insurance Policies.

5.1.4 OWNER will purchase and maintain Pollution Liability insurance coverage of up to $50,000,000 per occurrence. CONTRACTOR shall be responsible for payment of a $250,000 deductible for each occurrence up to a maximum aggregate deductible of $1,000,000.

5.1.5 CONTRACTOR and each of its Subcontractors, shall be solely responsible for any loss or damage to its, or their, personal property including, without limitation:

5.1.5.1 property created or provided under the Contract Documents for use or execution of the Work but which will not become or remain as part of the completed Work,

5.1.5.2 its, or their, tools and equipment, mobile construction equipment, scaffolding, and temporary structures, whether owned, used leased or rented by CONTRACTOR or any of its Subcontractors.

CONTRACTOR or any of its Subcontractors may, at its or their option, purchase, maintain and pay for insurance or self-insure such equipment and property, and any deductible in relation thereto shall be its, or their, sole responsibility. Any insurance, including self-insurance, shall be CONTRACTOR's or any of its Subcontractor's sole source of recovery in the event of a loss.

5.1.6 OCIP coverage ceases upon completion of Work at the Project Site as documented by a Certificate of Substantial Completion from OWNER. However, a grace period of sixty (60) days of additional coverage will be extended should CONTRACTOR be required to return to perform Work on Site directly and solely related to the completion of the Contract. CONTRACTOR should direct any questions or concerns relating to insurance beyond Substantial Completion to the OCIP Administrator to consult on insurance specifics for the Contract.

5.2 ***Excluded Parties and Their Insurance Obligations:***

OCIP insurance does not cover the following "Excluded Parties":

5.2.1 hazardous materials remediation, removal and/or transport companies and their consultants.

5.2.2 architects, surveyors, engineers, soil testing engineers, and their consultants.

5.2.3 vendors, suppliers, fabricators, material dealers, truckers, haulers, drivers and others who merely transport, pickup, deliver, or carry materials, personnel, parts or equipment or any other items or persons to or from the Project Site.

5.2.4 CONTRACTOR and each of their respective Subcontractors who do not perform any actual labor on the Project Site.

5.2.5 crane operators and crane operations

5.2.6 any parties or entities not specifically identified in these General Conditions or excluded by OWNER in its sole discretion, even if otherwise eligible.

Excluded Parties and parties no longer enrolled or covered by the OCIP shall obtain and maintain, and shall require each of its Subcontractors to obtain and maintain, the insurance coverage specified in Article 5.5 below and in the Insurance Manual.

5.3 ***OWNER Insurance Obligations:***

OWNER will pay OCIP premiums. OWNER will receive or pay, as the case may be, all adjustments to such premiums, whether by way of dividends, retrospective adjustments, additional or return premiums, other moneys due, audits or otherwise. CONTRACTOR and each of its Subcontractors hereby assign to OWNER the right to receive all such adjustments.

5.4 ***CONTRACTOR OCIP Obligations:***

CONTRACTOR shall:

5.4.1 incorporate the terms of Article 5 of these General Conditions in all Subcontractor agreements.

5.4.2 enroll in the OCIP within ten (10) days of receipt of the Notice of Intent to Award and maintain enrollment in the OCIP and ensure that eligible Subcontractors of CONTRACTOR enroll in the OCIP within five (5) days of subcontracting and maintain enrollment in the OCIP. OWNER may prohibit access to the Project Site by any CONTRACTOR and/or Subcontractor not enrolled in the OCIP.

5.4.3 comply with all of the administrative, safety, insurance, and other requirements outlined in these General Conditions, the Insurance Manual, the "LAUSD Facilities School Maintenance and Operations Repair & Construction Safety Standards" (the Safety Standards Manual), the OCIP insurance policies, or elsewhere in the Contract Documents.

5.4.4 provide each of its Subcontractors with a copy of the Insurance Manual and ensure Subcontractor compliance with the provisions of the OCIP insurance policies, the Insurance Manual, the Safety Standards Manual, these General Conditions, and the Contract Documents. Failure of OWNER to include the Insurance Manual in the Bidding Documents or failure of CONTRACTOR to provide each of its eligible Subcontractors with a copy of the Insurance Manual shall not relieve CONTRACTOR or any of its Subcontractors from any of the obligations contained therein.

5.4.5 acknowledge, and require all of its Subcontractors to acknowledge, in writing that OWNER and the OCIP Administrator are not agents, partners or guarantors of the insurance companies providing coverage under the OCIP (each such insurer, an "OCIP Insurer") and OWNER is not responsible for any claims or disputes between or among CONTRACTOR, its Subcontractors, and any OCIP Insurer(s). CONTRACTOR and its Subcontractors of all tiers are responsible for obtaining, at their sole cost and expense, all insurance they require for their own protection or that is required by Applicable Laws or regulations.

5.4.6 cooperate fully with the OCIP Administrator and the OCIP Insurers, as applicable, in its administration of the OCIP.

5.4.7 provide, within ten (10) days of request by OWNER, or the OCIP Administrator, all documents or information necessary to enroll, or continue as enrolled, CONTRACTOR or its Subcontractors of all tiers in the OCIP. Such information may include, but not be limited to, payroll records, certified copies of insurance coverages, declaration pages of coverages, certificates of insurance, underwriting/rating data, prior loss history information, safety records or history, OSHA citations, or such other data or information as OWNER, the OCIP Administrator, or the OCIP Insurers may request in the administration of the OCIP, or as required by the Insurance Manual.

5.4.8 use only mechanical, electrical and plumbing ("MEP") Subcontractors that are licensed pursuant to Section 7058 of the Business and Professions Code, specifically holding C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, and C-46 licenses, and identified on the OWNER's List of Prequalified Subcontractors at least five (5) business days prior to the date of bid for the Project, if the Project includes MEP components that will be performed by first-tier MEP Subcontractors.

For all other trades, CONTRACTOR shall use only Subcontractors that it has safety pre-qualified in accordance with the procedures outlined in the Safety Standards Manual and verified by CONTRACTOR to have an Experience Modification Rate (EMR) that complies with OWNER's requirement upon the date of bid. CONTRACTOR shall be responsible to provide documentation verifying all Subcontractors of CONTRACTOR have an EMR that complies with OWNER's requirement upon the date of bid. OWNER may prohibit access to the Project Site by CONTRACTOR or any Subcontractor for which CONTRACTOR has not provided documentation of an EMR that complies with OWNER's requirement upon the date of bid or waiver by OWNER of this requirement or has not met the safety pre-qualification requirements outlined in the Safety Standards Manual.

5.4.9 be responsible for paying all deductibles set forth in the OCIP Insurance Policies for losses attributable to the Work of CONTRACTOR, acts or omissions of CONTRACTOR, or the acts or omissions of any Subcontractor of CONTRACTOR, or any other entity or party for whom CONTRACTOR may be responsible.

5.4.10 submit an online payroll report (Alliant Payroll Form) for each completed payroll period and Application for Payment. Instructions for online access are provided in Section 8 of the OCIP Manual. This obligation includes compliance with all existing requirements and all new requirements implemented during the term of the Project. OWNER may decline to process or may apply a Withhold against, until receipt of the Alliant Payroll Form, any Application for Payment submitted without completion of the Alliant Payroll Form that is consistent with CONTRACTOR and Subcontractor (all tier) information submitted for the corresponding Certified Payroll Report periods.

5.5 ***Additional Insurance Required From Enrolled Parties and Excluded Parties:***

In addition to enrolling in OCIP, CONTRACTOR shall at its sole cost and expense obtain and maintain, and shall require each of its Subcontractors to obtain and maintain, the insurance coverages specified below in a form acceptable to OWNER. The insurance limits may be provided through a combination of primary and excess policies, including the umbrella form of policy provided that coverages under such excess or umbrella policies are at least as broad as the coverages under the underlying policies. Each policy required under this Article shall name OWNER, the Board, the OAR, the OCIP Administrator, their respective officers, agents and employees, and any additional entities as OWNER may request as additional insureds. The additional insured endorsement shall state that the coverages provided to the additional insureds are primary and non-contributing with respect to any other insurance available to the additional insured. Each policy shall provide for no less than thirty (30) days prior written notice to OWNER prior to cancellation. The insurance required below shall conform to OWNER requirements outlined in the Insurance Manual.

As to Enrolled Parties, the workers' compensation, employer's liability, and commercial general liability insurance required by this Article shall only be for off-site activities or operations, and automobile liability for both "on-site" and "off-site" operations not insured under the OCIP.

5.5.1 Standard Commercial Automobile Liability Insurance covering all owned, leased/non-owned and hired automobiles, trucks, and trailers with a combined single limit of not less than $1,000,000 per occurrence.

5.5.2 Statutory Workers' Compensation Insurance and Employer's Liability insurance with statutory limits as required by law and Employer's Liability limits of not less than $1,000,000 each accident/$1,000,000 each employee/$1,000,000 policy limit.

5.5.3 Commercial General Liability Insurance, including both bodily injury and property damage, in a form providing coverage not less than the standard ISO Commercial General Liability insurance policy ("Occurrence Form") with limits no less than the following:

	Enrolled Parties / Excluded Parties
Each Occurrence	$1,000,000 / $1,000,000
General Aggregate	$2,000,000 / $2,000,000
Products/ Completed Operations Aggregate	$2,000,000 / $2,000,000
Personal/ Advertising Injury Aggregate	$1,000,000 / $1,000,000

5.5.4 CONTRACTOR shall provide Pollution Liability insurance with limits not less than $5,000,000, in a form and with an insurer acceptable to OWNER, for Work of CONTRACTOR and/or Subcontractors involved in demolition and/or hazardous materials remediation excluded from OCIP coverage. All hazardous materials remediation Work must be performed by a CONTRACTOR or Subcontractor(s) approved by OWNER.

5.5.5 CONTRACTOR shall be reimbursed for all direct costs to provide any additional insurance required by OWNER, but not listed or otherwise specified in Articles 5.5.1 through 5.5.4 but shall not be reimbursed for those incurred to provide Subcontractors of the CONTRACTOR insurance coverages otherwise provided by the OCIP and required by OWNER to Subcontractors of CONTRACTOR enrolled in the OCIP as specified in Article 5.4.2 and Article 5.4.8.

5.5.6 Any failure by CONTRACTOR or its Subcontractors of any tier to procure or maintain the policies of insurance described above shall constitute a material breach of this Contract. In the event of such a breach, OWNER may exercise all remedies provided in the Contract Documents. In addition, OWNER may, at its discretion, procure or renew such insurance to protect OWNER's interests and pay any and all premiums in connection therewith; in that event, CONTRACTOR shall be responsible to OWNER for all such premiums and related costs and expenses and OWNER may withhold said amounts from payments otherwise owed to CONTRACTOR.

5.6 ***Insurer Qualification:***

All required policies shall be issued by insurance companies that are duly licensed and authorized by the State of California to issue insurance policies for the required coverages and limits. Such insurance companies shall have a current A.M. Best's financial strength rating of at least "A-" and a financial size category of VII or higher.

5.7 ***CONTRACTOR Representations and Warranties to OWNER:***

CONTRACTOR represents and warrants to OWNER that:

5.7.1 all information it submits to OWNER, OAR, or the OCIP Administrator shall be accurate and complete;

5.7.2 CONTRACTOR, on behalf of itself and its Subcontractors has had the opportunity to review and analyze copies of the OCIP binders and specimen policies that are on file in office of OWNER's OCIP Administrator. Any reference or summary in the Contract, these General Conditions, the Insurance Manual, or elsewhere in any other Contract Document as to amount, nature, type or extent of OCIP Coverages and/or potential applicability to any potential claim or loss is for reference only. CONTRACTOR and its Subcontractors have not relied upon said reference but solely upon their own independent review of the OCIP Coverages in formulating any understanding and/or belief as to amount, nature, type or extent of any OCIP Coverages and/or its potential applicability to any potential claim or loss;

5.7.3 CONTRACTOR represents on its own behalf, and on behalf of its Subcontractors, that the Costs of OCIP Coverages were deducted in CONTRACTOR bid or proposal for the Work, the Contract Amount, and will not be included in any Change Order Proposals or any Application for Payment relative to the Work. The "Costs of OCIP Coverages" is defined as

the amount of CONTRACTOR and its Subcontractors' reduction in insurance costs due to eligibility for OCIP Coverages as determined by using Alliant Form-B located in the Insurance Manual and information available to OWNER and/or the OCIP Administrator regarding the costs of similar coverages taking into account limits of liability, coverages, and rating of the insurer;

5.7.4 CONTRACTOR acknowledges OWNER shall not pay or compensate CONTRACTOR or any Subcontractor, in any manner, for "Costs of OCIP Coverages" or any other insurance costs of the CONTRACTOR or Subcontractors.

5.8 ***Audits:***

In addition to OWNER rights under Article 6.51, CONTRACTOR agrees OWNER, OAR, OCIP Administrator, and/or any OCIP Insurer may audit CONTRACTOR or any of its Subcontractors payroll records, books and records, insurance coverages, insurance cost information, or any other information CONTRACTOR provides to OWNER, OAR, OCIP Administrator, or the OCIP Insurers to confirm the accuracy and to assure Costs of OCIP Coverages are not included in any payment for the Work.

5.9 ***OWNER Election to Modify or Discontinue OCIP:***

OWNER may, in its sole discretion, modify the OCIP Coverages, discontinue the OCIP, or request that CONTRACTOR or any of its Subcontractors withdraw from the OCIP upon thirty (30) days written notice. Upon such notice, CONTRACTOR and/or one or more of its Subcontractors, as specified by OAR in such notice, shall obtain and thereafter maintain at OWNER expense during the performance of the Work all, or a portion thereof as specified by OWNER, of the OCIP Coverages. The form, content, limits of liability, cost, and the insurer issuing such replacement insurance shall be subject to OWNER approval.

5.10 ***Withhold of Payments:***

OWNER may withhold from any payment otherwise owed to CONTRACTOR the Costs of OCIP Coverages if included in an Application for Payment. In the event an OWNER audit of CONTRACTOR records and information as permitted in the Contract, these General Conditions, or other Contract Documents reveals a discrepancy in the insurance, payroll, safety, or any other information required by the Contract Documents to be provided by CONTRACTOR to OWNER, or to the OCIP Administrator, or reveals the inclusion of Costs of OCIP Coverages in any payment for the Work, OWNER shall have the right to full deduction from the Contract Amount of all such Costs of OCIP Coverages and all audit costs. Audit costs shall include, but not be limited to, the fees of the OCIP Administrator and the fees of attorneys and accountants conducting the audit and review. If the CONTRACTOR or its Subcontractors fail to timely comply with the provisions of these General Conditions, OWNER may withhold any payments due CONTRACTOR and its Subcontractors until such time as they have performed the requirements of these General Conditions. OWNER shall also have the right to initiate procedures to declare CONTRACTOR a non-responsible bidder for a period from two (2) to five (5) years.

5.11 ***Waiver of Subrogation:***

CONTRACTOR hereby waives all rights of recovery under subrogation because of deductible clauses, inadequacy of limits of any insurance policy, limitations or exclusions of coverage, or any

other reason against OWNER, the Board, OAR, the OCIP Administrator, its or their officers, agents, or employees, and any other contractor or Subcontractor performing Work or rendering services on behalf of OWNER in connection with the planning, development and construction of the Work. CONTRACTOR shall also require that all CONTRACTOR maintained insurance coverage related to the Work include clauses providing that each insurer shall waive all of its rights of recovery by subrogation against CONTRACTOR together with the same parties referenced immediately above in this Article. CONTRACTOR shall require similar written express waivers and insurance clauses from each of its Subcontractors.

A waiver of subrogation shall be effective as to any individual or entity even if such individual or entity:

5.11.1 would otherwise have a duty of indemnification, contractual or otherwise;

5.11.2 did not pay the insurance premium directly or indirectly;

5.11.3 whether or not such individual or entity has an insurable interest in the property damaged.

5.12 ***Duty of Care:***

Nothing contained in these General Conditions or the Insurance Manual shall relieve CONTRACTOR or any of its Subcontractors of their respective obligations to exercise due care in the performance of their duties in connection with the Work and to complete the Work in strict compliance with the Contract Documents.

5.13 ***Records Disclosure, Maintenance and Access:***

Prior to the commencement of the Work, CONTRACTOR shall furnish and shall cause each of its Subcontractors to furnish to OWNER in a form satisfactory to OWNER, an estimate of total direct labor cost (listed by Standard Workers' Compensation Insurance classification) to be incurred in connection with the Work at the Project Site, and the total amount due each Subcontractor under its subcontract with CONTRACTOR. CONTRACTOR shall, and shall cause each of its Subcontractors, to keep and maintain an accurate and classified record of its or their payroll data and information in accordance with the requirements of the OCIP Insurer(s) or any other Contract Document and shall keep and maintain evidence of safety pre-qualification and of insurance as required by this Article for each of its Subcontractors. CONTRACTOR shall provide OWNER with payrolls for all Project Site labor performed by CONTRACTOR and its Subcontractors. CONTRACTOR and its Subcontractors shall permit its books and records to be examined and audited periodically by the OCIP Administrator, OCIP Insurer(s), OWNER or their respective representatives.

5.14 ***Conflicts:***

In the event of a conflict between the provisions of these General Conditions and the provisions of the Insurance Manual, the provisions of these General Conditions shall govern.

5.15 ***Safety:***

CONTRACTOR shall be solely responsible for safety of the Work of this Contract. CONTACTOR shall establish a safety program that, at a minimum, complies with all local, state and federal safety standards, and any safety standards established by OWNER for the Project, including, but not limited

to, the Cal/OSHA Construction Safety Standards, and the LAUSD Facilities School Maintenance and Operations Repair & Construction Safety Standards.

5.15.1 Electrical Worker Qualification

5.15.1.1 CONTRACTOR shall implement and enforce an "Enhanced Electrical Safety Policy" on all projects defined in Division 26 of the Contract Documents (Electrical Work) or defined as:

"Placement, installation, erection, or connection, of any electrical wires, fixtures, appliances, apparatus, raceways, conduits, solar photovoltaic cells, or any part thereof, which generates, transmits, transforms, or utilizes electrical energy in any form for any purpose".

The elements of the "Enhanced Electrical Safety Policy" shall require that:

5.15.1.2 All electrical Work to be performed by qualified and certified personnel in accordance with Title 8 of the California Code of Regulations, Section 291.1; Note: Labor Code 108.2 (b), certification is not required for persons performing work for contractors licensed as class C-7 low voltage or Class C-45 electric sign contractors as long as the work performed is within the scope of the class C-7 or class C-45 license, including incidental and supplemental work as defined in Section 7059 of the Business and Professions Code, and regardless of whether the same contractor is also licensed as a class C-10 contractor; and seventy percent (70%) of all "journeyman" wireman will be graduates of a State of California approved electrical apprenticeship program. These provisions are subject to the provisions of Article 6.48.

5.15.1.3 A minimum of 20% of the jobsite electrical workers to be OSHA 10-hour General or Construction Industry Safety and Health Certified.

5.15.1.4 At least one jobsite electrical worker to be OSHA 30-hour General or Construction Industry Safety and Health Certified.

5.15.1.5 Only qualified personnel trained in accordance with NFPA 70E, "Standard for Electrical Safety in the Workplace" may work on electrical equipment containing mixed low and high voltages sharing the same vaults or panels.

5.16 ***Bond Requirements:***

CONTRACTOR shall apply for and furnish to OWNER separate payment and performance bonds for the Work on forms provided by OWNER. The original penal sum of the performance bond shall be in a monetary amount equal to 100% of the original Contract Amount, inclusive of all additive alternates, guaranteeing the prompt, competent and faithful performance of all terms and conditions of the Contract. The payment bond shall be for 100% of the Contract Amount and guarantee, without limitation, the payment in full of all claims for labor, services, materials, supplies, and the like, for the Work as required by Civil Code §§ 9550 and 9554. A corporate surety authorized and admitted to transact business in California shall provide the bonds. CONTRACTOR shall supply OWNER with documentation establishing the necessary requirements of the surety consistent with California law. To the extent, if any, the Contract Amount is increased in accordance with the Contract Documents,

CONTRACTOR shall cause the amount of the bonds to be increased accordingly and shall promptly deliver satisfactory evidence of such increase to OWNER. In the case of an increase of the Contract Amount, the penal sum of the performance bond shall automatically increase with the Contract Amount up to fifteen percent (15%) of the original Contract Amount; provided, however, that OWNER may, in its discretion, require CONTRACTOR to secure an increase in the penal sum from the performance bond surety beyond fifteen percent (15%) of the original Contract Amount. Subject to the preceding sentence, the bonds shall further provide no change or alteration of the Contract Documents (including, without limitation, an increase in the Contract Amount, as referred to above), adjustment to the Milestones and/or Contract Time, or modifications of the time, terms, or conditions of payment to the CONTRACTOR will release the sureties. If CONTRACTOR fails to furnish the required bonds, secure required increases in the penal sum of the performance bond, or fails to keep such bonds in full force and effect up through such times that such bonds are otherwise obligated to be in force and effect under the law, OWNER may terminate CONTRACTOR right to proceed with the Work and/or terminate the Contract for cause. The performance bond shall be in the form and contain the content shown in Document 00 6114. The payment bond shall be in the form and contain the content shown in Document 00 6113. The bonds shall also contain all other requirements prescribed by law.

5.17 ***Surety Qualification:***

Only bonds executed by admitted surety insurers as defined in Code of Civil Procedure § 995.120 shall be accepted. Surety must be a California-admitted surety and listed by the U.S. Treasury with a bonding capacity in excess of the Contract Amount.

ARTICLE 6 - CONTRACTOR DUTIES AND RESPONSIBILITIES

***Management and Superintendence of the Work*:**

6.1 CONTRACTOR shall supervise and direct all aspects of the Work using the best skill, attention, and efforts of CONTRACTOR. CONTRACTOR shall be solely responsible for and exercise full control over construction means, methods, techniques, sequences, procedures, quality control and coordinating all portions of the Work, unless the Contract Documents provide other specific instructions concerning these matters. CONTRACTOR shall perform in accordance with Title 24 of the California Code of Regulations, the DSA Procedures for the Construction Oversight Process and the Project Certification Process, and applicable sections of the Education Code.

6.2 CONTRACTOR shall provide a competent full time superintendent fluent in English and assistants as necessary who shall supervise and superintend the Work and be physically present at the Project Site while any aspect of the Work is being performed.

6.3 CONTRACTOR shall provide a competent project manager fluent in English and assistants as necessary who shall administer and manage the Work. The project manager shall represent CONTRACTOR, and communications given to the project manager shall be as binding as if given to CONTRACTOR. In the event the Contract Amount is equal to or exceeds ten million dollars ($10,000,000) the project manager shall be assigned to the Work on a full time basis and shall be present at the Project Site while any aspect of the Work is being performed.

6.4 CONTRACTOR shall furnish and ensure competent adequate staff necessary to properly administer, coordinate, purchase, expedite, and/or organize the procurement of all materials and equipment so the materials and equipment will be procured and delivered at the time they are required to be

incorporated into the Work and to furnish and maintain an adequate force of skilled workers on the Project Site to complete the Work in accordance with all requirements of the Contract Documents.

6.5 CONTRACTOR shall enforce strict discipline and good order among employees and other persons carrying out the Work including, but not limited to, Subcontractors, and/or material and/or equipment suppliers retained for the Work. CONTRACTOR shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. CONTRACTOR shall ensure all employees and other persons carrying out the Work abide by all statutes and all regulations pertaining to, but not limited to, smoking, consumption of alcohol, illegal substances, profanity or inappropriate attire and prohibited verbal and physical contact with students and faculty (see also Section 01 5000 of the General Requirements).

6.6 CONTRACTOR shall be responsible to OWNER for acts and omissions of CONTRACTOR employees, Subcontractors, material and equipment suppliers, and their agents, employees, invitees, and other persons performing portions of the Work under direct or indirect contract with CONTRACTOR or any of its Subcontractors.

Labor, Materials, and Equipment of the Work:

6.7 Unless otherwise specified in the Contract Documents, CONTRACTOR shall provide and furnish qualified personnel to survey, layout, and construct the Work. CONTRACTOR shall furnish, supply, install and maintain all items necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work, including without limitation, all labor, material, equipment, apparatus, tools, construction equipment and machinery, appliances, fuel, power, light, heat, ventilation, telephone, sanitary facilities, water, gas, utilities, temporary generators, transportation, and all other incidental facilities and services for the furnishing, performance, testing, start up, and completion of the Work.

6.8 Unless otherwise specified in the Contract Documents, all materials and equipment to be permanently installed in the Work shall be new and shall be of such quality as required by the Contract Documents. All warranties and guarantees required by the Contract Documents shall be expressly issued to the benefit of OWNER. CONTRACTOR shall, if requested by ARCHITECT and/or OAR, furnish satisfactory evidence in the form of reports of required tests as to kind and quality of all materials and equipment. All equipment, appliances, and fixtures shall be installed, erected, connected, tested, started and conditioned in accordance with applicable manufacturer's instructions and the Contract Documents.

6.8.1 The furnishing, use or installation of Lead Containing Paint or Asbestos Containing Construction Materials into the Work, Project or onto OWNER property is not permitted.

6.9 CONTRACTOR shall, upon approval of applicable submittals, promptly place orders for materials and equipment so delivery of materials and equipment can be incorporated into the Work without delay. CONTRACTOR, upon receipt of notice from OAR, shall furnish documentary evidence from CONTRACTOR, Subcontractor, distributor and/or manufacturer verifying placement of orders and/or scheduled delivery dates.

Delivery and Storage of Products, Equipment, Fabrications and Materials:

6.10 Products, equipment, fabrications, and applicable materials shall be delivered with an identification tag or label specifying name of manufacturer, model number, type and other pertinent data described

on such tag or label as required for complete identification. If products, equipment, fabrications, and applicable materials are not so identified then CONTRACTOR, upon notice by OAR or the Project Inspector, shall provide an invoice and/or other supporting identification of products, equipment, fabrications or applicable materials.

6.11 Materials specified to be tested, which are delivered to and are to be tested on the Project Site, shall be stored in separate areas in order to segregate untested materials or materials undergoing testing from materials previously tested and approved. CONTRACTOR shall have on the Project Site at all times a sufficient quantity of tested and approved materials for timely integration into and completion of the Work in accordance with the approved Construction Schedule.

Construction Schedule:

6.12 CONTRACTOR shall expeditiously proceed in accordance with the Construction Schedules established pursuant to Article 2.8, and the related Division 01 General Requirements, and shall furnish and maintain adequate forces in order to achieve all Milestones as set forth in Section 01 1216 (Phasing of the Work). If requested by OAR, CONTRACTOR shall submit for approval, in accordance with applicable Division 01 Requirements, proposed adjustments to the Construction Schedule, which does not change or amend either the Milestones and/or Contract Time. Proposed adjustments to the Construction Schedule which change and/or amend the Contract Amount, Milestones and/or Contract Time shall be submitted for approval by CONTRACTOR in accordance with Section 01 3213 or 01 3216 as applicable to the specific contract, and be in conformance with the applicable requirements of Articles 10 through 12 and 16.

6.13 ***Sufficient Forces:***

Upon the date specified in the Notice to Proceed, CONTRACTOR shall furnish and maintain sufficient forces, facilities and materials, work such hours, including extra shifts and overtime operations to ensure completion of all Base Scope Work in accordance with Section 01 1216 (Phasing of the Work), and every approved Construction Schedule.

"***Or Equal*" *and "Substitutions":***

6.14 When an item of material or equipment is specified by the use of a proprietary name, make, trade name, or catalog number the intent of the Specification is to establish the type, function, and quality required. Unless the provision of the Contract Documents indicate that no substitutions are permitted, for purposes as described in Public Contract Code Section 3400, the provision will be deemed followed by the words "or equal," and other items or material may be accepted by the OAR in accordance with the following provisions and applicable General Requirements.

"Or Equal"

6.14.1 Within thirty-five (35) days after the date established in the Notice of Award, CONTRACTOR may, in accordance with Public Contract Code Section 3400, submit to OAR proposed "or equal" material or equipment CONTRACTOR believes to be functionally equal to and sufficiently similar to those specified in the Contract Documents. CONTRACTOR must provide to OAR substantiating data.

6.14.2 The substantiating data shall include a CONTRACTOR certification stating that the proposed "or equal" will be readily available, perform the functions and achieve the results called for

by the general design, be similar in substance to that specified and be suited to the same use as that specified. All variations of the proposed "or equal" from that specified shall be identified in the proposal and all available maintenance, repair and replacement services shall be submitted. In addition, the following items shall be addressed in the substantiating data as to whether or not:

6.14.2.1 acceptance of the "or equal" for use in the Work will require a change in any of the Contract Documents or in the provisions of any other Separate Work Contract on the Project or to adapt the design to the proposed “or equal”;

6.14.2.2 the proposed "or equal" is subject to payment of any license fee or royalty;

6.14.2.3 the proposed "or equal" is equal to in quality and serviceability to the specified item;

6.14.2.4 is acceptable in consideration of the required design and artistic effect;

6.14.2.5 will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts.

6.14.3 ***CONTRACTOR Expense:*** All data to be provided by CONTRACTOR in support of any proposed "or equal" will be at expense of CONTRACTOR.

6.14.4 ***Evaluation:*** ARCHITECT and OAR shall be allowed a reasonable time as supported by the Construction Schedule to evaluate each submittal made pursuant to Articles 6.14.1 and 6.14.2 with OAR as the final judge of acceptability. No proposed "or equal" will be ordered, installed, or utilized without OAR prior written acceptance as evidenced by a Construction Directive and/or Change Order. ARCHITECT may condition its approval of the "or equal" upon delivery to OWNER of an extended warranty or other assurances of adequate performance of the "or equal." All risks of damage, loss or expense, of any kind, including, without limitation, all costs associated with any Adverse Impact due to CONTRACTOR’s “or equal” submission shall be the sole responsibility of CONTRACTOR.

“Substitutions”

6.14.5 A specified item of material or equipment, which is no longer manufactured and/or cannot be acquired from existing inventories, will be considered a basis for a proposed substitution item. Substitution requests arising due to a new Subcontractor entering into a contractual relationship with CONTRACTOR during the Contract Time may be considered as long as there is sufficient time to review and approve the substitution without altering the previously accepted construction and material submission schedule. Proposed substitutions of materials or equipment must be made by CONTRACTOR and on the substitution request form available from OWNER within thirty (30) days of identifying that the product is no longer available. CONTRACTOR shall certify the proposed substitution will be readily available, perform adequately the functions and achieve the results called for by the design concept, be similar in substance to that specified, and be suited to the same use as that specified. The substitution request shall include all variations of the proposed substitute and an itemized estimate of all costs or credits directly or indirectly resulting from acceptance of such substitute, including costs of redesign and of Subcontractors affected by the resulting change. CONTRACTOR shall bear all the costs associated with the proposed substitution, unless the

substitution is made necessary by OWNER's specification of material or equipment that is not available because it is no longer manufactured or produced, in which case OWNER shall bear such costs. In addition, the following items shall also be considered:

6.14.5.1 the extent, if any, to which the time required to evaluate and consider accepting a proposed substitution will jeopardize timely compliance with any Milestones;

6.14.5.2 whether acceptance of the proposed substitution for use in the Work will require a change in any of the Contract Documents or in the provisions of any other Work by Separate Work Contract on the Project to adapt the design to the proposed substitute;

6.14.5.3 whether the proposed substitute is subject to payment of any license fee or royalty;

6.14.5.4 the proposed substitution is equal in quality, warranties, and serviceability to the specified item;

6.14.5.5 is acceptable in consideration of the required design and artistic effect;

6.14.5.6 will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts.

6.14.6 ***CONTRACTOR Expense:*** All data to be provided by CONTRACTOR in support of any proposed substitute item will be at expense of CONTRACTOR.

6.14.7 ***Evaluation:*** ARCHITECT and OAR shall be allowed a reasonable time as supported by the Construction Schedule within which to evaluate each proposal for or submittal made pursuant to Article 6.14.5. ARCHITECT shall make a written recommendation to OAR regarding the acceptability of the proposed substitution. No substitution will be ordered, installed or utilized without OAR prior written acceptance as evidenced by a Construction Directive and/or Change Order. ARCHITECT may condition its approval of the substitution upon delivery to OWNER of an extended warranty or other assurances of adequate performance of the substitution. All risks of damage, of any kind, including, without limitation, all costs associated with any Adverse Impact due to obtaining approval from the Division of the State Architect, or any other governmental agency having jurisdiction, of a requested substitution shall be the responsibility of CONTRACTOR. ARCHITECT shall record the time of ARCHITECT in evaluating substitutions proposed or submitted by CONTRACTOR pursuant to Article 6.14.5, seeking any approvals required by governing agencies, and in making any changes in the Contract Documents or in the provisions of any other Separate Work Contract on the Project. Whether or not OAR accepts a substitution so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for ARCHITECT fees in evaluating each such proposed substitution. The OWNER shall have the right to assess any and all costs against Contract funds, the CONTRACTOR, and/or the performance bond.

6.14.8 All submittals made pursuant to 6.14 or 6.14.5 must meet OWNER's requirements for environmental safety and standards.

Additional Professional Services:

6.15 At any time during the Project, if OAR is required to provide or secure additional professional services for any reason by any acts of CONTRACTOR or its Subcontractors, CONTRACTOR may be responsible for the cost and expense thereof. Upon notice to CONTRACTOR, OWNER shall retain and provide additional professional services and may by assessment, recover all incurred costs for any additional professional services. Additional services shall include, but not be limited to:

6.15.1 all services made necessary by termination of CONTRACTOR for cause;

6.15.2 all services made necessary due to defective Work of CONTRACTOR;

6.15.3 all services required by failure of CONTRACTOR to perform Work according to any provision of the Contract Documents;

6.15.4 all services in connection with evaluating CONTRACTOR substitutions of materials or equipment and making subsequent revisions to Drawings, Specifications, and providing other documentation required;

6.15.5 all services required by failure of CONTRACTOR to prosecute the Work in compliance with the Construction Schedule;

6.15.6 all services required by failure of CONTRACTOR to pass or receive approval of any required test, inspection, observation or approval;

6.15.7 all services required in performing excessive reviews of CONTRACTOR Punch List Work;

6.15.8 all services in performing excessive reviews of CONTRACTOR Shop Drawings, material lists, Product Data, and Samples;

6.15.9 all services made necessary by OWNER exercising its options under Article 15.3;

6.15.10 all services required by failure of CONTRACTOR to provide for the safety of the Project.

Relative to Subcontractors, Suppliers and others:

6.16 Pursuant to Public Contract Code §§ 4107 and 4107.5, no CONTRACTOR whose bid is accepted shall, without the written consent of OWNER: substitute any person or entity as a Subcontractor in place of the Subcontractor designated in the original bid; permit any such Subcontractor to be assigned or transferred; or allow it to be performed by any person or entity, including the CONTRACTOR, other than the original Subcontractor listed in the original bid; sublet or subcontract any portion of the Work in excess of one-half of one percent (0.5%) of CONTRACTOR total bid as to which its original bid did not designate a Subcontractor. Any assignment or substitution made without the prior written consent of OWNER shall be void, and the assignees shall acquire no rights in the purported subcontract and/or Contract. Any consent, if given, shall not relieve CONTRACTOR or its Subcontractors from their obligations under the terms of the Contract Documents.

6.17 CONTRACTOR shall be responsible for all unreasonable and unforeseeable delays in the Milestones and/or Contract Time arising from substitutions. Any substitution shall not result in an adjustment to

the Contract Amount. Any substitution of a Subcontractor due to clerical error shall comply with Public Contract Code § 4107.5.

6.18 CONTRACTOR shall be responsible to OWNER for all acts and omissions of Subcontractors, suppliers and all others in furnishing and/or performance of the Work either by direct or indirect contract to CONTRACTOR. No provisions of the Contract Document shall serve to create and/or establish any contractual relationship between OWNER and/or ARCHITECT with any Subcontractor, supplier, or others in the furnishing and performance of the Work.

6.19 CONTRACTOR shall be responsible for the scheduling and coordination of all Work of Subcontractors, suppliers and all others in furnishing and/or performance of the Work by direct and/or indirect contract to CONTRACTOR. CONTRACTOR shall require all Subcontractors, suppliers and all others furnishing and/or performing any of the Work to communicate with ARCHITECT, OAR or OWNER through CONTRACTOR.

6.20 CONTRACTOR shall not be limited by the divisions of the Specifications or the identification of Drawings in apportioning the Work amongst Subcontractors or suppliers unless otherwise required by applicable law, regulation or statute.

6.21 By appropriate subcontract agreement CONTRACTOR shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to CONTRACTOR by terms of the Contract Documents, and to assume toward CONTRACTOR all obligations and responsibilities, which CONTRACTOR, by the Contract Documents, assumes toward OWNER. Each subcontract agreement shall preserve and protect the rights of OWNER under the Contract Documents with respect to the Work to be performed by the Subcontractor so the subcontracting thereof will not prejudice such rights. All subcontracts regarding the Work under the Contract shall contain an assignment clause running in favor of OWNER and/or an entity designated by OWNER. That clause is subject to the option of OWNER to exercise it. CONTRACTOR shall also require each Subcontractor to enter into similar subcontracts with sub-Subcontractors. CONTRACTOR shall make available to each proposed Subcontractor, before the execution of the subcontract agreement, the Contract Documents to which the Subcontractor will be bound. Subcontractors shall similarly make the Contract Documents available to their respective sub-Subcontractors. OWNER shall have the right to copies of all executed subcontracts for the Project.

6.22 Each subcontract agreement for a portion of the Work is assigned by CONTRACTOR to OWNER provided that: (1) the assignment is effective only after termination of the Contract or after CONTRACTOR right to proceed with the Work has been terminated under Article 15.3; (2) and only for those subcontract agreements which OWNER accepts by specifically notifying the Subcontractor in writing; (3) and the assignment is subject to the prior rights of the surety, if any, obligated under any bond relating to the Contract.

6.23 CONTRACTOR shall ensure by subcontract agreement each Subcontractor shall prepare and submit to CONTRACTOR within ten (10) days of execution of each subcontract agreement, comprehensive material lists, as set forth in Article 6.44.3, of the manufacturers and products proposed for the Work including information on materials, equipment, and fixtures required by the Contract Documents, as may be required for CONTRACTOR or ARCHITECT preliminary approval. Approval of such material lists of products shall not be construed as a substitute for the Shop Drawings, Product Data, manufacturer's descriptive data, Samples, or a substitution request, which are required by the Contract Documents, but rather as a base from which more detailed submittals shall be developed for the final review of CONTRACTOR, OAR and ARCHITECT.

6.24 No later than seven (7) days after receipt, pursuant to Business and Professions Code § 7108.5, CONTRACTOR shall pay to each Subcontractor, out of the amount paid to CONTRACTOR on account of such Subcontractors portion of the Work, the amount to which said Subcontractor is entitled, reflecting percentages actually retained from payments to CONTRACTOR on account of such Subcontractors portion of the Work. CONTRACTOR shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to sub-Subcontractors in a similar manner.

6.25 OWNER shall, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by CONTRACTOR, and action taken thereon by OWNER, on account of portions of the Work completed by such Subcontractor.

6.26 OWNER shall have no obligation to pay, or to see to the payment of monies to a Subcontractor except as may otherwise be required by law.

6.27 Payment to material or equipment suppliers shall be treated in a manner similar to that provided for in Articles 6.24, 6.25 and 6.26.

6.28 CONTRACTOR shall not use in any way as part of its bid, and shall not use to perform any portion of the Work, a Subcontractor, contractor or subcontractor who is ineligible to bid and/or work on a work of public improvements as mandated by Public Contract Code Section 6109.

Patent Fees and Royalties:

6.29 CONTRACTOR shall be financially responsible for payment of all royalties and license fees and shall assume all incidental costs in the performance of and/or incorporation into the Work of any invention, process, design, product or device subject to the patent and/or copyrights held by others. CONTRACTOR shall defend all suits or claims of infringement of patent and/or copyrights rights and shall hold OWNER and ARCHITECT harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process, or product of a particular manufacturer is required by the terms and conditions of the Contract Documents. If CONTRACTOR has reason to believe the required invention, process, design, product or device is an infringement of a patent and/or copyright, CONTRACTOR shall be responsible for such loss unless such information is furnished to ARCHITECT prior to the use and/or incorporation into the Work. ARCHITECT and/or OAR review of any method of construction, invention, appliance, process, article, device, or material of any kind shall be for its adequacy for the Work and shall not be an approval for the use by CONTRACTOR in violation of any patent or other rights of any person or entity. CONTRACTOR shall defend all suits or claims of infringement of patent and/or copyrights and shall hold OWNER and ARCHITECT harmless from loss when the terms and conditions of the Contract Documents do not require any particular invention, process, design, or product.

Permits and Fees:

6.30 CONTRACTOR and OWNER shall obtain and be financially responsible for the following governmental fees, permits and licenses necessary for proper execution and completion of the Work which are customarily secured after the Effective Date of the Contract and are required by any authority having legal jurisdiction over the Work and/or Project, except those required by the Division of the State Architect. Unless noted otherwise in the Contract Documents, OWNER shall be responsible for all Project Site testing and inspection as required by DSA and/or within sixty (60) miles of the Project Site, unless a different distance limitation is specified in the Contract Documents.

6.30.1 OWNER will obtain and be financially responsible for the following:

1. DSA application and plan check fees
2. Sewer facility assessment fees
3. Health Department Plan Check and Operating Permit Fees
4. Permanent Water Meter and Street Connection fee
5. Permanent Gas Meter and Street Connection Fee
6. Fire Sprinkler Detector Check Valve Assembly and Street Connection Fee
7. Operating permits for permanent material handling or elevator systems
8. Fire Department or related agency plan check and permits for permanent material handling, storage and or dispensing facilities of gasoline, diesel fuel, waste storage, oil, liquids and or gases.
9. Plan check and permit fees for DSA Deferred Approval Items or systems
10. Utility purveyor plan check and permit fees for electrical service
11. Plan check and meter fees for permanent gas systems
12. Industrial waste plan check and permits for permanent facilities
13. County and or City storm drain plan check and drainage fees
14. Plan Check for off-Site improvements

6.30.2 CONTRACTOR shall obtain and be financially responsible for the following:

1. Fire Department or related agency plan check and permits for temporary material handling, storage and or dispensing facilities of gasoline, diesel fuel, waste storage, oil, liquids and or gases
2. Grading or Site related development permits as required
3. Industrial waste plan check and permits for temporary facilities
4. AQMD permits as required
5. City business license
6. Permits for off-Site improvements
7. Traffic control plan check and permits as required
8. OSHA permits
9. Temporary utility plan check and permits as required
10. Sewer, storm and water connection permits
11. General building, electrical, plumbing and HVAC permits
12. Patent fees, licenses and royalties
13. Signage plan check fees and permits
14. Plan check and permit fees for temporary gas systems
15. Operating permits for temporary material handling or elevator systems

16. Storm Water Pollution Prevention Plan (SWPPP)

17. Other plan check, permits and fees as required.

Laws and Regulations:

6.31 CONTRACTOR at no additional cost to OWNER shall comply with all Applicable Laws and regulations and shall give all notices required by any law, ordinance, rule, regulation, and lawful order of public authorities having jurisdiction relative to the furnishing of or performance of the Work. Where the Contract Documents state that materials, processes, or procedures must be approved by the Division of State Architect or other Governmental Authority, CONTRACTOR shall be responsible for satisfying requirements of such Governmental Authority.

6.32 If CONTRACTOR performs Work contrary to any law, statute, ordinance, building code, rule or regulation, CONTRACTOR shall be responsible for all the direct and indirect costs, fees, expenses, losses and damages in connection with replacement thereof.

6.33 Each and every provision of law required by law to be inserted in the Contract Documents shall be deemed to be inserted. The Contract Documents shall be read and enforced as though such laws were included.

6.34 CONTRACTOR shall provide and maintain at the Project Site one copy of Title 19 and 24 for use and reference by the parties mentioned in the Contract Documents.

Sales, Consumer, Use and Similar Taxes:

6.35 CONTRACTOR is financially responsible for applicable federal, state, and local taxes on all items, including, without limitation, materials, labor, equipment, supplies and services furnished by CONTRACTOR, and all taxes arising from operations of CONTRACTOR pursuant to the Contract Documents. OWNER is exempt from federal excise tax, and a certificate of exemption shall be provided upon request of CONTRACTOR. CONTRACTOR is financially responsible for applicable charges and fees for all insurance and bonds required by the Contract except for OCIP premiums.

Use of Project Site and Premises:

6.36 During progress of the Work, CONTRACTOR shall maintain the Work, Project Site and surrounding areas free from accumulation of debris, waste material or rubbish caused by CONTRACTOR operations. All crates, cartons, paper, and other flammable waste materials shall be removed from all areas of the Work and/or Project Site and shall be properly disposed of at the end of each day. CONTRACTOR shall remove from all areas of the Work and/or Project Site all excess materials, tools, construction equipment, machinery, and temporary facilities no longer required for the Work. Forty-eight (48) hours after a request to remove from the OWNER, if CONTRACTOR fails to remove, OWNER reserves the right to take possession of any materials, tools, construction equipment, and machinery on the Project Site that OAR deems CONTRACTOR has abandoned. OWNER may withhold from payment due to CONTRACTOR any costs incurred by OWNER for the disposal thereof.

6.37 CONTRACTOR shall restrict all construction equipment, material storage and worker operations to the Project Site, lands, and/or areas identified in the Contract Documents and to other lands and areas allowed by permits, right of ways, easements and/or laws and regulations. CONTRACTOR is strictly

liable and assumes full responsibility for any damage to any such land, area, occupant and/or property of OWNER and any adjacent land, area, right of way, property, occupant and/or pedestrian thereof.

6.38 CONTRACTOR shall not cause, permit or allow structural loading in excess of safe limits or where such loading may induce stresses and/or pressures endangering:

6.38.1 any part of the Work under construction, completed Work or existing improvements on the Project Site;

6.38.2 any part of the Work under construction, completed Work or existing improvements adjacent to the Project Site.

Project Record Documents:

6.39 CONTRACTOR shall prepare and maintain on the Project Site, a current, accurate and complete set of all Drawings, Specifications, Addenda, Change Orders, Construction Directives, ARCHITECT written interpretations and clarification, Shop Drawings, Product Data and Samples, Construction Schedules, denoted and annotated to reflect all changes, revisions, and substitutions during construction of the Work, including, without limitation, field changes and the final location of all mechanical equipment, utility lines, ducts, outlets, structural members, walls, partitions, and other significant features. CONTRACTOR will update the record documents on a weekly basis. Project record documents shall be made available for inspection and use by, but not limited to, OAR, ARCHITECT, and the Project Inspector. Upon Substantial Completion of the Work, CONTRACTOR shall submit, in accordance with related provisions of the Contract Documents, one complete set of Project record documents, including the "As-Built" Drawings, to ARCHITECT, certifying them to be a complete and accurate reflection of the actual construction conditions of the Work. OWNER may delay any portion of CONTRACTOR's Application for Payments if the Project record documents are not kept current, accurate and complete.

Safety and Protection:

6.40 CONTRACTOR shall have responsibility for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. CONTRACTOR shall ensure, by subcontract agreement, each Subcontractor has the responsibility for participating in and enforcing the safety and loss prevention programs established by CONTRACTOR for the Work and/or Project.

CONTRACTOR shall designate a competent person whose duties shall include loss and accident prevention and who shall have the responsibility and full authority to enforce the program. This competent person shall attend meetings with the representatives of the various Subcontractors employed to ensure that all employees understand and comply with the programs.

Each Subcontractor shall designate a competent person whose duties shall include loss and accident prevention and who shall have the responsibility and full authority to enforce the program. This person shall conduct safety meetings with the Subcontractor's employees and attend meetings with the representatives of the various sub-Subcontractors they have employed to ensure that all employees understand and comply with the programs. All Subcontractors and material or equipment suppliers shall cooperate fully with CONTRACTOR, OAR, OWNER, and all insurance carriers and loss prevention engineers.

6.40.1 If CONTRACTOR anticipates at any time that CONTRACTOR and its Subcontractors will have fifty (50) or more combined total employees on-Site throughout the duration of the Contract or the original Contract Amount exceeds $10,000,000, CONTRACTOR shall have a certified safety representative, with minimum qualifications as defined in the Safety Standards Manual, dedicated solely to safety and located on-Site on a full time basis.

6.40.2 If CONTRACTOR and its Subcontractors have fewer than fifty (50) combined total employees on-Site, CONTRACTOR may delegate the safety representative duties to an on-Site safety qualified supervisor with minimum qualifications as defined in the Safety Standards Manual.

6.40.3 CONTRACTOR shall provide and maintain at the Project Site adequate first aid supplies for minor injuries.

6.40.4 CONTRACTOR shall take all reasonable safety precautions related to the Work of this Contract, and shall provide reasonable protection to prevent damage, injury, or loss to:

6.40.4.1 employees or personnel involved in the Work on the Project Site and other persons who may be affected thereby.

6.40.4.2 the Work, material, and equipment to be incorporated therein and whether in storage on or off the Project Site and/or under the care, custody, or control of CONTRACTOR or Subcontractors.

6.40.4.3 other property at the Project Site, or adjacent thereto, such as trees, shrubs, lawns, walkways, pavement, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of the Work. CONTRACTOR shall give notices and comply with Applicable Laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on the safety of persons or property or their protection from damage, injury, or loss.

6.40.4.4 CONTRACTOR shall erect and maintain, as required by existing Project Site conditions and performance of the Work, reasonable safeguards for safety and protection including posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities.

6.40.4.5 CONTRACTOR and Subcontractors shall continuously protect the Work and every portion thereof, OWNER property, and the property of others from damage, injury, or loss arising from weather conditions, vandals, and/or in connection with the Project and/or in connection with any Work.

6.40.4.6 CONTRACTOR and Subcontractors shall make good any such damage, injury, or loss except such as may be solely caused by, or due to, agents or employees of OWNER.

6.40.4.7 CONTRACTOR will remove all mud, water, or other elements required for the proper protection and safe prosecution of the Work.

6.40.4.8 CONTRACTOR shall at all times maintain adequate protection against weather so as to preserve the Work, materials, equipment, apparatus, and fixtures.

6.40.4.9 CONTRACTOR shall promptly provide notice to OAR, and other designated OWNER representatives, of all accidents arising out of or in connection with the Work, causing death, personal injury, or property damage including full details and statements of any witnesses. In addition, if death, serious personal injuries, or serious property damages are caused, the accident shall be reported immediately by telephone or messenger to OAR and other designated OWNER representatives.

6.40.4.10 CONTRACTOR shall ensure by subcontract agreement that each Subcontractor shall promptly report in writing to CONTRACTOR all incidents and/or accidents whatsoever arising out of, or in connection with, the performance of the Work, whether on or off the Project Site and whether or not they caused death, personal injury, or property damage, giving full details and statements of witnesses. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported immediately to CONTRACTOR by telephone or messenger. CONTRACTOR shall immediately report the accident to OAR by telephone and thereafter promptly report the facts in writing to OAR giving full details of the accident.

6.40.5 CONTRACTOR shall perform its Work in a manner so as not to create excessive noise. For purposes of this Article 6.40.5, excessive noise is defined as causing or creating a disruption to an on-going educational or administrative function of OWNER during business hours or noise that violates any applicable federal, state, or local laws or regulations, including the ordinances of the surrounding community.

6.41 ***Hazard Communication Plan / Global Harmonized System:***

CONTRACTOR is responsible for identifying, coordinating, maintaining and any exchange of safety data sheets or other hazard information requiring dissemination or distribution between CONTRACTOR, Subcontractor, and/or others.

6.42 ***Emergencies:***

In an emergency affecting the safety or protection of persons or property of OWNER or adjacent to OWNER, CONTRACTOR, without special instructions or authorization from OAR, is obligated to act to prevent threatened damage, injury or loss due to, but not limited to, occurrences such as fire, flood, earthquake, or other soil and/or geological movements. CONTRACTOR shall provide notice to ARCHITECT and OAR if CONTRACTOR believes any significant changes in the Work or variations from the Contract Documents have been caused thereby. If OAR determines a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Construction Directive may be issued to document the consequences of such action. If CONTRACTOR believes a Construction Directive establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal within ten (10) days of the date of issuance of the Construction Directive.

6.43 ***Shop Drawings, Samples, Product Data and Material Lists:***

6.43.1 ***Shop Drawings:*** CONTRACTOR shall prepare and/or cause to be prepared and shall submit all required Shop Drawings to ARCHITECT, with concurrent copy (if requested) to the OAR, for ARCHITECT review in accordance with the OAR accepted schedule of Shop Drawings and Sample submittals. All Shop Drawing submittals shall be identified and shall be submitted in accordance with the applicable requirements of related Division 01 General Requirements. Shop Drawings will be complete in respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show ARCHITECT the materials and equipment CONTRACTOR proposes to provide and to enable ARCHITECT to review the information for the limited purposes as set forth in Article 6.45.

6.43.2 ***Samples:*** CONTRACTOR shall prepare and/or cause to be prepared and shall submit all required Samples to ARCHITECT, with concurrent copy (if requested) to the OAR, for review in accordance with the OAR accepted schedule of Shop Drawings and Sample submittals. All Sample submittals shall be identified and shall be submitted in accordance with the applicable requirements of related Division 01 General Requirements. Each Sample will be clearly identified as to material, supplier, pertinent data such as catalog number, and the use for which intended and otherwise as ARCHITECT may require to enable ARCHITECT to review the submittal for the limited purposes required by Article 6.45.

6.43.3 ***Product Data and Material Lists:*** CONTRACTOR shall prepare and/or cause to be prepared and shall submit all required Product Data and material lists to OWNER for review in accordance with the OAR accepted schedule of Shop Drawings and Sample submittals. All Product Data and material lists shall be identified and shall be submitted in accordance with the applicable requirements of related Division 01 General Requirements. Each Product Data and material list will be complete with respect to manufacture's data, supplier, installation instructions, color charts, compliance with recognized codes and standards, performance characteristics, diagrams and templates, catalog cuts, schedules, illustrations, materials, specified performance and design criteria, and similar data to show ARCHITECT the use for which intended and otherwise as ARCHITECT may require to enable ARCHITECT to review the information for the limited purposes required by Article 6.45.

6.44 ***Submittal Procedures:***

6.44.1 Prior to the submission of each Shop Drawing, Sample, Product Data and/or material list CONTRACTOR shall have determined and verified:

6.44.1.1 all field measurements, quantities, dimensions, coordination, specified performance criteria, installation requirements, materials, catalog numbers and similar information with respect thereto;

6.44.1.2 all materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the Work;

6.44.1.3 all information relative to the sole responsibility of CONTRACTOR in respect to means, methods, techniques, sequences, and procedure of construction and safety precautions and programs incident thereto.

6.44.2 Each submittal shall bear a stamp or specific written indication signifying CONTRACTOR has satisfied CONTRACTOR obligations under the Contract Documents with respect to CONTRACTOR review, coordination and approval of that submittal. Each submittal shall bear written identification of all Specification section numbers and/or Drawing title block references the submittal is intended to address.

6.44.3 At the time of each submission, CONTRACTOR shall give ARCHITECT and OAR specific written notice of such variations, if any, that the Shop Drawings, Samples, Product Data and material lists submitted have from the requirements of the Contract Documents. Such notice shall be in a communication separate from, but included with each submittal, and in addition, CONTRACTOR shall cause a specific notation to be made on each Shop Drawing, Sample, Product Data and material list submitted to ARCHITECT and OAR for review and approval of each such variation.

6.45 ARCHITECT will review Shop Drawings, Samples, Product Data and material lists to determine if the items covered by the submittals will, after installation or incorporation into the Work, conform to the Contract Documents. CONTRACTOR shall make corrections required by ARCHITECT, and shall return the required number of corrected copies of Shop Drawings, Product Data and material lists and shall submit as required new Samples for review. CONTRACTOR must indicate in writing revisions other than the corrections called for by ARCHITECT (see Section 01 3300 of the General Requirements).

6.46 CONTRACTOR is not relieved from any responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has complied with Article 6.44.3 and the variation has been approved by the OAR and/or ARCHITECT.

6.47 Where a Shop Drawing, Sample, Product Data and material list is required to be submitted by the Contract Documents or the approved schedule of Shop Drawings and Sample submissions accepted by OAR, any related Work performed prior to ARCHITECT review of the pertinent submittal will be at the sole expense, risk, and responsibility of CONTRACTOR.

6.48 ***Prevailing Wages:***

6.48.1 ***Labor Compliance Program***

6.48.1.1 CONTRACTOR and all Subcontractors must comply with OWNER's Labor Compliance Program ("LCP") requirements, including, but not limited to, all applicable statutes and regulations, OWNER's LCP Manual, and OWNER's Contract requirements. In the event that additional or revised information is required pursuant to enforcement of the LCP, such requirement shall not result in an increase to the Contract Time or the Contract Amount. CONTRACTOR will be responsible for all failures by all Subcontractors to comply with OWNER's LCP requirements. CONTRACTOR, consistent with California Public Contract Code section 6109, is prohibited from performing a portion of Work with a Subcontractor who is debarred pursuant to Sections 1777.1 or 1777.7 of the Labor Code.

6.48.1.2 Notice of LCP Approval:

OWNER's LCP was granted final approval/extended authority by the Department of Industrial Relations on December 27, 1996. For questions and assistance, please contact the OWNER LCP Office at (213) 241-4665, lcp@lausd.net, or at www.laschools.org on the web.

6.48.1.3 CONTRACTOR and all Subcontractors must send an authorized representative responsible for LCP compliance to the first available Labor Compliance Certification Training class following contract award. If a CONTRACTOR or Subcontractor has already attended OWNER's Labor Compliance Certification Training class less than one (1) year before contract award on the Project, it does not have to retake the Labor Compliance Certification Training Class. A representative responsible for LCP compliance for CONTRACTOR and each Subcontractor must take the online Labor Compliance Recertification class within one (1) year after taking the Labor Compliance Certification Training class.

6.48.2 ***Prevailing Wages***

6.48.2.1 This Project is a public work, as defined in Labor Code section 1720, and must be performed in accordance with the requirements of Labor Code sections 1720 to 1815 and Title 8 CCR sections 16000 to 17270, which govern the payment of prevailing wage rates on public works projects.

6.48.2.2 Payment of Prevailing Wages

In accordance with Labor Code sections 1720, 1771, 1771.5, 1774, and 1815 and Title 8 CCR section 16433, OWNER requires the payment of prevailing wages for all projects over twenty-five thousand ($25,000) dollars when the project is for construction or installation work, and for all projects over fifteen thousand ($15,000) dollars when the project is for alteration, demolition, repair, warranty or maintenance work.

6.48.2.3 Pursuant to Labor Code sections 1770 et seq., OWNER has obtained from the Department of Industrial Relations determinations of the prevailing wage rates and the prevailing wage rates for holiday and overtime work for Los Angeles County where the Project is to be performed. Copies of these prevailing wage rates are on file and available to any interested party upon request at the OWNER's principal office and the following websites: www.laschools.org/contractor/lc or www.dir.ca.gov/dlsr/pwd.

6.48.2.4 Questions pertaining to prevailing wage rates should be directed to the Labor Compliance Department or to the Division of Labor Statistics and Research at the following respective addresses:

Labor Compliance Department	or	DLSR
333 S. Beaudry Ave, 21st Floor		P.O. Box 420603
Los Angeles, CA 90017		San Francisco, CA 94142
(213) 241-4665		(415) 703-4774
lcp@lausd.net		Statistics@dir.ca.gov

6.48.2.5 CONTRACTOR shall post at appropriate and conspicuous locations on the Project Site the following:

6.48.2.5.1 A schedule showing all applicable prevailing wage rates in accordance with Labor Code section 1773.2; and

6.48.2.5.2 Notice of LCP approval and prevailing wage monitoring sufficient to satisfy Title 8 CCR sections 16429 and 16451(d), as appropriate.

6.48.2.6 CONTRACTOR and all Subcontractors must provide itemized wage statements to their employees in accordance with Labor Code section 226.

6.48.2.7 CONTRACTOR represents and warrants that the Contract Amount includes sufficient funds to allow CONTRACTOR and all Subcontractors to comply with all Applicable Laws and contractual agreements. CONTRACTOR shall satisfy its defense, indemnity and hold harmless obligations pursuant to the provisions of Article 6.53 arising out of or relating to the failure of CONTRACTOR or any Subcontractor to comply with any applicable law in this regard, including, but not limited to Labor Code section 2810. CONTRACTOR agrees to pay any and all assessments, including wages, penalties and liquidated damages, made against OWNER in relation to such failure.

6.48.2.8 Failure to comply with the payment of prevailing wages shall result in a penalty to the District pursuant to Labor Code section 1775 and applicable regulations, for each day, or portion thereof, for each worker paid less than the prevailing wage rate for the work or craft in which such worker is employed by the CONTRACTOR or Subcontractor. This includes, but is not limited to, the failure to pay applicable shift differential rates. Such penalty amounts may be deducted from the Contract Amount or sought directly from the CONTRACTOR's surety under the performance bond if there are insufficient funds remaining in the Contract Amount.

6.48.2.9 The CONTRACTOR and the bond insurer will be jointly and severally liable for the back wages, penalties, and/or Labor Code Liquidated Damages due as a result of a prevailing wage violation. "Labor Code Liquidated Damages" are equal to the total underpayment of wages remaining unpaid sixty (60) days after service of the Notice of Withholding of Contract Payments pursuant to Labor Code section 1742.1. The underpaid employee will receive both the Labor Code Liquidated Damages and the underpayment amount.

6.48.2.10 Pursuant to Labor Code section 1778, every person, who individually or as a representative of an awarding or public body or officer, or as a contractor or subcontractor doing public work, or agent or officer thereof, who takes, receives or conspires with another to take or receive, for his own use or the use of any other person, any portion of the wages of any workman or working subcontractor, in connection with services rendered upon any public work is guilty of a felony.

6.48.3 ***Apprentices***

6.48.3.1 CONTRACTOR and all Subcontractors shall comply with all requirements in Labor Code section 1777.5 and Title 8 CCR sections 200 et seq. CONTRACTOR is responsible for compliance with Labor Code section 1777.5 for all apprenticeable crafts or trades. CONTRACTOR and any Subcontractor(s) who fail to comply with Labor Code section 1777.5 shall be subject to the penalties specified in Labor Code section 1777.7.

6.48.3.2 CONTRACTOR and all Subcontractors shall submit contract award information using the Division of Apprenticeship Standards (DAS 140) Form to the applicable apprenticeship committee within ten (10) days of the date of execution of contract and no later than the first day of work in accordance with Title 8 CCR section 230. CONTRACTOR shall simultaneously submit a copy of the completed DAS 140 Form to the OWNER's Labor Compliance Department.

6.48.4 ***Working Hours***

6.48.4.1 CONTRACTOR and all Subcontractors shall comply with the following provisions for working hours:

6.48.4.1.1 Pursuant to Labor Code section 1810, eight (8) hours labor shall constitute a legal day's work.

6.48.4.1.2 Pursuant to Labor Code section 1811, the time of service of any worker employed at any time by CONTRACTOR or any Subcontractor is limited and restricted to eight (8) hours during any one day and forty (40) hours during any one week, except as otherwise provided by law.

6.48.4.1.3 Notwithstanding the foregoing provisions, work performed in excess of eight (8) hours per day and forty (40) hours during any one week, shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day and forty (40) hours per week at not less than one and one-half (1 ½) times the basic rate of pay, or as otherwise required by law. All work performed on Saturday, Sunday, and/or holidays shall be paid pursuant to the Prevailing Wage Determination.

6.48.4.1.4 Unless otherwise provided in the Supplementary Conditions or prescribed by law, where a single shift is worked, eight (8) consecutive hours between 7 AM and 5 PM shall constitute a work day at the applicable prevailing wage rate(s).

6.48.4.1.5 Unless otherwise provided in the Supplementary Conditions or prescribed by law, forty (40) hours between Monday 7 AM and Friday 5 PM shall constitute a workweek at the applicable prevailing wage rate(s).

6.48.4.1.6 The OWNER's Labor Compliance Department audit and investigation uses the working hours contained in Articles 6.48.4.1.4 and 6.48.4.1.5 and determines violations and penalties accordingly, unless evidence is found to the contrary, such as in the Supplementary Conditions, or is prescribed by law.

6.48.4.1.7 After the Effective Date of the Contract, the work day and workweek may only be modified as authorized in Article 3.15. Any other Work performed by workers necessary to be performed outside of the work day and workweek shall be performed without adjustment to the Contract Amount or any other additional expense to the District.

6.48.4.2 Failure to comply with the payment of overtime wages shall result in a penalty to the OWNER pursuant to Labor Code section 1813 and applicable regulations, for each day, or portion thereof, during which the worker is required or permitted to work more than 8 hours in any one day and 40 hours in any one week without proper compensation in violation of Labor Code sections 1810 et seq. and/or applicable regulations. Such penalty amounts may be deducted from the Contract Amount or sought directly from the CONTRACTOR's surety under the performance bond if there are insufficient funds remaining in the Contract Amount.

6.48.5 ***Certified Payroll Reporting Forms and Payroll Records***

6.48.5.1 CONTRACTOR shall be responsible for the submission of electronic certified payroll records of CONTRACTOR and all Subcontractors within ten (10) days of the week ending date of each week. CONTRACTOR shall submit weekly electronic certified payroll records, including certified Non-Performance payroll records, in the method provided by the OWNER's Web-based Certified Payroll Reporting System, to the OWNER's Labor Compliance Program. When a Contract has various school projects, Certified Payroll Reporting Forms for each individual school shall be maintained and submitted in the method provided by OWNER.

6.48.5.2 CONTRACTOR must comply with all requirements of OWNER's Web-based Certified Payroll Reporting System, including, but not limited to, electronic signature, electronic submittal of documents and forms, and use of other electronic modules. This obligation includes compliance with all existing requirements and all new requirements developed during the term of the Project.

6.48.5.3 CONTRACTOR shall submit to OWNER's Labor Compliance Department, an estimated start date for all Subcontractors, within five (5) days of the Subcontractor work start date and shall submit a revised estimate, if applicable, within five (5) days of knowledge of any changes to any estimated start date. This document must contain the name and address of each Subcontractor, each Subcontractor's contractor license number and the estimated start date.

6.48.5.4 CONTRACTOR shall provide, and shall cause all Subcontractors to provide, "Payroll Records" to OWNER, within ten (10) days of written request, at no cost to OWNER. "Payroll Records" are all un-redacted certified payroll records, time

cards, sign-in sheets, daily construction reports, check stubs, cancelled checks, cash receipts, trust fund forms, books, documents, schedules, forms, reports, receipts or other evidences which reflect job assignments, work schedules by days and hours, and the disbursement by way of cash, check or in whatever form or manner, of funds to a person(s) by job classification and/or skill pursuant to the Project. All received documents will become property of OWNER.

6.48.5.5 Failure to submit Payroll Records within ten (10) days of such due date shall result in a penalty to OWNER pursuant to Labor Code section 1776 and applicable regulations, until strict compliance is effectuated. Such penalty amounts may be deducted from the Contract Amount or sought directly from the CONTRACTOR's surety under the performance bond if there are insufficient funds remaining in the Contract Amount.

6.48.6 ***Payroll Record Liquidated Damages***

Should CONTRACTOR or any Subcontractor neglect, fail or refuse to submit any Payroll Records pursuant to Article 6.48.5, CONTRACTOR agrees to pay to OWNER the sum of $100.00 per day in contractual liquidated damages, not as a penalty but as liquidated damages, for every day of noncompliance beyond ten (10) days after such documents are due ("Payroll Record Liquidated Damages"). Payroll Record Liquidated Damages shall continue to accrue until strict compliance is effectuated. Upon issuance of a Payroll Record Liquidated Damages Permanent Assessment, the liquidated damages amount will be disbursed to the OWNER. The Payroll Record Liquidated Damages amounts are agreed upon by and between the CONTRACTOR and OWNER because of the difficulty of fixing OWNER's actual damages in the event of failure to submit such documents. CONTRACTOR and OWNER specifically agree that said amounts are reasonable estimates of OWNER's damages in such event, and that such amounts do not constitute a penalty. CONTRACTOR and OWNER acknowledge and agree that these Payroll Record Liquidated Damages are reasonable under the circumstances existing at the time of the CONTRACTOR's execution of the Contract. These Payroll Record Liquidated Damages are distinct from statutory Labor Code Liquidated Damages. This remedy is not exclusive and is cumulative of all other remedies available to OWNER.

6.48.7 ***Withholding of Contract Payments***

6.48.7.1 OWNER will withhold payment from CONTRACTOR in accordance with its rights and obligations under Labor Code section 1720 et seq. and applicable regulations, including for back wages, penalties and Labor Code Liquidated Damages.

6.48.7.2 Notwithstanding any other provision in these General Conditions, OWNER may withhold payment from any portion of the Contract Amount then or thereafter due the CONTRACTOR for violation by CONTRACTOR or any Subcontractor of the requirements of Article 6.48 or any of its subsections and for Payroll Record Liquidated Damages. Without limitation to the foregoing, payment shall not be made to the CONTRACTOR when certified payroll records by CONTRACTOR or any of its Subcontractors are delinquent or inadequate in accordance with Title 8 CCR 16435.

6.48.8 ***Incorporation by Reference***

All statutory Codes and Regulations cited in this contract are understood by the parties to be incorporated in full by the references to those statutes and regulations herein.

6.48.9 ***Project Stabilization Agreement (PSA)***

6.48.9.1 The Project Stabilization Agreement ("PSA") applies to all construction, major rehabilitation work, and capital improvement work, as set forth in Section 00 7349 of this Contract. CONTRACTOR agrees to be bound by the PSA and to require all Subcontractors to do so. For information pertaining to PSA, CONTRACTOR can refer to the following web address:

http://www.laschools.org/new-site/project-stabilization/

6.48.9.2 If the PSA applies to this Work, CONTRACTOR must also comply with all of the following provisions:

6.48.9.2.1 CONTRACTOR shall cause a sign to be posted on the job Site stating, in English and Spanish, in large enough print to read from a reasonable distance, no less than 32 point font size, "Employees: Your employee benefits payments are being paid to a trust fund on your behalf. Your employer must provide you information about your benefits and make documentation about your benefits available to you."

6.48.9.2.2 CONTRACTOR must submit with its final Application for Payment a certification that CONTRACTOR and all Subcontractors have paid all benefit contributions due and owing to the appropriate trust fund(s).

6.48.9.2.3 CONTRACTOR and all Subcontractors must comply with the requirements of OWNER's Web-based Certified Payroll Reporting System for electronic submittal of PSA-related documents, including, but not limited to, Letters of Assent and certification forms.

6.48.9.3 OWNER's Labor Compliance Department may monitor the timely payment of employee benefits to the appropriate trust fund in accordance with the PSA and Labor Code section 1771.5.

6.49 ***Public Works Contractor Registration***

Pursuant to Labor Code section 1771.1, a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Labor Code section 1725.5.
It is not a violation of this Article 6.49 for an unregistered contractor to submit a bid that is authorized by section 7029.1 of the Business and Professions Code, or by section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Labor Code

section 1725.5 at the time the contract is awarded. CONTRACTOR represents that all Subcontractors are registered pursuant to Labor Code section 1725.5.

6.50 ***Continuing the Work; and Measure of Damages:***

The school facilities being built for OWNER under this Contract are critically needed to provide seats, classrooms and other facilities for the children of the Los Angeles Unified School District. If CONTRACTOR stops, delays, postpones and/or otherwise suspends the Work or any portion thereof, except in cases of emergency or encountering those conditions as set forth in Articles 4.2, 4.3, and 4.5, CONTRACTOR will cause irreparable harm; including without limitation the renting and/or leasing of temporary classroom and support facilities, the busing of students to temporary alternative educational facilities, and the providing of temporary nutrition services. Accordingly, at all times, CONTRACTOR shall continue to perform the Work in accordance with the Construction Schedule and/or as otherwise directed in writing by a Construction Directive. CONTRACTOR shall proceed with the Work even if CONTRACTOR contends OWNER, and/or anyone OWNER is legally responsible for, has materially and/or otherwise breached the Contract; and even if there exists a dispute; disagreement, or a proceeding and/or Claim is pending. CONTRACTOR acknowledges that it shall not suffer any irreparable harm by continuing to perform the Work and/or any disputed Work as there is a fair and reasonable method of full compensation provided for under this Contract, as found in, but without limitation, Articles 10, 11, 12, 14, and 16 of these General Conditions. CONTRACTOR and OWNER agree that the measure of damages for breach of Contract shall be the sole measure of damage used in any dispute, proceeding, arbitration, and/or litigation and in every and all disagreements between them, unless expressly stated otherwise in this Contract. The Work, portions thereof, and/or disputed Work shall not be stopped, delayed, postponed and/or otherwise suspended pending the resolution of any dispute, Claim, proceeding and/or disagreement of every kind. This provision constitutes an advance waiver by CONTRACTOR of any right, if any, whenever acquired, to rescind this Contract.

6.51 ***Right to Audit:***

6.51.1 The State Allocation Board ("SAB") and/or OWNER shall have the right to review, obtain, inspect, audit and copy all the written and electronically stored records of CONTRACTOR pertaining to the Contract and/or Work and any claim in connection with any of the foregoing, and regarding all Applicable Laws and/or regulations pertaining to the Contract and/or Work, in any way.

6.51.2 CONTRACTOR, in executing this Contract, agrees without reservation to OWNER's right to audit. Should CONTRACTOR refuse to allow OWNER or its agents access to any records or delay or inhibit OWNER or it agents from performing the audit or any portion of the audit, CONTRACTOR may be subject to an adverse evaluation and/or removal from the list of prequalified contractors.

6.51.3 CONTRACTOR shall include the right to audit provisions, specifically providing the right of OWNER's representatives to examine their records, in the contracts of all Subcontractors, insurance agents, material suppliers, or any other business entity providing goods and services.

6.51.4 If an audit, inspection and/or examination under this Article 6.51 discloses overpricing and/or overcharges of any nature by CONTRACTOR to OWNER, then, in addition to all other OWNER rights and remedies, and in addition to making adjustments for the overcharges

and/or overpricing, CONTRACTOR shall reimburse OWNER for all reasonable actual cost of OWNER audit, legal services, inspection, and/or examination.

6.51.5 Any OWNER assessments shall be made no later than ninety (90) days from the date that OWNER findings are presented to CONTRACTOR. The fact that a dispute, Claim, arbitration, and/or litigation under Article 16 is pending involving OWNER, CONTRACTOR, and/or others, shall not in any way preclude, postpone, or impair, in any way, OWNER rights to proceed under this Article 6.51.

6.51.6 In addition to the remedies available to OWNER under Article 6.51.2 and as provided elsewhere in the Contract Documents, CONTRACTOR's refusal or the refusal of any of CONTRACTOR's Subcontractors to comply with the DISTRICT's request to audit or provide access to any records or delay or inhibit OWNER or its agents from performing the audit may be considered a material breach of the Contract which may result in delay or disruption of payments to CONTRACTOR pursuant to Article 14.9 or termination for cause under Article 15.3.1.

6.52 ***General Warranty and Guarantee:***

6.52.1 CONTRACTOR warrants and guarantees to OWNER all Work shall be in accordance with the Contract Documents and will not be defective. CONTRACTOR warranty and guarantee hereunder excludes defects and/or damages caused by:

6.52.1.1 abuse, modification or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors or suppliers;

6.52.1.2 normal wear and tear under normal usage.

6.52.2 CONTRACTOR obligation to perform and complete the Work in accordance with the Contract Documents and all applicable codes, laws and regulations shall be absolute. None of the following shall constitute acceptance of Work which is not in accordance with the Contract Documents and all applicable codes, laws and regulations or shall serve as a release of CONTRACTOR obligations to perform the Work in accordance with the Contract Documents:

6.52.2.1 observation by ARCHITECT;

6.52.2.2 recommendation of any progress and/or final payment and/or release of retention by OAR;

6.52.2.3 issuance of a certificate of Substantial Completion, Partial Use or Occupancy or any payment by OWNER to CONTRACTOR under the Contract Documents;

6.52.2.4 any direction by OAR or acceptance by OWNER or any failure to do so;

6.52.2.5 any review and approval of a Shop Drawing, Sample, Product Data or material list submittal or the issuance of a notice of acceptability by ARCHITECT and/or OAR pursuant to Article 6.43;

6.52.2.6 any inspection, test and/or approval by others;

6.52.2.7 any correction of defective Work by OWNER.

6.53 ***Indemnification:***

In addition to Article 6.54 and any other part of the Contract Documents, and to the fullest extent permitted by law, CONTRACTOR shall defend, indemnify, and hold harmless OWNER, members of OWNER's Board of Education, OAR, OCIP Administrator, ARCHITECT, OWNER consultants, Project Inspector and State of California, and each of their respective agents, employees, representatives, officers, and directors (collectively, "Indemnified Parties"), from and against claims, actions, damages, losses, penalties, costs and expenses (including, but not limited to attorneys' fees and costs including fees of consultants) arising out of or resulting from, whether in whole or in part, breach of or noncompliance with this Contract, statutory of other violations of law, negligence, gross negligence or willful misconduct, or the acts, omissions, or other conduct of CONTRACTOR, any Subcontractor or any person or entity engaged by them for the Work. CONTRACTOR's obligations under this Article 6.53 include without limitation: (i) injuries to or death of persons; (ii) damage to property; (iii) theft or loss of property; (iv) stop payment notice claims asserted by any person or entity in connection with the Work; and (v) other losses, liabilities, damages or costs resulting from, in whole or in part, any acts, omissions or other conduct of CONTRACTOR or its Subcontractors or their respective agents, employees, material or equipment suppliers, vendors, invitees, or licensees, anyone directly or indirectly employed by any of them, or anyone for whose acts they may be liable, arising out of or related to the Contract, Work and/or Project, including without limitation, performance of the Work; payment of Subcontractors and/or others; use of the Project Site; construction of the Work, or failure to construct the Work, or any portion thereof; and use, misuse, erection, maintenance, operation, or failure of any machinery or equipment including, but not limited to, scaffolds, derricks, ladders, hoists, and rigging supports, whether or not such machinery or equipment was furnished, rented, or loaned by any of the Indemnified Parties. The obligations provided in this Article 6.53 shall be binding on CONTRACTOR regardless of whether the allegations underlying such claims, action, damage, loss, penalty, cost or expense are with or without merit, true or false and whether or not caused in part by any of the Indemnified Parties. The obligations of CONTRACTOR as set forth in (v) above shall include, without limitation, claims, actions, damages, losses, penalties, costs and expenses asserted by any other contractor to the OWNER in connection with the Work or in connection with a work of improvement related to or affected by the Work. If any action or proceeding, whether judicial, administrative, arbitration or otherwise, shall be commenced on account of any claim, demand or liability subject to CONTRACTOR's obligations hereunder, and such action or proceeding names any of the Indemnified Parties as a party thereto, CONTRACTOR shall, at its sole cost and expense, defend the named Indemnified Parties in such action or proceeding with counsel reasonably satisfactory to the named Indemnified Parties. In the event that there shall be any judgment, award, ruling, settlement or other relief arising out of such action or proceeding to which any of the Indemnified Parties are subject to or bound by, CONTRACTOR shall pay, satisfy or otherwise discharge any such judgment, award, ruling, settlement or relief; CONTRACTOR shall indemnify and hold harmless the Indemnified Parties from any and all liability or responsibility arising out of any such judgment, award, ruling, settlement or relief. CONTRACTOR's obligations hereunder are binding upon CONTRACTOR's performance bond surety and these obligations shall survive notwithstanding CONTRACTOR's completion of the Work or the termination of the Contract or CONTRACTOR's performance of the Contract. CONTRACTOR's obligations shall not be construed to negate, abridge or reduce other rights or obligations of defense and/or indemnity which would otherwise exist as to the Indemnified Parties. Nothing set forth in this Article 6.53 is intended to provide indemnification

for those situations precluded by law, including without limitation, the circumstances described in Civil Code §§ 2782(a) and 2782(b).

6.54 ***Indemnification by Subcontractors:***

In addition to Articles 6.53 and 6.54 and any other part of the Contract Documents, and to the fullest extent permitted by law, CONTRACTOR shall ensure by subcontract agreement that each Subcontractor shall defend, indemnify, and hold harmless the Indemnified Parties from and against claims, actions, damages, losses, penalties, costs and expenses (including, but not limited to attorneys' fees and costs including fees of consultants) arising out of or resulting from, whether in whole or in part, breach of or noncompliance with the subcontract agreement, this Contract, statutory or other violations of law, negligence, gross negligence or willful misconduct, or the acts, omissions, or other conduct of such Subcontractor or any person or entity engaged by them for the Work. Subcontractor's obligations under this Article 6.54 include without limitation: (i) injuries to or death of persons; (ii) damage to property; (iii) theft or loss of property; (iv) stop payment notice claims asserted by any person or entity in connection with the Work; and (v) other losses, liabilities, damages or costs resulting from, in whole or in part, any acts, omissions or other conduct of such Subcontractor or its agents, employees, material or equipment suppliers, invitees, or licensees, anyone directly or indirectly employed by any of them, or anyone for whose acts they may be liable, arising out of or related to such subcontract agreement, this Contract, Work and/or Project, including without limitation, performance of the Work; use of the Project Site; payment of suppliers and/or others; construction of the Work, or failure to construct the Work, or any portion thereof; and use, misuse, erection, maintenance, operation, or failure of any machinery or equipment including, but not limited to, scaffolds, derricks, ladders, hoists, and rigging supports, whether or not such machinery or equipment was furnished, rented, or loaned by any of the Indemnified Parties. The obligations provided in this Article 6.54 shall be binding on each Subcontractor regardless of whether the allegations underlying such claims, action, damage, loss, penalty, cost or expense are with or without merit, true or false and whether or not caused in part by any of the Indemnified Parties. The obligations of each Subcontractor as set forth in (v) above shall include, without limitation, claims, actions, damages, losses, penalties, costs and expenses asserted by any other contractor to the OWNER in connection with the Work or in connection with a work of improvement related to or affected by the Work. If any action or proceeding, whether judicial, administrative, arbitration or otherwise, shall be commenced on account of any claim, demand or liability subject to Subcontractor's obligations hereunder, and such action or proceeding names any of the Indemnified Parties as a party thereto, Subcontractor shall, at its sole cost and expense, defend the named Indemnified Parties in such action or proceeding with counsel reasonably satisfactory to the named Indemnified Parties. In the event that there shall be any judgment, award, ruling, settlement or other relief arising out of such action or proceeding to which any of the Indemnified Parties are subject to or bound by, Subcontractor shall pay, satisfy or otherwise discharge any such judgment, award, ruling, settlement or relief; Subcontractor shall indemnify and hold harmless the Indemnified Parties from any and all liability or responsibility arising out of any such judgment, award, ruling, settlement or relief. Subcontractor's obligations hereunder are binding upon Subcontractor's performance bond surety, if any, and these obligations shall survive notwithstanding Subcontractor's completion of the Work or the termination of the subcontract agreement, the Contract or CONTRACTOR's performance of the Contract. Subcontractor's obligations shall not be construed to negate, abridge or reduce other rights or obligations of defense and/or indemnity which would otherwise exist as to the Indemnified Parties. Nothing set forth in this Article 6.54 is intended to provide indemnification for those situations precluded by law, including without limitation, the circumstances described in Civil Code §§ 2782(a) and 2782(b).

6.55 ***Joint and Several Liability:***

In the event that more than one Subcontractor is connected with an event covered by the text of Articles 6.53 and/or 6.54, then all such Subcontractors, together with CONTRACTOR, shall be jointly and severally responsible to each of the Indemnified Parties for the obligations described therein, and the ultimate responsibility among such indemnifying Subcontractors and/or CONTRACTOR for the loss and expense of any such obligations shall be resolved without jeopardy to any of the Indemnified Parties. The text of Articles 6.53 and 6.54 shall not be construed to indemnify any of the Indemnified Parties for its own negligence if not permitted by law or to eliminate or reduce any other right that any of the Indemnified Parties has by law or equity.

6.56 ***No Limitation on Obligations to Indemnify:***

CONTRACTOR's and each Subcontractor's obligation to defend, indemnify, and hold harmless the Indemnified Parties under Articles 6.53 and 6.54 shall also include, without limitation, any and all claims, actions, damages, losses, penalties, costs and expenses for: injury to persons and property and death of any person; breach of any warranty and/or guarantees, express or implied; failure of CONTRACTOR or Subcontractors to comply with any Applicable Laws, rule, regulation, or other requirement; and products installed in or used in connection with the Work, except as may be precluded by statute. These obligations shall survive final payment, Contract Completion, acceptance of the Work, any termination of the Contract and/or any termination of CONTRACTOR's right to proceed with the Work in whole and/or in part.

6.57 ***Indemnification and Performance Bond:***

The performance bond surety shall not be liable under the performance bond where CONTRACTOR's liability to OWNER is based solely upon Articles 6.53, 6.54, 6.56 and/or the indemnity provision of 4.7 of this Agreement; provided that, should OWNER terminate CONTRACTOR for CONTRACTOR's failure to comply with Articles 6.53, 6.54, 6.56 and/or the indemnity provision of 4.7, SURETY shall nevertheless be liable for completion of the Contract and Work.

ARTICLE 7 - CONSTRUCTION BY OWNER OR BY SEPARATE WORK CONTRACT

7.1 ***OWNER Right:***

OWNER reserves the right to perform the Work, portions thereof and other Work related to the Project with OWNER forces and/or to award Separate Work Contract to perform Work relative to utilities, Work and/or the Project.

7.2 ***Work Not Identified in Bidding Documents:***

In the event the Work is not identified in the Bidding Documents and upon the election to perform Work with OWNER forces or by Separate Work Contract, OWNER shall provide notice to CONTRACTOR prior to commencing any such Work. If CONTRACTOR believes the performance of any such work by OWNER forces or Separate Work Contract justifies an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall provide notice to OWNER who shall promptly investigate.

7.3 ***Work Identified in Contract Documents:***

If the Work or a portion thereof is identified in the Contract Documents and upon OWNER election to perform the Work or a portion thereof with OWNER forces or Separate Work Contract, OWNER may, in addition to the OWNER rights as set forth in Article 10, proceed in accordance with, but not limited to, Articles 15.1 through 15.3.

7.4 ***CONTRACTOR Duties and Responsibilities:***

CONTRACTOR duties and responsibilities are to:

7.4.1 Coordinate, sequence, and schedule Work activities of the Project in conjunction with the Work of CONTRACTOR, OWNER forces and/or Separate Work Contract. CONTRACTOR shall make any revisions to the Construction Schedule in conjunction with or relative to the Work of CONTRACTOR, OWNER forces and/or Separate Work Contract. CONTRACTOR shall, and in accordance with related Division 01 General Requirements, submit and obtain OAR approval of all Construction Schedules. Upon approval and subsequent distribution of the Construction Schedules, CONTRACTOR, OWNER forces and/or Separate Work Contract shall fully comply with the Construction Schedules.

7.4.2 Allow the delivery and storage of materials and/or equipment of OWNER forces and/or Separate Work Contract.

7.4.3 Not hinder or otherwise delay the Work of CONTRACTOR, OWNER forces and/or Separate Work Contract.

7.4.4 Unless provided otherwise in the Contract Documents and in order to fully integrate the Work of OWNER forces and/or Separate Work Contract, CONTRACTOR shall perform all cutting, fitting, patching and connecting of the Work with and to the Work of OWNER forces and/or Separate Work Contract. CONTRACTOR shall seek, and not be subject to unreasonable withholding of, written consent from ARCHITECT and/or Separate Work Contract prior to cutting, excavating, and/or otherwise altering Work of OWNER forces and/or Separate Work Contract.

7.4.5 If the Contract Documents specify cutting, fitting, patching and connecting of the Work performed by OWNER forces and/or Separate Work Contract, CONTRACTOR shall not unreasonably withhold consent to cutting, fitting, patching, or otherwise altering Work of CONTRACTOR.

7.4.6 If any part of the Project depends upon Work of OWNER forces and/or Separate Work Contract, CONTRACTOR shall examine and immediately provide notice to OAR of any defective Work in the Work of OWNER forces and/or Separate Work Contract rendering it unsuitable for the proper execution of subsequent CONTRACTOR Work. CONTRACTOR shall take all reasonable measures necessary to minimize and mitigate the impact of the asserted defective Work on CONTRACTOR's Work or on CONTRACTOR's ability to proceed with completion of the Work per the Contract Documents and Project Schedule. Failure of CONTRACTOR to provide notice shall constitute acceptance of preceding Work as fit and proper for execution of subsequent Work. ARCHITECT and OAR shall promptly investigate and the OAR may, in consideration of, but not limited to, the recommendation of ARCHITECT, issue a Construction Directive to CONTRACTOR, OWNER forces and/or

Separate Work Contract. If CONTRACTOR believes a Construction Directive establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal within ten (10) days of the date of issuance of the Construction Directive.

7.4.7 Assure proper execution of subsequent CONTRACTOR Work. In order to do so, CONTRACTOR shall measure the completed Work of OWNER forces and/or Separate Work Contract and shall immediately provide notice to OAR of any discrepancies between the completed Work of OWNER forces and/or Separate Work Contract rendering it unsuitable for the proper execution of subsequent CONTRACTOR Work. ARCHITECT and OAR shall promptly investigate and the OAR may, in consideration of, but not limited to, the recommendation of ARCHITECT, issue a Construction Directive to CONTRACTOR. Failure of CONTRACTOR to provide notice shall constitute acceptance of preceding Work as fit and proper for execution of subsequent Work. If CONTRACTOR believes a Construction Directive establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal within ten (10) days of the date of issuance of the Construction Directive.

7.4.8 CONTRACTOR shall not damage or otherwise endanger the Work and/or property of OWNER forces and/or Separate Work Contract. In the event CONTRACTOR causes damage or is deemed responsible by the OAR for the cause of damage to Work and/or property of OWNER forces and/or Separate Work Contract, OAR may issue a Construction Directive to immediately remedy such damage. If CONTRACTOR believes a Construction Directive establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal within ten (10) days of the date of issuance of the Construction Directive.

7.4.9 CONTRACTOR shall be completely responsible for, and shall provide all means, methods and materials to fully protect and/or otherwise prevent damage to the Work until Substantial Completion.

7.4.10 If OWNER elects to perform any portion of the Work as per Articles 7.2 and/or 7.3, CONTRACTOR shall perform and/or otherwise continue to perform the remaining portions of the Work and shall fully comply with CONTRACTOR obligations as set forth in Article 6.50.

OWNER Roles:

7.5 ***OWNER will:***

7.5.1 participate in, or cause participation in, the coordination, sequencing and scheduling of CONTRACTOR activities relative to the Work, Work of OWNER forces and/or Separate Work Contract;

7.5.2 not hinder or otherwise delay the Work of CONTRACTOR, OWNER forces and/or Separate Work Contract.

ARTICLE 8 - OWNER DUTIES, RIGHTS AND RESPONSIBILITIES

8.1 OWNER will define the roles and responsibilities of OAR and ARCHITECT. OAR is the OWNER representative during the Work, or any portion thereof, who will be identified at the initial job start meeting as provided in Article 2.6. The duties, responsibilities and authority limits of the OAR are as set forth in the Contract Documents.

8.2 Unless noted otherwise, OWNER shall issue all OWNER communications to CONTRACTOR, ARCHITECT, and/or others, through the OAR or as otherwise designated by OWNER.

8.3 In case of termination and/or replacement of ARCHITECT, OWNER has the right to engage the professional services of another ARCHITECT or may perform ARCHITECT duties and responsibilities with ARCHITECT of direct OWNER employment. The status of the replacement ARCHITECT shall be as of original ARCHITECT as defined within the Contract Documents.

8.4 OWNER shall have the right, but not the obligation, to require the removal from the Work any superintendent, staff member, agent, or employee of CONTRACTOR, Subcontractor, vendor, material, or equipment supplier for cause.

8.5 OWNER has no duty, responsibility or obligation for any and/or all safety precautions and/or programs except which is expressly called out in the Contract Documents.

8.6 OWNER has no contractual relationship of any kind with any Subcontractor, supplier, or anyone other than CONTRACTOR. The Contract is made solely for the benefit of CONTRACTOR and OWNER and no others.

8.7 OWNER has the right to assess and withhold all costs and expenses for CONTRACTOR caused damages against Contract funds or the CONTRACTOR.

8.8 OWNER has no duty, responsibility or obligation to supervise, direct, control or have authority over, CONTRACTOR means, methods, techniques, sequences, and/or procedures of construction unless otherwise specified in the Contract Documents.

8.9 OWNER has no duty, responsibility, or obligation for CONTRACTOR failure to comply with Applicable Laws and regulations in furnishing of or performance of the Work.

8.10 OWNER has no duty, responsibility, or obligation for CONTACTOR failure in furnishing of or performance of the Work in strict accordance with the Contract Documents.

8.11 OWNER has the right to perform and complete a safety evaluation and a CONTRACTOR performance evaluation at the end of the Project and at any time during the course of the Project.

8.12 Other OWNER rights, duties and responsibilities not expressly set forth in this Article.

ARTICLE 9 - ARCHITECT ROLE DURING CONSTRUCTION; AND REQUESTS FOR CLARIFICATION (RFCs)

ARCHITECT - General:

9.1 ARCHITECT's role during construction of the Work is as set forth in the Contract Documents. ARCHITECT has the responsibilities and authority established by law, including but not limited to, California Code of Regulations, Title 24.

9.2 ARCHITECT has no contractual relationship of any kind with CONTRACTOR.

ARCHITECT Project Representative:

9.3 There may be an on-Site ARCHITECT representative or other staff representatives to observe the Work, Project or portions thereof.

9.4 ***Request for Clarification of the Contract Documents*:**

9.4.1 ARCHITECT shall provide the OAR, within a reasonable time, clarifications and/or interpretations of the Contract Documents for the purposes of proceeding with the Work. Clarifications and/or interpretations may be in the form of drawings and/or other written instruments as determined by ARCHITECT, which will be reasonably inferable from and consistent with the intent of the Contract Documents.

9.4.2 CONTRACTOR shall submit a Request for Clarification to OAR with a concurrent copy to ARCHITECT and Project Inspector. A Request for Clarification shall be submitted:

9.4.2.1 a minimum of nine (9) days prior to commencement of any Work for which the Request for Clarification was submitted;

9.4.2.2 immediately upon discovery of minor conflicts or discrepancies in the Work during actual performance of the Work.

9.4.3 A Request for Clarification shall be prepared on an OWNER supplied form and shall reference all the applicable Contract Documents including division and/or Specification section, detail number, Drawing and/or plan designation. OAR shall provide a response to the CONTRACTOR within nine (9) days after receipt of a Request for Clarification.

9.4.4 Responses furnished within the time specified in Article 9.4.3 shall not give rise to or establish the basis for any dispute seeking adjustments to the Contract Amount, Milestones and/or Contract Time, including damages due to any Adverse Impact or similar cause.

9.4.5 A Request for Clarification submitted by CONTRACTOR after the time specified in Article 9.4.2.1 shall not give rise to or establish the basis for any dispute seeking adjustments to the Contract Amount, Milestones and/or Contract Time, including damages due to any Adverse Impact or similar cause.

9.4.6 In the event CONTRACTOR believes the clarifications and/or interpretations as provided in the response to the Request for Clarification establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, the directives of the OAR shall be final

for the purpose of proceeding with the Work. If CONTRACTOR believes a Construction Directive and/or a response as provided in the Request for Clarification establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal within ten (10) days of the date of receipt of the response to the Request for Clarification.

9.4.7 OWNER and CONTRACTOR agree that Requests for Clarification (RFC) are an anticipated part of the Contract. CONTRACTOR agrees that all costs of CONTRACTOR and that of any persons claiming through CONTRACTOR arising in connection with the preparation of any Request for Clarification, whether or not such Request for Clarification results in a Change Order, are part of CONTRACTOR's overhead and profit on the Project and are included in the Contract Amount. For each response to a Request for Clarification that requires no explanation except reference or references to specific pages, Drawings, sections or articles of the Contract Documents, OAR may withhold from monies otherwise due and payable to CONTRACTOR a reasonable amount to compensate OWNER for the time spent by OAR and/or ARCHITECT to generate the response.

Authorized Minor Variations in the Work:

9.5 ARCHITECT may direct and OAR may authorize minor variations in the technical aspects of the Work from the requirements of the Contract Documents. Any variation in the Work that impacts Structural, Fire/Life Safety, or Accessibility components ("DSA Purview") is subject to DSA review as a CCD-A. Variations in the Work that do not relate to DSA Purview, but modify the scope of the Work shown in the DSA-approved documents, are required to be documented by a CCD-B. For purposes of this Article 9.5, a minor variation is defined as one that does not relate to DSA Purview. Authorized minor variations in the Work shall be consistent with the overall intent of the design concept of providing a complete functioning Project. Minor variations in the Work authorized by OAR may be accomplished by issuance of a Construction Directive. If CONTRACTOR believes a Construction Directive establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal within ten (10) days of the date of issuance of the Construction Directive.

Disputes, Disagreements and other Matters:

9.6 When disputes regarding the Contract Documents arise, OAR shall issue a final, binding Construction Directive to CONTRACTOR for the purpose of proceeding with the Work. If CONTRACTOR believes a Construction Directive establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal within ten (10) days of the date of issuance of the Construction Directive.

Limitations of ARCHITECT Duty and Authority:

9.7 ARCHITECT will not supervise, direct, control, have authority over or in any way be responsible for the means, methods, techniques, sequences and/or procedures of CONTRACTOR, or the safety precautions and programs of CONTRACTOR, or for any failure by CONTRACTOR to comply with laws and regulations applicable to the furnishing of or performance of the Work. ARCHITECT shall not be responsible for failure of CONTRACTOR to furnish and/or perform the Work in accordance with the Contract Documents.

9.8 ARCHITECT shall not be responsible for acts and/or omissions of CONTRACTOR, Subcontractor, supplier, or any other person and/or organizations furnishing and/or performing any of the Work.

9.9 In no event shall any instruction, direction, communication or Request for Clarification response of ARCHITECT to CONTRACTOR result in any change or modification to the Contract Amount or Contract Time unless authorized by an approved Change Order.

ARTICLE 10 - CHANGES IN THE WORK

10.1 Without negating the Contract or providing notice to any surety, and at any time and/or times, OAR has the right to direct additions, deletions, and/or revisions in the Work. A Change Order or Construction Directive shall serve to authorize additions, deletions and/or revisions in the Work. CONTRACTOR, upon receipt of any such document shall immediately proceed with the Work to be performed under the applicable conditions of the Contract Documents. If CONTRACTOR believes it is entitled to an adjustment of the Contract Amount or Contract Time, CONTRACTOR shall submit a Change Order Proposal in strict accordance with Articles 10, 11 and 12.

10.2 CONTRACTOR shall not be entitled to an increase in the Contract Amount, Milestones and/or Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in Articles 3.15.1 and 3.15.2, except in case of emergency as set forth in Article 6.42 or in the case of uncovering Work as set forth in Article 13.19.2.

Request for Proposal:

10.3 A Request for Proposal may be issued by OAR to CONTRACTOR. Within ten (10) days of receipt of the Request for Proposal, unless otherwise indicated in the Request for Proposal, CONTRACTOR shall provide a Change Order Proposal which contains proposed adjustments to the Contract Amount, Milestones and/or Contract Time reflective of the Work specified in the Request for Proposal.

Construction Directive:

10.4 A Construction Directive shall not adjust the Contract Amount, Milestones and/or Contract Time but may lead to a Change Order Proposal.

10.5 Upon OAR issuance of a Construction Directive, CONTRACTOR shall comply as set forth in the Construction Directive.

10.6 If CONTRACTOR believes a Construction Directive establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17 submit a Change Order Proposal within ten (10) days of the date of issuance of the Construction Directive, unless otherwise indicated in the Construction Directive.

Change Order Proposal:

10.7 A Change Order Proposal shall include all detailed estimates for quantities of material, quantities of labor hours, hourly labor rates, allowable mark-ups, and detailed quotes/invoices from any applicable third party suppliers/fabricators or subcontracts in order to validate a proposed adjustment in the Contract Amount. If the CONTRACTOR seeks adjustment in Milestones and/or Contract Time, CONTRACTOR shall also adhere to the requirements outlined in Article 12 and all related Sections

of the Division 01 General Requirements. If CONTRACTOR seeks adjustment of the Contract Amount, CONTRACTOR shall also adhere to the requirements outlined in Article 11 and all related Sections of the Division 01 General Requirements.

10.8 Should CONTRACTOR fail to submit a Change Order Proposal within the (10) day time period required under, without limitation, Articles 3.11, 4.2.3, 4.3.2, 4.5.3.3, 6.42, 7.4.6, 7.4.7, 7.4.8, 9.4.6, 9.5, 9.6, 10.6, 13.19.3, and 15.1.2, CONTRACTOR acknowledges that it would be depriving OWNER of an opportunity to timely mitigate the issue, event, condition, circumstance and/or cause, and therefore, CONTRACTOR waives and releases any and all disputes, Claims, rights and remedies in connection therewith.

10.9 CONTRACTOR shall not be entitled to any adjustment in the Contract Amount, Milestones and/or Contract Time in connection with preparing a Change Order Proposal whether ultimately accepted or not.

10.10 If CONTRACTOR and OAR agree to all the proposed adjustments, in an additive and/or deductive Change Order Proposal, OAR shall issue a Change Order for mutual execution by the parties.

10.11 If CONTRACTOR and OAR are able to achieve only partial agreement on the proposed adjustments in the Contract Amount, Milestones and/or Contract Time contained within an additive Change Order Proposal, then OAR shall issue a Change Order for mutual execution by the parties setting forth those undisputed adjustments. If CONTRACTOR still chooses to pursue the disputed items, then the CONTRACTOR shall within ten (10) days of the OAR's written decision serve notice to the OAR of CONTRACTOR's intent to file a Claim and shall submit its Claim within the time period set forth in Article 16.6.

10.12 If OAR rejects a Change Order Proposal in its entirety, CONTRACTOR shall within ten (10) days of the OAR's written decision serve notice to the OAR of CONTRACTOR's intent to file a Claim and shall submit its Claim within the time period set forth in Article 16.6, if CONTRACTOR intends to seek further relief.

10.13 CONTRACTOR shall use the most current version of the OWNER provided forms found at http://www.laschools.org/documents/file?file_id=289569928 and listed in Section 01 3229 of the General Requirements for Change Order Proposal. CONTRACTOR shall submit the Change Order Proposal with all supporting documents and data.

10.14 Prior to submitting any Change Order Proposal, CONTRACTOR shall verify that all tiers of Subcontractor costs and time have been accounted for.

10.15 CONTRACTOR shall not use the Schedule of Values by itself to determine the proposed adjustments to the Contract Amount, Milestones and/or Contract Time.

10.16 The proposed adjustments to the Contract Amount shall cover any and all costs, including those due to Adverse Impacts and damages associated with the changed Work. Where CONTRACTOR requests that a Change Order Proposal include a time extension, CONTRACTOR shall submit a detailed critical path method schedule analysis supporting the requested time extension showing the delay to the critical path to the Approved Construction Schedule.

10.17 The OAR has the right to require CONTRACTOR to revise and resubmit a Change Order Proposal if such Change Order Proposal fails to comply with Articles 10 and 11 requirements. CONTRACTOR

shall correct the incomplete and/or inaccurate Change Order Proposal, supply additional back up and re-submit the proposal within ten (10) days of OAR's required revisions. CONTRACTOR shall be responsible for any costs, delays and/or damages resulting from the submittal or re-submittal of an incomplete and/or inaccurate Change Order Proposal.

Change Order:

10.18 CONTRACTOR shall not place any reservation of rights and/or qualifying language on any Change Order.

10.19 OAR and CONTRACTOR shall execute appropriate Change Orders covering:

10.19.1 changes in the Work ordered pursuant to, but not limited to, Article 10.1;

10.19.2 changes in the Contract Amount, Milestones and/or Contract Time which are agreed to by the parties;

10.19.3 changes in the Contract Amount, Milestones and/or Contract Time which embody the substance of any decision rendered pursuant to Article 16.

10.20 If CONTRACTOR fails or refuses to execute a Change Order within ten (10) days of OAR issuance, OWNER reserves the right to process the Change Order without CONTRACTOR's signature.

10.21 Notwithstanding any note, comment, reservation or other notation appearing on the face of the Change Order or any other document or form, concurrent with the Change Order or not, the signing of a Change Order shall be conclusively deemed to be a full resolution, settlement and accord and satisfaction with respect to all CONTRACTOR's and Subcontractors' (regardless of tier) rights for losses and extensions of time that were asserted, or that could have been asserted, whether known or unknown at the time of execution of the Change Order, related to the subject matter of the Change Order, including without limitation all rights to recovery of costs, expense or damages for Adverse Impacts, extended or extraordinary (direct and indirect) overhead, home office overhead, multiplicity of changes, legal expenses, consultant costs, interest, lost profits or revenue, bond and insurance costs, changes in taxes and other similar and related losses.

ARTICLE 11 - CHANGE OF CONTRACT AMOUNT

This Article sets forth the process for adjusting the Contract Amount. If CONTRACTOR believes it is entitled to an adjustment of the Contract Amount, CONTRACTOR shall submit a Change Order Proposal in strict accordance with this Article 11.

11.1 The costs set forth in Article 11 are limited to those costs incurred in the performance of Change Order Work and include any costs resulting from adjustment to the Contract Time covered by the Change Order. All original duties, responsibilities and obligations assigned to, or undertaken by, CONTRACTOR under the original Contract shall be at expense of CONTRACTOR without change in the Contract Amount.

11.2 The Contract Amount can only be changed by Change Order to the Contract.

11.3 Any adjustment to the Contract Amount due to compensable delay shall be determined pursuant to Articles 11.12 and 12.1.2 and included in the Change Order amount.

11.4 The value of any Work covered by a Change Order Proposal or a Change Order shall be determined as follows:

11.4.1 where the Work involved is covered by unit prices contained within the Contract Documents, the costs of such Work shall be determined by application of such unit prices to the quantities of the items involved, subject to the provisions of Articles 11.5 through 11.7 inclusive;

11.4.2 where the Work involved is not covered by unit prices contained in the Contract Documents, OAR and CONTRACTOR will arrive at a mutually agreed-upon sum based on the estimated Cost of the Work as determined by Articles 11.8 and 11.9 plus a CONTRACTOR fee for overhead and profit as determined in Article 11.10;

11.4.3 where the Work involved is not covered by unit prices contained in the Contract Documents and no agreement is reached under Article 11.4.2, then the basis of Cost of the Work may be as set forth in Article 11.11, plus a CONTRACTOR fee for overhead and profit as determined in Article 11.10.

11.4.4 all allowed and non-allowed costs as set forth in this Article 11 apply to any claims of Subcontractors and suppliers, regardless of tier.

Unit Prices:

11.5 Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, the initial Contract Amount shall be deemed to include for all Unit Price Work an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Bidding Documents. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of bids and determining an initial Contract Amount. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by OAR.

11.6 Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to fully cover all overhead and profit for each separately identified item.

11.7 OAR or CONTRACTOR may request, by appropriate Change Order Proposal, an adjustment in the Contract Amount if:

11.7.1 the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Contract and there is no corresponding adjustment with respect to any other item of Work;

11.7.2 CONTRACTOR believes CONTRACTOR is entitled to an increase in the Contract Amount as a result of having incurred additional expense or OAR believes that OWNER is entitled to a decrease in the Contract Amount.

Cost of the Work:

11.8 The term “Cost of the Work” means the sum of all direct costs necessarily incurred and paid for by CONTRACTOR in connection with the proper furnishing and/or performance of the Work covered by Change Order. Such costs shall be in amounts no greater than those prevailing in the locality of the Work and/or Project and shall only include:

11.8.1 estimated payroll costs for employees in direct employ of CONTRACTOR for the performance of the Work. Payroll costs shall include wages paid and fringe benefits as determined by the California State Director of Industrial Relations at the time the Change Order Proposal is submitted. A table of burdened labor rates acceptable to OWNER, which includes employer paid social security contributions, unemployment insurance, and payroll taxes required by law, can be downloaded from http://www.laschools.org/file-storage/download/forms_log/forms_beginning_with_e/Fully_Burdened_Prevailing_Wage_TABLE.pdf. Any burdened labor rate in excess of the published burdened labor rate table will require submittal of the appropriate supporting documents as set forth in Section 01 3229 of the General Requirements. OWNER's consideration of a rate in excess of the published burdened labor rate will be given only if the supporting documents validate CONTRACTOR's payment of costs at the higher rate and if the employee in connection with those costs was in direct employ of CONTRACTOR at least 90 days prior to the claim for a higher rate. The expenses of performing Work after regular hours, on Saturday, Sunday or legal holidays, shall be included if authorized by OAR;

11.8.2 cost of all materials and equipment furnished and incorporated into the Work, including costs of transportation, loading and unloading, storage and the cost of supplier's field services in connection therewith;

11.8.3 payments made by CONTRACTOR to Subcontractors for Work furnished and/or performed by Subcontractors. If the Work requires a trade subcontractor not listed at the time of the bid because such Work was not within the scope of the Work when bid, CONTRACTOR shall obtain competitive bids from a minimum of three (3) Subcontractors. OAR shall determine the acceptable bid. Subcontractors Cost of the Work and fees shall be determined in the same manner as for CONTRACTOR under Articles 11.8, 11.9, and 11.10. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

11.8.4 Supplemental costs:

11.8.4.1 transportation, delivery and storage of all materials, supplies, appliances, at the Project Site and hand tools not owned by the workers which are consumed in the performance of the Work;

11.8.4.2 an amount for CONTRACTOR owned equipment and machinery based on the Equipment Rental Rates published by Caltrans or rental rate published by actual rental company. The amount shall be based on actual use of the equipment and machinery;

11.8.4.3 sales, consumer, use and/or similar taxes related to the Work, and for which CONTRACTOR is responsible;

11.8.4.4 royalty payments and fees for permits and licenses;

11.8.4.5 utilities, fuel and sanitary facilities at the Project Site;

11.8.4.6 premiums due to additional bonds required because of changes in the Work, or increases, as appropriate, to the scope of the Work covered by the bonds;

11.8.4.7 consultants such as surveyors, testing agencies and engineers, employed for services specifically related to the Work.

11.8.5 Rental amount for construction equipment and machinery, whether rented by CONTRACTOR or others in accordance with Rental Rate Blue Book for Construction Equipment or Equipment Rental Rates published by Caltrans. The amount shall be based on actual use of the equipment and machinery.

11.9 All costs set forth in Article 11.9.1 through 11.9.11 are deemed to be part of CONTRACTOR's overhead and profit, and are included in the Contract Amount and/or covered by CONTRACTOR fee as set forth in Article 11.10. The following are not allowed in the Cost of the Work:

11.9.1 payroll costs and other compensation of CONTRACTOR's project manager, superintendents, general foreman, project coordinators, schedulers, safety officers, detailers, draftsman, project engineers, officers, executives, principals, owners, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the Project Site or in CONTRACTOR principal or a branch office for general administration of the Work;

11.9.2 costs and expenses of CONTRACTOR's office located at the Project Site, principal office, branch office(s), home office(s) and all home office overhead costs, including without limitation general and administrative costs;

11.9.3 any part of CONTRACTOR capital expenses, including interest on CONTRACTOR capital employed for the Work and charges against CONTRACTOR for delinquent payments;

11.9.4 cost of premiums for all bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain same except for the cost of premiums covered by Article 11.8.4.6;

11.9.5 costs due to negligence, act or failure to act of CONTRACTOR, any Subcontractor, or anyone else directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment furnished in error and the repair and/or replacement of any damage to property;

11.9.6 consumable materials, such as drill bits, abrasive discs, gloves, rags, rope, welding tips, etc.;

11.9.7 tools and equipment with original costs of less than $1,000.00;

11.9.8 other overhead or general expense costs of any kind such as Shop Drawings, guarantees and warranties, and the costs of any item not specifically and expressly set forth in Article 11.8;

11.9.9 consequential expenses including impairment of bonding capacity, lost opportunity, labor, wage or cost escalations, legal expenses or changes in taxes;

11.9.10 expenses related to pickup trucks;

CONTRACTOR Overhead and Profit

11.10 CONTRACTOR fee for overhead and profit shall be based on the following:

11.10.1 for costs incurred under Articles 11.8.1 and 11.8.2, CONTRACTOR fee shall be fifteen (15) percent for Work performed directly by CONTRACTOR;

11.10.2 where Subcontractors are included in the change, the intent of Articles 11.8.1, 11.8.2, 11.8.3 and 11.11 is that the Subcontractor who actually performs or furnishes the Work, regardless of tier, will be paid a fee of fifteen (15) percent of the costs incurred by such Subcontractor under Articles 11.8.1 and 11.8.2, and CONTRACTOR will be paid a fee of five (5) percent, for a maximum total fee of twenty (20) percent;

11.10.3 no fee shall be payable on the basis of costs itemized under Articles 11.8.4 and 11.9;

11.10.4 the amount CONTRACTOR shall credit OWNER for any change that results in a net decrease in cost will be the amount of the actual net decrease in cost and a deduction in the CONTRACTOR fee of five (5) percent of the net decrease;

11.10.5 the amount CONTRACTOR shall credit OWNER for any change of Work by a Subcontractor which results in a net decrease in cost will be the amount of the actual net decrease in costs plus a deduction in the Subcontractor fee by an amount equal to five (5) percent of such net decrease and a deduction in fee for the CONTRACTOR of five (5) percent;

11.10.6 for costs incurred under Article 11.8.5, the CONTRACTOR fee for rented equipment shall be five (5) percent. No fee shall be allowed for CONTRACTOR owned equipment as set forth in Article 11.8.4.2;

11.10.7 when both additions and credits are involved in any one change of Work, the adjustment in CONTRACTOR fee shall be calculated on the basis of the net change in accordance with Articles 11.10.1 through 11.10.6 inclusive.

Time and Material:

11.11 Whenever the Cost of the Work is to be determined in accordance with Article 11.4.3, CONTRACTOR shall maintain records thereof in accordance with generally accepted accounting practices and shall submit the itemized cost breakdown to OAR in the following form:

At the close of each work day, CONTRACTOR shall submit a daily time and material record, on a form prescribed by OWNER, to OAR, together with applicable delivery tickets, listing all labor, employees names, hours worked, wage classifications, materials, quantities, equipment size, type and identification number, and supplies involved for said work day, the location of the affected portion of the Work, for services and expenditures as authorized under Articles 11.8, 11.9, and 11.10. An attempt shall be made to reconcile the daily time and material record, and OAR and CONTRACTOR shall sign it. In the event of disagreement, each party, to explain points which cannot be resolved immediately, shall enter pertinent notes. Each party shall retain a signed copy of the daily time and material record. Daily time and material records of Subcontractors or others shall only be submitted through CONTRACTOR. The submittal shall include invoices depicting cost of material and rental equipment.

Cost of Compensable Delay:

11.12 When the Contract Time is extended, the allowable cost for the time extension shall include only the following items:

11.12.1 Payroll costs of CONTRACTOR's employees at the Project Site.

11.12.2 CONTRACTOR Project Site and Site office expenses.

11.12.3 CONTRACTOR fee for all profit and overhead, including costs and expenses of CONTRACTOR's principal office, branch office(s), home office(s) and all home office overhead costs, including without limitation general and administrative costs, and all other off Site expenses, shall be five (5) percent of costs incurred under Articles 11.12.1 and 11.12.2.

11.12.4 Additional cost of bond premiums, if any, due to extended Contract Time.

Change Order Exceeding $500,000:

11.13 Any individual Change Order in an amount that exceeds $500,000 and which has been approved by the Deputy Chief Procurement Officer (Facilities), or designee, shall be subject to audit by OWNER as set forth in Article 14.8.

ARTICLE 12 - CHANGE OF CONTRACT TIME

12.1 ***Adjustment of Contract Time*.** If the Work is delayed for any reason, adjustment, if any, to the Contract Time on account of such delay shall be in accordance with this Article 12 and will be made, if at all, by Change Order in accordance with Articles 10 and 11 or, if the duration of the adjustment cannot be resolved, then in accordance with Article 16. If CONTRACTOR believes it is entitled to an adjustment of the Contract Time, CONTRACTOR shall submit a Change Order Proposal in strict accordance with this Article 12.

12.1.1 ***Excusable Delays*.** If the Work is delayed by unforeseeable and unavoidable casualties or other unforeseen causes beyond the control, and without fault or neglect, of CONTRACTOR, any Subcontractor, Material Supplier or other person directly or indirectly engaged by CONTRACTOR in performance of any portion of the Work the Contract Time shall be subject to adjustment for such reasonable period of time as determined by OWNER. Such delays will be known as "Excusable Delays." Excusable Delays include unanticipated and unavoidable labor disputes, unusual and unanticipated delays in transportation of equipment or materials reasonably necessary for completion and proper execution of the Work, and unanticipated unusually severe weather conditions. Neither the financial resources of CONTRACTOR nor any person or entity directly or indirectly engaged by CONTRACTOR in performance of any portion of the Work shall be deemed conditions beyond the control of CONTRACTOR. If an event of Excusable Delay occurs, the Contract Time shall be subject to adjustment hereunder only if CONTRACTOR establishes: (i) full compliance with all applicable provisions of the Contract Documents relative to the method, manner and time for CONTRACTOR's notice and request for adjustment of the Contract Time; (ii) that the event(s) forming the basis for CONTRACTOR's request to adjust the Contract Time are outside the reasonable control and without any fault or neglect of CONTRACTOR or any person or entity directly or indirectly engaged by CONTRACTOR in performance of any

portion of the Work; and (iii) that the event(s) forming the basis for CONTRACTOR's request to adjust the Contract Time directly and adversely impacted the progress of the Work as indicated in the most recent updated Approved Construction Schedule relative to the date(s) of the claimed event(s) of Excusable Delay. The foregoing provisions notwithstanding, if the Specifications set forth a number of "Rain Days" to be anticipated during performance of the Work, the Contract Time shall not be adjusted for unusually severe weather conditions until and unless the actual number of Rain Days during performance of the Work shall exceed those noted in the Specifications and such additional Rain Days shall have directly and adversely impacted the progress of the Work as depicted in the Approved Construction Schedule or the most recent updated Approved Construction Schedule relative to the date(s) of such additional Rain Days. Excusable Delays shall not result in any increase in the Contract Amount.

12.1.2 ***Compensable Delays*.** If Work is delayed by the acts or omissions of OWNER, ARCHITECT or separate contractor employed by OWNER, upon CONTRACTOR's request and notice, in strict conformity with Articles 10, 12 and 16 of these General Conditions and all related Sections of the Division 01 General Requirements, the Contract Time will be adjusted by Change Order for such reasonable period of time as determined by the OWNER and in accordance with Article 11.12.

12.1.3 ***Unexcusable Delays*.** Unexcusable Delays refer to any delay to the progress of the Work caused by events or factors other than those specifically identified in Articles 12.1.1 and 12.1.2 above. Neither the Contract Amount nor the Contract Time shall be adjusted on account of Unexcusable Delays.

12.2 ***Procedure for Adjustment of Contract Time*.** The Contract Time shall be subject to adjustment only in strict conformity with applicable provisions of the Contract Documents. Failure of CONTRACTOR to request adjustment(s) of the Contract Time in strict conformity with applicable provisions of the Contract Documents shall be deemed CONTRACTOR's waiver and release of the same.

12.2.1 If CONTRACTOR and/or its Subcontractor, encounter any issue, event, condition, circumstance and/or cause of an Adverse Impact, CONTRACTOR shall provide a written notice to OAR, utilizing a notice form provided by OWNER. The notice shall be given to OAR upon the date of discovery or no later than three (3) days after CONTRACTOR first encounters the Adverse Impact. The notice shall supply all the information required by the provided form. CONTRACTOR shall also raise the circumstances of the Adverse Impact at the first Project meeting with OAR following the date of discovery of the Adverse Impact. The matter shall be carried in the meeting minutes until resolved.

12.2.2 Within three (3) days of the ending of the Adverse Impact, CONTRACTOR shall provide written notice to OAR, on an OWNER provided form, notifying OAR of the date on which the Adverse Impact ended. If CONTRACTOR contends the Adverse Impact entitles CONTRACTOR to an adjustment of the Contract Amount, Milestones and/or Contract Time, then CONTRACTOR shall submit a Change Order Proposal in strict conformity with Articles 10 through 12, Article 16 and Division 01 General Requirements within thirty-five (35) days after the written notice to the OAR was given.

12.2.3 CONTRACTOR recognizes and acknowledges that timely submission of notices identified in Articles 12.2.1 and 12.2.2, whether or not the circumstances of an Adverse Impact may be

known to OWNER or available to OWNER through other means, is not a mere formality but is of crucial importance to the ability of OWNER to promptly identify, prioritize, evaluate and mitigate the potential effects of the Adverse Impact. Any form of informal notice, whether verbal or written (including, without limitation, statements at regular job meetings or entries on monthly reports, daily logs or job meeting minutes), that does not strictly comply with the formal notice requirements of Articles 12.2.1 and 12.2.2 above, shall accordingly be deemed insufficient and of no force or effect.

12.3 ***Limitations Upon Adjustment of Contract Time on Account of Delays.*** Any adjustment of the Contract Time on account of an Excusable Delay or a Compensable Delay shall be limited as set forth herein. No adjustment of the Contract Time shall be made on account of any Excusable Delays or Compensable Delays unless such delay(s) actually and directly impact Work or Work activities on the critical path of the then current and updated Approved Construction Schedule as of the date on which such delay first occurs. OWNER shall not be deemed in breach of, or otherwise in default of any obligation hereunder, if OWNER shall deny a request by CONTRACTOR for an adjustment of the Contract Time for any delay which does not actually and directly impact Work on the critical path of the then current and updated Approved Construction Schedule. In submitting a request for an adjustment of Contract Time, and as a condition precedent to OWNER's review of such request, CONTRACTOR shall insert into the then current and updated Approved Construction Schedule a "fragnet" analysis representing the event which CONTRACTOR claims to result in delay to the critical path as depicted in such updated Approved Construction Schedule. If an Excusable Delay and a Compensable Delay occur concurrently, the maximum extension of the Contract Time shall be the number of days, if any, which the Compensable Delay exceeds the period from the Excusable Delay. If an Unexcusable Delay occurs concurrently with either an Excusable Delay or a Compensable Delay, the maximum extension of the Contract Time shall be the number of days, if any, which the Excusable Delay or the Compensable Delay exceeds the period of time of the Unexcusable Delay.

12.4 ***Early Completion***. Nothing stated in these General Conditions or elsewhere in the Contract Documents shall be interpreted as creating any contractual right, express or implied, on the part of CONTRACTOR to complete the Work earlier than the Contract Time. CONTRACTOR has included in its Bid that is the basis for the Contract Amount the costs of all CONTRACTOR's and the Subcontractors' direct and indirect overhead, including but not limited to all Project staff, temporary facilities, temporary utilities and home office overhead for the entire duration of the Contract Time. The above costs have been included in the Bid and Contract Amount notwithstanding CONTRACTOR's possible anticipation of completion in fewer Days than established by the Contract Time. Under no circumstances shall OWNER be liable to CONTRACTOR for any losses, of any kind, due to the inability of CONTRACTOR to complete the Work earlier than the Contract Time, regardless of the cause, including, without limitation, delays due to acts or omissions (intentional or negligent) of OWNER, ARCHITECT or others. No reduction in the Contract Amount shall be made nor will CONTRACTOR be required to remain on the Site if the Work is completed before expiration of the Contract Time.

12.5 ***Acceleration of the Work.***

12.5.1 ***Due to Unexcused Delay.*** If OWNER determines and notifies CONTRACTOR that CONTRACTOR's progress in performance of the Work is such that, in OWNER's good faith judgment, CONTRACTOR will not achieve Substantial Completion of the Work within the Contract Time, then CONTRACTOR shall immediately respond in writing setting forth a detailed plan for accelerating the Work and shall thereafter take, at CONTRACTOR's own expense, all measures necessary, including, if permissible, providing additional equipment,

working overtime, additional shifts, Saturdays, Sundays and holidays, to recover performance to ensure that the Work is performed within the Contract Time. OWNER reserves the right to take all necessary measures to mitigate further delays to the completion of the Work within the Contract Time and CONTRACTOR shall reimburse OWNER, or OWNER may withhold from payment due to CONTRACTOR, any costs incurred by OWNER to perform such measures.

12.5.2 ***Due to Excusable Delay*****.** CONTRACTOR shall have the right, exercised in its sole discretion, to accelerate performance of the Work to overcome time lost due to Excusable Delay. However, such acceleration, if performed, shall be deemed a voluntary acceleration performed at CONTRACTOR's own expense.

12.5.3 ***Due to Compensable Delay*****.** OWNER shall have the right, exercised in its sole discretion, in lieu of granting an adjustment to the Contract Time and/or Contract Amount for Compensable Delay, to direct in writing the acceleration of the Work by CONTRACTOR in order to recapture time lost due to Compensable Delay. OWNER and CONTRACTOR shall endeavor prior to commencement of the acceleration to mutually agree upon an amount of compensation to be paid therefor that is consistent with the provisions of this Article. OWNER shall have the right, in the absence of such an agreement, to direct in writing that CONTRACTOR accelerate, in which case CONTRACTOR's compensation therefor shall be limited, subject to the other provisions of this Article, to only those costs incurred and paid for any premium time portion of overtime wages paid and additional equipment that is required to recapture the number of days of Compensable Delay stated by OWNER in such direction. Except as directed by OWNER in the manner stated in this Article, no statements, conduct or actions by OWNER will be construed as creating an obligation on the part of OWNER to make payment for the cost of any overtime or other costs associated with an acceleration of the Work and any acceleration undertaken without the prior written direction of OWNER as required by this Article shall be deemed to be a voluntary acceleration performed at CONTRACTOR's own expense.

12.6 ***Continuous Performance*****.** No dispute or disagreement with respect to any Changes or delay, including, without limitation, disputes over CONTRACTOR's right to or the amount of any adjustment to the Contract Amount or Contract Time, shall relieve or excuse CONTRACTOR from the obligation to proceed with and maintain continuous, expeditious and uninterrupted performance of the Work, including performance of any disputed Changes.

12.7 ***Liquidated Damages – CONTRACTOR Delays*****.** Should the CONTRACTOR not achieve Completion of the Work within the Contract Time, as adjusted, the CONTRACTOR shall pay to the OWNER the amount of per diem Liquidated Damages set forth in Supplementary Condition Article 12.7.1, for every day beyond the Contract Time, as adjusted, until Completion of the Work is achieved. Any such Liquidated Damages are automatically and without notice of any kind owed by CONTRACTOR upon the accrual of each day of delay. The OWNER may at any time deduct Liquidated Damages from any payments due or to become due to the CONTRACTOR. Neither the OWNER's failure or delay in deducting Liquidated Damages from payments otherwise due the CONTRACTOR, nor the OWNER's failure or delay in notifying CONTRACTOR of the accrual of Liquidated Damages, shall be deemed a waiver of the OWNER's right to Liquidated Damages. The CONTRACTOR and the Surety shall be liable for and pay to the OWNER the entire amount of Liquidated Damages including any portion that exceeds the amount of the Contract Amount then held, retained or controlled by the OWNER. The CONTRACTOR and OWNER acknowledge and agree that the Liquidated Damages and the provisions of this Article 12.7 are reasonable and

necessary under the circumstances existing at the time this Contract is made because of the difficulty of fixing the OWNER's actual damages in the event of delayed completion of the Work. The CONTRACTOR and the OWNER agree that the Liquidated Damages do not constitute a penalty. In the event that the CONTRACTOR shall fail or refuse to correct or complete items of the Work noted upon Substantial Completion and the OWNER elects to exercise its right to cause completion or correction of such items pursuant to Article 15, the OWNER's Liquidated Damages pursuant to the foregoing shall be in addition to, and not in lieu of, the OWNER's right to charge CONTRACTOR with the cost of completing or correcting such items of the Work, as provided for under Article 15.

ARTICLE 13 - TESTING AND INSPECTION; DEFECTIVE WORK

Notice of Defective or Non-Compliant Work:

13.1 Although OAR, ARCHITECT, or the Project Inspector have no obligation to discover or search for non-compliant or defective Work, if OAR, ARCHITECT, or the Project Inspector acquire actual knowledge of any non-compliant and/or defective Work, OWNER shall notify and provide CONTRACTOR with a listing that identifies the observed non-compliant items (NCIL) and/or defective Work requiring correction, including any Punch List items from any applicable governing agency for Class "A" or "B" permit work. OWNER shall post all lists of non-compliant items to OWNER's website at http://mo.laschools.org/fis/construction-support/inspection/fs-inspection-docs-2 for CONTRACTOR access and reference. Any or all defective Work may be rejected, corrected and/or accepted in accordance with the terms set forth in Articles 13 and 15.

Access to the Work:

13.2 CONTRACTOR shall provide access at any time to the Work, products, equipment, materials and/or fabrications of the Work, wherever same are stored, fabricated, erected or installed, when directed to do so by OAR, ARCHITECT, the Project Inspector, other OWNER personnel, representatives of testing and inspection agencies and other governmental entities having jurisdiction over the Work. CONTRACTOR shall provide sufficient, safe, proper access to labor and facilities to prepare for and take samples for testing and/or inspection of products, equipment, and materials or fabrications of the Work.

Project Inspector:

13.3 The person employed by OWNER and approved by the Division of the State Architect will be assigned to the Work in accordance with the requirements of Title 24 of the California Code of Regulations.

13.4 All Work shall be under the observation of or with the knowledge of the Project Inspector. The Project Inspector shall have free access to any and all parts of the Work at any time. CONTRACTOR shall furnish the Project Inspector such information and facilities as may be necessary to keep the Project Inspector fully informed regarding progress, manner of Work and character of materials. Such observations shall not, in any way, relieve CONTRACTOR from responsibility for full compliance with all terms and conditions of the Contract Documents or be construed to lessen to any degree CONTRACTOR responsibility for providing efficient and capable superintendence of the Work. The Project Inspector is not authorized to make changes in the Contract Documents, including, without limitation, the Drawings or Specifications nor shall the Project Inspector's inspection of the Work and methods relieve the CONTRACTOR of responsibility for the correction of subsequently discovered defects, or from its obligation to exactly comply with the Contract Documents. To the extent

CONTRACTOR believes the Project Inspector is requiring any such change, CONTRACTOR shall immediately provide written notice to OAR. The Project Inspector review of percentage of the Work completed for the purpose of progress payments are stated for facilitating cash flow only and shall not constitute acceptance of the Work, in whole or in part, shall not be binding upon OWNER in any way, and shall not be used as evidence of the actual percentage of the Work completed as per the requirements of the Contract Documents. The Project Inspector shall prepare all Project NCIL and Punch Lists relative to Partial Use or Occupancy, Substantial Completion, Administrative Closeout, and/or Contract Completion.

Testing, Inspection and Observation of the Work:

13.5 Tests, inspections, observations, and approvals of any portion of the Work required by the Contract Documents will comply with Title 24, and with all other laws, ordinances, rules, regulations, or orders of public authorities having jurisdiction.

13.6 Tests, inspections, observations, and approvals conducted pursuant to the Contract Documents shall not serve as a basis for any CONTRACTOR dispute based on, but not limited to, Adverse Impacts.

13.7 CONTRACTOR shall provide a minimum of 48 hours advance notice to the Project Inspector by submitting a correctly completed Inspection Request form identifying Work, including Off-Site Work, that is ready to be inspected, tested, observed and/or verified as compliant with the DSA approved construction documents in order for the Project Inspector to observe such test or to perform or arrange performance thereof. When any Off-Site Work is ready to be inspected, tested, observed and/or verified as compliant with the DSA approved construction documents and participation of a public authority having jurisdiction over the Off-Site Work is required, or the Off-Site Work is outside a sixty (60) mile radius of Project Site, CONTRACTOR shall provide a minimum of 96 hours advance notice to the Project Inspector. CONTRACTOR is responsible for providing notice to any public authority having jurisdiction over the Off-Site Work. CONTRACTOR shall fully cooperate with all testing and inspection personnel in the performance of their duties and responsibilities.

13.8 CONTRACTOR shall provide a minimum of 96 hours advance notice to the Project Inspector by submitting a correctly completed Inspection Request form identifying the supply, manufacture and/or fabrication of material to be supplied which must, by terms of the Contract Documents, be tested, observed, and/or inspected at the source of supply, fabrication, or manufacture.

13.9 If the Contract Documents require observation, inspection, testing, or approval of Work to be performed outside normal hours of Work, the costs thereof shall be borne by OWNER. If CONTRACTOR elects to perform Work outside normal hours of Work, the costs of any required observation, inspection, testing, or approvals performed outside normal hours of Work shall be borne by CONTRACTOR with such costs of observation, inspection, testing, and approval being assessed against Contract funds or CONTRACTOR. CONTRACTOR shall provide a minimum of 48 hours advance notice to the Project Inspector if CONTRACTOR elects to perform Work outside normal hours of Work.

13.10 If the Project Inspector, ARCHITECT, or any other public authority having jurisdiction over the Work, require or consider it necessary to perform additional observation, testing, inspection and/or approval, the Project Inspector or ARCHITECT shall, upon receipt of OAR directive, arrange for such additional observation, testing, inspection, or approval with the costs thereof being borne by OWNER, except for costs as set forth in Articles 13.11, 13.14, and 13.16 or as otherwise noted in the Contract Documents.

13.11 If initial observations, tests, inspections or approvals do not pass or receive approvals, CONTRACTOR shall be responsible for all costs including, but not limited to, the costs of additional observations, tests, inspections or approval additional professional services and consultants provided by OWNER with the costs of such observation, tests, inspections and approval being assessed against Contract funds or CONTRACTOR.

13.12 CONTRACTOR shall not incorporate any material, product, assembly, or fabrication requiring observation, testing, inspection and/or approval into the Work until such test results, observation or inspection reports denoting compliance with applicable provisions of the Contract Documents are provided to CONTRACTOR.

13.13 If observations, tests, inspections, or approvals do not pass or receive approval, CONTRACTOR shall be responsible for all delays in the Milestones and/or Contract Time as set forth in Article 12.1.3.

OWNER Consultants:

13.14 If required by the terms and conditions of the Contract Documents, OWNER will furnish at OWNER expense, professional consultants such as, but not limited to, geotechnical engineers or other consultants who shall provide observations, tests, inspections and approvals identified in the Contract Documents as being responsibility of OWNER except:

13.14.1 when such services and expenses thereof are stipulated by the Contract Documents to be provided by CONTRACTOR;

13.14.2 when an observed, tested, inspected or approved material, product, fabrication or assembly fails to meet the requirements of the Contract Documents;

13.14.3 when the source or supplier of material is changed after original observation, test or inspection has been approved or passed;

13.14.4 when, upon examination of ARCHITECT, any material, product, fabrication or assembly appears to be inferior to and/or different from the originally observed, tested, inspected or approved material, product, fabrication or assembly;

13.14.5 for travel and incidental costs related to specified observations, testing, inspection and approval Work associated with CONTRACTOR-provided materials, products, fabrications or assemblies that are outside a sixty (60) mile radius of Project Site.

13.15 OWNER Consultant shall report results of all observations and tests noting if tested and/or observed materials passed or failed such tests and shall furnish copies to the Project Inspector, ARCHITECT, OAR, DSA, CONTRACTOR and others as required. In the case of geotechnical engineers the report shall state such observations and tests were conducted under the responsible charge of a licensed State of California civil engineer and the material was tested in accordance with applicable provisions of the Contract Documents, Title 24, CCR and the DSA. Upon completion of the Work, testing laboratory shall submit electronically a verified report to the DSA as required by Title 24, CCR, and as described in the DSA Procedure for the Construction Oversight Process.

Testing Laboratories and Test Reports:

13.16 If required by the terms and conditions of the Contract Documents, OWNER will furnish at OWNER expense professional services of an independent approved testing laboratory to conduct required tests and inspections identified in the Contract Documents as being responsibility of OWNER except:

13.16.1 when such services and expenses thereof are stipulated by the Contract Documents to be provided by CONTRACTOR;

13.16.2 when a tested and/or inspected material, product, fabrication or assembly fails to meet the requirements of the Contract Documents;

13.16.3 when the source or supplier of material is changed after original observation, test or inspection has been approved or passed;

13.16.4 when, upon examination of ARCHITECT, any material, product, fabrication or assembly appears to be inferior to and/or different from the originally observed, tested, inspected or approved material, product, fabrication or assembly;

13.16.5 for travel and incidental costs related to specified observations, testing, inspection and approval Work associated with CONTRACTOR-provided materials, products, fabrications or assemblies that are outside a sixty (60) mile radius of Project Site.

13.17 Independent testing laboratory shall report results of all tests noting if inspection and/or tested material passed or failed such tests and shall furnish copies to the Project Inspector, ARCHITECT, OAR, DSA, CONTRACTOR and others as required. Report shall state tests were conducted under the responsible charge of a licensed State of California civil engineer and the material was tested in accordance with applicable provisions of the Contract Documents, Title 24, CCR, and the DSA. Upon completion of the Work, testing laboratory shall submit electronically a verified report to the DSA as required by Title 24, CCR, and as described in the DSA Procedure for the Construction Oversight Process.

Uncovering the Work:

13.18 If any portion of the Work is covered prior to any required observation, inspection, testing or approval it shall, upon notice to CONTRACTOR by the Project Inspector or OAR, be uncovered for observation, inspection, testing or approval with the costs of uncovering and replacement thereof being borne by CONTRACTOR. CONTRACTOR shall erect and maintain reasonable safeguards for the safety and protection of the uncovered work.

13.19 If ARCHITECT, OAR, or Project Inspector deems it necessary to uncover any portion of the Work for additional observation, inspection, testing or approval, CONTRACTOR shall, upon receipt of OAR Construction Directive, proceed with furnishing such labor, material and equipment to uncover such portion of the Work and shall proceed as follows:

13.19.1 if uncovered Work is deemed to be defective, CONTRACTOR shall proceed in accordance with, but not limited to, Articles 13.20 through 13.23;

13.19.2 if uncovered Work is deemed to be in complete accordance with the Contract Documents,

CONTRACTOR may be allowed an adjustment in the Contract Amount for those specific costs directly related to the costs of uncovering, repair and replacement of Work, and OAR may adjust the Milestones and/or Contract Time;

13.19.3 however, if CONTRACTOR believes a Construction Directive establishes a basis for an adjustment in the Contract Amount, Milestones and/or Contract Time, CONTRACTOR shall, pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal within ten (10) days of the date of issuance of the Construction Directive.

Remedying Defective Work:

13.20 Any Work, materials, equipment or other items, which do not conform to the requirements, standards or approvals as set forth in the Contract Documents may be deemed defective by OWNER, in which case, they shall be removed and replaced by CONTRACTOR upon notice from OWNER.

13.21 CONTRACTOR shall, upon receipt of OAR notice, promptly correct any portion of the Work deemed defective, whether observed before or after completion and whether or not fabricated, installed, or completed. CONTRACTOR shall be responsible for all delays to the Milestones and/or Contract Time, costs of correcting defective Work, including the Work of others, including, but not limited to, additional professional services and consultants provided by OWNER with the costs of such observations, tests, inspections, and approvals being assessed against Contract funds or CONTRACTOR.

13.22 CONTRACTOR shall remove from the Project Site all portions of defective Work not corrected by CONTRACTOR or not accepted by OAR.

13.23 If CONTRACTOR fails to remedy any defective Work, OAR may proceed as set forth in Article 15.3.

Correction Period for the Work:

13.24 If, within one (1) year after the date of Substantial Completion or such longer periods of time prescribed by any special guarantees or warranties established under the Contract Documents and/or by any specific provisions of the Contract Documents, any Work is found to be defective, CONTRACTOR shall, in accordance with OWNER written notice and directives, correct defective Work; or replace defective Work with Work which is not defective; and correct and/or replace damage to other Work resulting from correction and/or replacement of defective Work. During the prescribed correction period, CONTRACTOR shall remedy any defective Work within forty-five (45) days of receipt of OWNER's written notice unless such notice requests more immediate corrective action due to a potential health or safety issue posed by the defective Work.

13.25 In the event OAR accepts a particular item of equipment and places it into continuous service prior to Substantial Completion of the Work, the correction period and the warranty period for such item may commence from such date of OAR acceptance if such acceptance is provided for in Article 14.13.

13.26 Where such defective Work has been corrected and/or replaced pursuant to Article 13.24, the correction and warranty period for such corrected and/or replaced Work shall be extended an additional term equal to the original correction and warranty period for the Work or such longer period of time prescribed by any special guarantees or warranties.

13.27 Nothing contained in Articles 13.24, 13.25, and 13.26 shall be construed to establish a period of limitation with respect to CONTRACTOR obligations under the Contract Documents. Establishment of the one (1) year time period only relates to the specific obligation of CONTRACTOR to correct defective Work and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, or to the time within which proceedings may be commenced to establish CONTRACTOR liability with respect to CONTRACTOR obligations other than to correct any defective portion of the Work.

OWNER Acceptance of Non-Compliant Work:

13.28 Prior to Contract Completion, OWNER may, in lieu of requiring correction and/or replacement of non-compliant Work and where code, statute, ordinance or law does not require such correction, prefer to accept the non-compliant Work and may do so. CONTRACTOR shall pay all claims, costs, professional services, tests, inspections, losses, and damages incurred by OWNER in the evaluation of and determination of the acceptability of such non-compliant Work. In addition, the OAR may issue a Construction Directive and CONTRACTOR shall provide OWNER with a credit (deductive) Change Order Proposal for accepting such non-compliant Work. When changes in Contract scope (as opposed to quality issues) are being accepted, the provisions of Article 10 shall apply.

ARTICLE 14 - CONTRACTOR PAYMENTS AND COMPLETION

Schedule of Values:

14.1 The Schedule of Values, as established in Article 2.5.2, shall serve as the basis for progress payments and shall be incorporated into a certified Application for Payment form available from OWNER.

Application for Payment:

14.2 On or before the fifth (5th) day of each calendar month following the month for which payment is being requested, but not more than once a month, CONTRACTOR shall submit to OAR an itemized Application for Payment for Work completed during the preceding month in accordance with the Contract Documents. Such application shall be certified by CONTRACTOR under penalty of perjury and shall be supported by the following or such portion thereof as OAR requires:

14.2.1 the amount paid to the date of the application to CONTRACTOR, to all its Subcontractors, and all others furnishing labor, material, or equipment;

14.2.2 certified payroll records submitted in electronic format as specified by OWNER and hard copy directly to Labor Compliance Program, as per Article 6.48, for the prior Application for Payment period in addition to District OCIP forms;

14.2.3 a certification the Project record documents are current;

14.2.4 the approved Change Orders to the Contract Amount, Milestones and/or Contract Time;

14.2.5 in accordance with Article 14.7, a summary of the retention withheld;

14.2.6 material invoices, evidence of equipment purchases, rentals, and other supporting documentation and details of cost as OAR may require from time to time;

14.2.7 the percentage of completion of the Work by line item referenced to the certified Schedule of Values, and construction schedule updates;

14.2.8 a statement showing all payments made by CONTRACTOR for labor and materials on account of the Work covered in the preceding certified Application for Payment;

14.2.9 prior to CONTRACTOR receipt of any payment for monies due, as a result of a percentage of the Work completed, it shall furnish OAR with a summary which must show payments to be made to Subcontractors and all others furnishing labor, material, and equipment covered by the payment application.

14.3 If CONTRACTOR fails to comply with any one of the certified Application for Payment requirements as set forth in Article 14.2, OWNER has no obligation whatsoever to make any payment. Each of the Article 14.2 requirements, as well as performing the Work as per the Contract, shall be conditions precedent to the maturing of OWNER obligation to make payment.

14.4 In accordance with Section 22300 of the Public Contract Code, and at CONTRACTOR sole cost and expense, OWNER will also permit the substitution of securities in lieu of retention withheld by OWNER to ensure performance under the Contract. At the request and expense of CONTRACTOR, securities equivalent to the amount otherwise to be withheld under the Contract shall be deposited with OWNER, or with a state or federally chartered bank as the escrow agent. If the securities are so deposited, then retention on progress payments will not be withheld. In accordance with the provisions of the Contract the securities shall be returned to CONTRACTOR. Securities eligible for investment under Section 22300 shall include those listed in Government Code §16430, bank or savings and loan certificates of deposit, interest-bearing, demand-deposit accounts, standby letters of credit, or any other security mutually agreed to by CONTRACTOR and OWNER. CONTRACTOR shall be the beneficial owner of any securities substituted for monies withheld and shall receive an interest thereon. The escrow agreement used for the purposes of this Article 14.4 shall be substantially similar to the form set forth in Public Contract Code § 22300. The escrow agreement shall provide "in the event OWNER declares a material breach of the Contract and gives notice thereof in writing to CONTRACTOR and the escrow agent, the escrow agent shall immediately release to OWNER funds and/or securities in an amount necessary to permit OWNER to correct defective Work and/or complete the Work."

14.5 CONTRACTOR is required to order, obtain, and store materials and equipment sufficiently in advance of the Work at no additional cost or advance payment from OWNER, and assure there will be no delays to the progress of the Work. OWNER may pay for stored material only when OAR specifically approves the payment in writing. If payments are to be made on account for materials and equipment not incorporated in the Work, but delivered and suitably stored at the Project Site or at some other location agreed to in writing by OAR, the certified Application for Payment shall be accompanied by a bill of sale, invoice or other documentation warranting OWNER has received the materials and equipment free and clear of all liens and encumbrances and the materials and equipment are covered by appropriate insurance and/or other arrangements to protect OWNER interests therein, including, without limitation, transportation to the Project Site. All stored items shall be stored, inventoried, and if applicable, specified by identification numbers, otherwise all risk of loss remains with CONTRACTOR.

CONTRACTOR Warranty of Title:

14.6 CONTRACTOR warrants and guarantees title to all Work, materials, and equipment covered by any certified Application for Payment, whether incorporated into the Work or not, will pass to OWNER no later than the time of payment free and clear of stop payment notices and any and all encumbrances. CONTRACTOR further warrants upon submittal of a certified Application for Payment all Work for which a certified Application for Payment has been previously issued and payments received from OWNER shall, to the best of CONTRACTOR knowledge, information, and belief, be free and clear of stop payment notices and any and all encumbrances in favor of CONTRACTOR, Subcontractors, material and equipment suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work. Nothing set forth in this Article shall be construed to commence any warranty period for materials, equipment, systems, etc. incorporated into the Work. OWNER expressly reserves the right to reject any or all of the Work not in compliance with the Contract Documents at any time before Contract Completion.

Review of Payment Applications:

14.7 If the certified Application for Payment is undisputed and properly submitted as per Articles 14.2 and 14.3, payment, less five percent (5%) retention, any OWNER assessments and withholds will be made within thirty (30) days from receipt.

14.7.1 If the certified Application for Payment is not properly submitted and/or is otherwise disputed the OAR will return it with a written statement setting forth the reason why the payment request is not proper.

14.7.2 If the payment request is properly submitted, and only a portion thereof is disputed, OWNER may pay the undisputed portion thereof and refuse to pay the disputed portion thereof until the dispute is resolved.

14.7.3 If CONTRACTOR disputes any OWNER assessment, then CONTRACTOR shall give written notice as set forth in Article 16.

14.8 Individual Change Orders exceeding $500,000 require an audit by OWNER. Following approval of the Change Order and completion and acceptance of the Change Order Work, OWNER shall pay CONTRACTOR up to 80% of the value of the Change Order pending completion of the audit. Payment of the remaining amount, reflecting any adjustments as required by OWNER's audit, will be made upon completion of the audit.

14.9 OAR may refuse to make payments in whole or part because of:

14.9.1 defective Work not remedied or completed Work has been damaged requiring correction;

14.9.2 Contract Amount having been reduced by Change Order;

14.9.3 OWNER has been required to correct defective Work and/or to complete Work in accordance with Articles 13.23 and/or 15.3;

14.9.4 stop payment notices filed;

14.9.5 Liquidated Damages owed by CONTRACTOR;

14.9.6 reasonable OAR doubt the Work can be completed for the unpaid balance of any Contract Amount and/or within the Milestones and/or Contract Time;

14.9.7 damage to OWNER and/or Separate Contract Work;

14.9.8 failure to store and/or properly secure materials;

14.9.9 failure of CONTRACTOR to submit on a timely basis, proper and sufficient documentation required by the Contract Documents, including, without limitation, Shop Drawings, submittal schedules, construction schedules, Product Data and Samples, proposed material lists, and/or verified reports;

14.9.10 failure of CONTRACTOR to maintain current and accurate Project record documents;

14.9.11 erroneous estimates by CONTRACTOR of the value of the Work performed and/or other erroneous data in a certified Application for Payment;

14.9.12 unauthorized deviations from the Contract Documents including, without limitation, CONTRACTOR failure to correct notices of defective Work, NCILs, and/or safety orders;

14.9.13 failure of CONTRACTOR and/or its eligible Subcontractors to comply and remain in compliance with the OCIP program;

14.9.14 other items entitling OWNER to a partial and/or full withholding of the recommended amounts;

14.9.15 OWNER exercising any of its rights as set forth in Articles 15.3;

14.9.16 OWNER assessed other costs, expenses and/or damages as permitted by the Contract;

14.9.17 OWNER assessed penalties as permitted by law;

14.9.18 failure of CONTRACTOR to comply with Certified Payroll Records, as required per Article 6.48.

14.9.19 failure to defend, indemnify or hold harmless the OWNER, members of OWNER's Board of Education, OAR, OCIP Administrator, ARCHITECT, OWNER consultants, Project Inspector or State of California, and each of their respective agents, employees, representatives, officers and directors, as required by Article 6.53.

No interest or penalties shall be paid on any retention or amounts withheld due to the failure of CONTRACTOR to perform in full accordance with the terms and conditions of the Contract Documents.

Payment Not Constituting Approval or Acceptance:

14.10 An approved certified Application for Payment, a progress payment, or partial or entire use or occupancy of the Work by the OWNER shall not constitute acceptance of Work not in accordance with the Contract Documents.

Interest:

14.11 If payment is not made within thirty (30) days of receipt of an undisputed and properly submitted certified Application for Payment as set forth in Articles 14.2 and 14.3, then interest shall begin to accrue as of the thirty-first (31st) day until paid at the rate set forth in Code of Civil Procedure Section 685.010 as of the date this Contract was entered into.

Substantial Completion:

14.12 When CONTRACTOR considers the progress of the Work to be at Substantial Completion, CONTRACTOR shall request in writing that OAR inspect the Work and issue a Certificate of Substantial Completion.

14.12.1 CONTRACTOR shall submit to OAR the written request using OWNER form "Request for Certificate of Substantial Completion." In the request, CONTRACTOR shall certify that the progress of the Work is at Substantial Completion and CONTRACTOR shall at that time, submit a list of items that CONTRACTOR believes are corrective in nature. CONTRACTOR shall promptly proceed in correcting items that are on CONTRACTOR submitted list.

14.12.2 Within three (3) days after receipt of the Request for Certificate of Substantial Completion, OAR, ARCHITECT, the Project Inspector authorities having jurisdiction, and CONTRACTOR shall inspect the Work.

14.12.2.1 If, after inspection of the Work, OAR considers the progress of the Work to be at Substantial Completion, the Project Inspector shall prepare and issue to OAR, ARCHITECT and CONTRACTOR a comprehensive Punch List of items to be corrected. OAR shall prepare and deliver to CONTRACTOR a Certificate of Substantial Completion thereby establishing the date of Substantial Completion and the date by which CONTRACTOR shall finish all items on the attached Punch List.

14.12.2.2 If, after inspection of the Work, and within seven (7) days after receipt of the Request for Certificate of Substantial Completion, OAR does not consider the progress of the Work to be at Substantial Completion, OAR will notify CONTRACTOR stating the reasons thereof.

14.12.3 At Substantial Completion, OAR and CONTRACTOR will concur on the division of responsibilities between OWNER and CONTRACTOR with respect to security, maintenance, safety, operation, heat, utilities, damage to the Work, warranties and guarantees. Warranties and guarantees shall commence on the date of Substantial Completion, unless otherwise indicated in the Certificate of Substantial Completion.

14.12.4 CONTRACTOR shall correct all items on the Punch List in the time frame established by the Certificate of Substantial Completion issued by the OAR, within the Administrative Closeout period and in accordance with the Contract. Failure to include an item on the Punch List issued by OWNER does not relieve CONTRACTOR from completing all the Work in accordance with the Contract Documents.

14.13 OWNER shall allow reasonable access to CONTRACTOR to correct items on the Punch List, which may not be granted during normal school hours if such activity interferes with school operations.

Partial Use or Occupancy:

14.14 OWNER may occupy or use any completed or partially completed portion of the Work with such Partial Use or Occupancy not constituting acceptance of the Work or a portion thereof. Upon OWNER election to partially use and/or occupy the Work, OAR shall provide notice to CONTRACTOR. OAR, ARCHITECT and the Project Inspector shall jointly inspect the area to be partially used and/or occupied in order to determine and record the status of completion. The Project Inspector shall prepare and distribute a list of Contract deficiencies to CONTRACTOR, OAR, and ARCHITECT. The Contract deficiencies shall be corrected in the time frame as directed by the OAR. OAR and CONTRACTOR shall also agree in writing to the division of responsibilities pending issuance of a certificate of Substantial Completion regarding security, maintenance, operation, heat, utilities, damage to the Work, warranties, and guarantees.

Final Payment Application:

14.15 Upon certification of Substantial Completion by OAR, CONTRACTOR may make a final Application for Payment. This does not preclude CONTRACTOR from subsequently submitting a payment request for Change Order Work completed prior to, but approved after Substantial Completion. Final Application for Payment shall be accompanied by the same details as set forth in Article 14.2 and the following items shall have been submitted as conditions precedent to final payment:

14.15.1 written preliminary warranties and guarantees, operating permits, applications, occupancy and use permits, and bonds required by the Contract Documents for its portion of the Work;

14.15.2 all manuals and extra materials required by the Contract Documents;

14.15.3 all training and OWNER orientations as specified in the Contract Documents;

14.15.4 CONTRACTOR shall have removed, or caused to be removed, all waste materials and rubbish from and about the Project Site, as well as all tools, construction equipment, machinery, surplus material, scaffolding equipment, temporary facilities, and any other similar materials or equipment of CONTRACTOR or any Subcontractor; except as needed to correct items on the Punch List with approval of the OAR.

Release of Retention

14.16 Within sixty (60) days after certification of Substantial Completion by OAR, the retention shall be paid, except for one-hundred fifty percent (150%) of the value of the Punch List items and/or any

amount which OWNER otherwise has a right or obligation to withhold, in accordance with Public Contract Code Section 7107.

14.17 OAR shall make a determination of all outstanding items required by the Contract as a condition precedent to payment of retention and may withhold monies for all outstanding items considered in dispute as listed in Article 14.17 and including the following items:

14.17.1 Outstanding corrections to the Work which are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and/or ordinances including but not limited to the filing of a DSA final verified report, or to fulfill any of the orders or directives of OAR required under the Contract;

14.17.2 CONTRACTOR shall have delivered to OAR legible and reproducible final Project record documents, including the "As-Built" Drawings, with CONTRACTOR certification of the accuracy of the Project record documents, all guarantees and warranties, bonds, operation and maintenance instructions for equipment, products, apparatus.

Contract Completion and Release of Withholds:

14.18 CONTRACTOR is precluded from performing Punch List corrections and/or document submittal after the Contract Time has expired unless OWNER elects to extend the Administrative Closeout duration. This authorization is solely issued as an accommodation and convenience for CONTRACTOR to complete remaining Punch List items and/or document submittals, and shall be non-compensable and shall not be deemed to extend the Contract Time. CONTRACTOR will be assessed actual cost for the items the CONTRACTOR was precluded from completing. Withhold amounts exceeding actual costs to correct or to obtain deliverables will be released.

14.19 OWNER shall have the right, if deemed necessary in its sole discretion, to issue joint checks made payable to CONTRACTOR and any Subcontractor(s), of any tier. The joint check payees shall be solely responsible for the allocation and disbursement of funds included as part of any such joint payment. Endorsement on such check by a payee shall be conclusively presumed to constitute receipt of payment by such payee. In no event shall any joint check payment be construed to create (i) any contract between OWNER and a Subcontractor, of any tier, (ii) any obligation from OWNER to such Subcontractor, or (iii) any third party rights against OWNER.

ARTICLE 15 – WORK SUSPENSION AND TERMINATION

15.1 ***OWNER Right To Suspend Or Stop Work:***

15.1.1 OWNER may, with or without cause and without invalidating or terminating the Contract, at any time and from time to time, order CONTRACTOR, in writing, to suspend, delay or interrupt performance of the Work, in whole or in part, for such period of time as the OWNER may determine or, if no time frame is provided, until OWNER directs resumption of the suspended Work or any part thereof. Upon receipt of such Construction Directive, CONTRACTOR shall comply with its terms and take all reasonable steps to minimize costs allocable to the Work covered or impacted by the Construction Directive during the period of Work stoppage.

15.1.2 If a Construction Directive issued by OWNER is canceled or expired, in whole or in part, CONTRACTOR shall resume and continue with the Work. Within ten (10) days of the

cancellation or expiration of a suspension directive, CONTRACTOR, if it believes it is entitled to an adjustment to the Contract Amount or Contract Time shall pursuant to Articles 10.7 through 10.17, submit a Change Order Proposal. Any adjustment in Contract Amount as a result of an adjustment to the Contract Time shall be limited to the amount set forth in Article 11.12; provided however that no adjustment of the Contract Amount shall be made to the extent (1) performance of the Work is, was or would have been so suspended, delayed or interrupted by another cause for which CONTRACTOR or any Subcontractor is responsible or for which CONTRACTOR would not be entitled to an adjustment of the Contract Amount or Contract Time under the Contract Documents or (2) to the extent that either an adjustment to the Contract Amount or Time is made or denied under another provision of the Contract Documents.

15.1.3 In addition to the OWNER's right to suspend the Work or terminate the Contract pursuant to the Contract Documents, the OWNER may, by written order, direct the CONTRACTOR to stop the Work, or any portion thereof, until the cause for such stop work order has been eliminated, if the CONTRACTOR: (i) fails to correct Work which is not in conformity and in accordance with the requirements of the Contract Documents, or (ii) otherwise fails to carry out the Work in conformity and accordance with the Contract Documents. The right of the OWNER to stop the Work hereunder shall not be deemed a duty on the part of the OWNER to exercise such right for the benefit of the CONTRACTOR or any other person or entity, nor shall the OWNER's exercise of such right waive or limit the exercise of any other right or remedy of the OWNER under the Contract Documents or at law.

15.2 ***OWNER Termination For Convenience:***

The OWNER may at any time, in its sole and exclusive discretion, by written notice to the CONTRACTOR, terminate the Contract in whole or in part for the convenience of the OWNER ("Termination for Convenience"). CONTRACTOR's sole and exclusive compensation in the event of a Termination for Convenience shall be payment for: (i) Work actually performed and in place in accordance with the Contract Documents as of the effective date of such Termination for Convenience with a reasonable allowance for profit and overhead on such Work, (ii) reasonable termination expenses for reasonable protection of Work in place and suitable storage and protection of materials and equipment delivered to the Site of the Work but not yet incorporated into the Work, provided that such payments exclusive of termination expenses shall not exceed the total Contract Price as reduced by payments previously made to the CONTRACTOR and as further reduced by the value of the Work as not yet completed and (iii) other direct costs for material and equipment which CONTRACTOR has already incurred as of the date of termination provided CONTRACTOR incurred such expense as authorized by the Contract Documents. The CONTRACTOR shall not be entitled to profit and overhead on Work which was not performed as of the effective date of the Termination for Convenience by the OWNER or for any other damages, direct or indirect, including loss of revenue, lost opportunity, or other consequential or incidental damages of any kind which CONTRACTOR or anyone claiming through CONTRACTOR alleges (including all Subcontractors of any tier) resulting from the OWNER's election to terminate under this Article or where a termination for cause under Article 15.3 has been converted to a Termination for Convenience under Article 15.3.8. The OWNER may, in its sole discretion, elect to have Subcontracts assigned pursuant to Article 15.3.4 after exercising the right hereunder to Terminate for Convenience. CONTRACTOR shall deliver to OWNER all partial drawings, warranties or other contractual requirements which would be required to be furnished to OWNER upon Contract Completion.

15.3 ***OWNER Termination For Cause:***

15.3.1 OWNER may terminate the Contract and/or the CONTRACTOR's performance of the Contract, upon the occurrence of any one or more of the following events or actions or inactions of CONTRACTOR: (1) fails to correct or remedy any defective Work; (2) refuses, fails or neglects to supply a sufficiency of material, labor or equipment; (3) refuses, fails or neglects to prosecute the Work with diligence as will insure Substantial Completion of the Work within the Contract Time; (4) fails to promptly pay Subcontractors; (5) fails to keep in full force and effect the payment and performance bonds required by law and/or the Contract; (6) fails to comply with a Construction Directive or direction by the OAR to correct noncompliant Work; (7) fails to keep to the Construction Schedule; (8) fails to enroll and remain enrolled in the OCIP; (9) fails to correct and complete Punch List Work including required documents; (10) fails to adhere and comply with any provision of the Contract Documents including safety requirements; (11) if CONTRACTOR's prequalification status has been revoked or cancelled; (12) CONTRACTOR is adjudged a bankrupt or makes a general assignment for the benefit of creditors or a receiver is appointed on account of CONTRACTOR's insolvency; (13) if CONTRACTOR disregards laws, ordinances, rules, codes, regulations, or orders applicable to the Work or similar requirements of any public entity having jurisdiction over the Work; or (14) if the CONTRACTOR otherwise violates in any material way any provisions or requirements of the Contract Documents.

15.3.2 If OWNER determines that any of the events set forth in Article 15.3.1 have occurred, the OWNER may declare a default and shall provide CONTRACTOR and its Surety written notice of the event(s) giving rise to the default and provide CONTRACTOR and its Surety five (5) days from CONTRACTOR or Surety's receipt of such written notice, whichever occurs first, to correct and/or commence correcting the events giving rise to default to OWNER's satisfaction. Should CONTRACTOR or its Surety fail to commence correction within the five (5) days, and/or fail to commence to correct such events of default in a diligent manner to OWNER's satisfaction, OWNER may, without limitation to OWNER's other rights or remedies under the Contract Documents, terminate the Contract and/or CONTRACTOR's performance of the Contract as set forth in Article 15.3.1 and the OWNER may take over the Work and prosecute it to completion, by contract or otherwise, and may exclude the CONTRACTOR from the Site. OWNER may take possession of the Work and of all of the CONTRACTOR's tools, appliances, construction equipment, machinery, materials, and plant which may be on the Site of the Work, and use the same to the full extent they could be used by the CONTRACTOR without liability to the CONTRACTOR. In exercising OWNER's right to prosecute the completion of the Work, OWNER may also take possession of all materials and equipment stored at the Site of the Work or for which OWNER has paid the CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER deems expedient. In exercising OWNER's right to prosecute the completion of the Work, OWNER shall have the right to exercise its sole discretion as to the manner, methods, and reasonableness of the costs of completing the Work and OWNER shall not be required to obtain the lowest figure for completion of the Work. In the event that OWNER takes bids for remedial Work or completion of the Work, the CONTRACTOR shall not be eligible for the award of such contract(s).

15.3.3 In the event that the Contract or the CONTRACTOR's performance of the Contract is terminated pursuant to Article 15.3.1, OWNER may also demand that the Surety take over and complete the Work. OWNER may require that in so doing, the Surety not utilize the CONTRACTOR in performing and completing the Work. Upon the failure or refusal of the

Surety to take over and begin completion of the Work within ten (10) days after demand therefor, OWNER may take over the Work and prosecute it to completion as provided for in Article 15.3.2.

15.3.4 OWNER shall, in its sole and exclusive discretion, have the option of requiring any Subcontractor or Material Supplier to perform in accordance with its subcontract or purchase order with the CONTRACTOR and assign the subcontract or purchase order to OWNER or such other person or entity selected by OWNER to complete the Work.

15.3.5 In the event of termination under Article 15.3.1, the CONTRACTOR shall not be entitled to receive any further payment of the Contract Amount until the Work is completed. If the unpaid balance of the Contract Amount as of the date of termination exceeds OWNER's direct and indirect costs and expenses for completing the Work, including without limitation, attorneys' fees and compensation for additional professional and consultant services, such excess shall be used to pay the CONTRACTOR for the Cost of the Work performed prior to the effective date of termination with a reasonable allowance for overhead and profit. If OWNER's costs and expenses to complete the Work exceed the unpaid Contract Amount, the CONTRACTOR and/or the Surety shall pay the difference to OWNER.

15.3.6 The CONTRACTOR and the Surety shall be liable for all damage sustained by OWNER resulting from, in any manner, the termination of the Contract or CONTRACTOR's performance of the Contract under Article 15.3.1, including without limitation, attorneys' fees, and for all costs necessary for repair and completion of the Work over and beyond the Contract Amount.

15.3.7 If OWNER terminates the Contract or CONTRACTOR's performance of the Contract under Article 15.3.1 because an event of default under Article 15.3.1 has occurred, and OWNER later learns that another event or events of default under Article 15.3.1 existed at the time notice was provided to CONTRACTOR and Surety but that OWNER was unaware of such event(s) but CONTRACTOR was or should have been aware of such event(s), then such event(s) shall have been considered to have been included in the notice provided to CONTRACTOR and Surety under Article 15.3.2 and their opportunity to cure shall be considered to have been waived by CONTRACTOR's and Surety's failure to cure the enumerated event(s) of default contained in the notice.

15.3.8 In the event the Contract or CONTRACTOR's performance of the Contract is terminated under Article 15.3.1, and it is finally determined by an arbitrator, court, jury or other tribunal having jurisdiction, for any reason, that the CONTRACTOR was not in default under the provisions hereof, or that OWNER's exercise of its rights under Article 15.3.1 was defective, deficient, ineffective, invalid or improper for any reason, the termination shall be deemed a Termination for Convenience by OWNER and thereupon, the rights and obligations of OWNER and the CONTRACTOR shall be determined in accordance with Article 15.2 hereof.

15.3.9 In the event the Contract or CONTRACTOR's performance of the Contract is terminated pursuant to Article 15.2 or 15.3, the termination shall not affect or limit any rights or remedies of OWNER against the CONTRACTOR or the Surety. The rights and remedies of OWNER under Article 15.2 or 15.3 are in addition to, and not in lieu of, any other rights and remedies provided by law or otherwise under the Contract Documents. Any retention or

payment of monies to the CONTRACTOR by OWNER shall not be deemed to release the CONTRACTOR or the Surety from any liability hereunder.

ARTICLE 16 – CLAIM RESOLUTION

16.1 ***Public Contract Code section 9204.*** This Article 16 is intended to comply with the provisions of Public Contract Code section 9204 pertaining to claim resolution.

16.2 ***What is a Claim?***

The term "Claim" means a written demand by CONTRACTOR sent by registered mail or certified mail with return receipt requested for one or more of the following:

(1) An extension of the Contract Time, including relief from damages or penalties assessed by OWNER for delay;

(2) Payment by OWNER of money or damages arising from work done by, or on behalf of, CONTRACTOR pursuant to the Contract and payment that is not otherwise expressly provided for in the Contract Documents or to which CONTRACTOR is not otherwise entitled;

(3) Payment of an amount that is disputed by OWNER.

16.3 ***What is not a Claim?***

16.3.1 The term "Claim" does not include, and the Claims procedures provided under this Article 16 do not apply to, the following:

16.3.1.1 Penalties, forfeitures or other remedies prescribed by statute or regulation which a government agency is specifically authorized to administer, settle, or determine, including revocation of pre-qualification status, barring a bidder from OWNER contracts; however, penalties sought against a public agency pursuant to statute, such as Public Contract Code sections 7107 or 20104.50, are considered Claims.

16.3.1.2 Personal injury, death, reimbursement, or other demands for compensation arising out of or resulting from liability for personal injury or death.

16.3.1.3 The OWNER's determination of whether the Work complies with the Contract Documents, or concerning a latent defect, breach of warranty, or guarantee to repair.

16.3.1.4 Stop payment notices.

16.3.1.5 OWNER's rights under the Contract Documents including, but not limited to, Articles 12 and 15.

16.3.1.6 Disputes arising out of or pertaining to the LCP or PSA.

16.3.1.7 An OCIP insurance claim or dispute with an OCIP Insurer.

16.4 ***When does a Claim arise?***

A Claim arises upon the issuance of a written decision by the OAR denying in whole or in part CONTRACTOR's Change Order Proposal.

16.5 ***Where must the Claim be submitted?***

16.5.1 CONTRACTOR must submit the Claim to the OWNER's Construction Claims Unit ("CCU") located at 333 S. Beaudry Avenue, 23rd Floor, Los Angeles, California, 90017. CONTRACTOR must also submit a copy of the Claim to the OAR.

16.6 ***When must the Claim be submitted?***

CONTRACTOR must submit a Claim in writing, together with all supporting data specified in Article 16.7.1, no later than the earlier of either: (1) thirty (30) days after the date the Claim arises under Article 16.4; or (2) sixty (60) days after the date of Substantial Completion. It is the intent of OWNER to evaluate and resolve Claims with CONTRACTOR as close to the events giving rise to such Claims as possible and to avoid stale or late Claims, including late notice and documenting of Claims, and to timely mitigate the issue, event, condition, circumstance and/or cause of the Claim and any Adverse Impacts or damages related thereto. Should CONTRACTOR fail to submit a Claim by the deadline set forth in this Article, CONTRACTOR waives and releases such Claim, including all rights and remedies in connection therewith.

16.7 ***What must the Claim include?***

16.7.1 A Claim must include the following:

16.7.1.1 A statement identifying it as a Claim signed by an authorized agent or officer of CONTRACTOR under penalty of perjury and including the following language immediately above or before CONTRACTOR's signature: "I declare under penalty of perjury under the laws of the State of California that the information provided and statements made in this Claim are true and correct, substantiated and of merit." CONTRACTOR recognizes and acknowledges that this requirement is not a mere formality but is intended to ensure that CONTRACTOR only submits Claims that it believes are true and correct, substantiated and have merit. Should CONTRACTOR fail to submit the foregoing written statement signed under penalty of perjury, CONTRACTOR waives and releases its Claim, including all rights and remedies in connection therewith.

16.7.1.2 A detailed description of the act, error, omission, unforeseen condition, event or other condition giving rise to the Claim.

16.7.1.3 A statement demonstrating that the Claim was timely submitted as required by Article 16.6. If the Claim arises from the issuance by OWNER of a Construction Directive, a statement demonstrating that a Change Order Proposal was timely submitted.

16.7.1.4 A detailed justification for any remedy or relief sought by the Claim, including to the extent applicable, the following:

16.7.1.4.1 If the Claim involves extra work, a detailed cost breakdown of the amounts claimed, including the items specified in Article 11 shall be provided by CONTRACTOR. The breakdown must be provided even if the costs claimed have not been incurred when the Claim is submitted. To the extent costs have been incurred when the Claim is submitted, the Claim must include actual cost records (including without limitation, all payroll records (including Subcontractors), material and rental invoices and the like) demonstrating that costs claimed have actually been incurred. To the extent costs have not yet been incurred at the time the Claim is submitted, actual cost records must be submitted on a current basis not less than once a week during any periods costs are incurred. A cost record will be considered current if received by CCU within ten (10) days of the date the cost reflected in the record is incurred. At the request of OWNER, claimed extra costs may be subject to further verification procedures (such as having an inspector verify the performance of alleged extra work on a daily basis).

16.7.1.4.2 If the Claim involves an alleged error or omission in the Contract Documents: (i) an affirmative representation under penalty of perjury by CONTRACTOR and any affected Subcontractors and suppliers that the error or omission was not discovered prior to submitting a bid for the Contract, and (ii) a detailed statement demonstrating that the error or omission reasonably should not have been discovered, by CONTRACTOR, its Subcontractors and/or suppliers, prior to submitting a bid for the Contract.

16.7.1.4.3 If the Claim involves an extension of the Contract Time, written documentation demonstrating CONTRACTOR's entitlement to a time extension under Article 12.1.

16.7.1.4.4 If the Claim involves an adjustment of the Contract Amount for delay, written documentation demonstrating CONTRACTOR's entitlement to such an adjustment under Articles 11 and 12.1.

16.7.1.4.5 Pursuant to Public Contract Code section 9204(d)(5), a Subcontractor may request in writing, either on its own behalf or on behalf of a lower tier Subcontractor, that CONTRACTOR submit to OWNER a Claim for work which was performed by the Subcontractor or by a lower tier Subcontractor on behalf of the Subcontractor. The Subcontractor requesting that the Claim be submitted to OWNER shall furnish reasonable documentation to support the Claim. Regardless of whether or not CONTRACTOR decides to submit the Subcontractor's Claim to OWNER, CONTRACTOR shall provide a copy of the Subcontractor's written request, including all supporting documentation, to the OAR within ten (10) days of CONTRACTOR's receipt of the request. In the event CONTRACTOR agrees to submit a Subcontractor's Claim to OWNER, CONTRACTOR shall submit such Claim as a Change Order Proposal in accordance with Articles 10, 11 and 12, unless

such Claim was previously submitted to OWNER as a Change Order Proposal. Within forty-five (45) days of receipt of the Subcontractor's written request, CONTRACTOR shall notify the Subcontractor in writing as to whether CONTRACTOR submitted the Claim to OWNER and, if CONTRACTOR did not submit the Claim, CONTRACTOR shall provide the Subcontractor with a written statement of the reasons for not having done so and shall concurrently provide a copy of such written statement to the OAR. In the event CONTRACTOR includes supporting documentation with such written statement, CONTRACTOR shall concurrently provide a copy of such supporting documentation to the OAR.

16.7.1.4.6 If CONTRACTOR submits a Claim on behalf of a Subcontractor as set forth in Article 16.7.1.4.5, in addition to the penalty of perjury language required by Article 16.7.1.1, the Claim shall also include a statement in writing and signed by an authorized agent or officer of CONTRACTOR under penalty of perjury that includes the following language immediately above or before CONTRACTOR's signature: "I declare under penalty of perjury under the laws of the State of California that [insert name of CONTRACTOR] has thoroughly evaluated the claim of [insert name of Subcontractor] and determined that the information provided and statements made in the claim are true and correct, substantiated and of merit."

16.8 ***District Review of Claims:***

Upon receipt of a Claim, OWNER shall conduct a reasonable review of the Claim and, within a period not to exceed forty-five (45) days, shall provide CONTRACTOR a written statement identifying what portion of the Claim is disputed and what portion is undisputed. Upon receipt of a Claim, OWNER and CONTRACTOR may, by mutual written agreement, extend the forty-five (45) day time period. OWNER shall process and make payment of any undisputed portion of a Claim within sixty (60) days after OWNER issues its written statement. Failure by OWNER to provide a written statement in response to a Claim from CONTRACTOR within the forty-five (45) day time period, or within an agreed upon extended time period, shall result in the Claim being deemed rejected in its entirety. A Claim that is rejected by reason of OWNER's failure to respond, or failure to timely respond, to the Claim shall not constitute an adverse finding regarding the merits of the Claim or the claimant's responsibility or qualifications.

16.9 ***Meet and Confer:***

If CONTRACTOR disputes OWNER's written response made pursuant to Article 16.8, or if OWNER fails to respond within the time frame prescribed in Article 16.8, CONTRACTOR, within fifteen (15) days of OWNER's written response or if OWNER fails to respond, within fifteen (15) days after OWNER's response was due, may demand in a writing sent to CCU by registered mail or certified mail, return receipt requested, with a copy to the OAR, an informal conference to meet and confer for settlement of the issues in dispute. OWNER shall schedule a meet and confer conference within thirty (30) days of its receipt of CONTRACTOR's written demand.

16.10 ***Mediation:***

Within ten (10) business days following the conclusion of the meet and confer conference, if the Claim or any portion of the Claim remains in dispute, OWNER shall provide CONTRACTOR a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) days after the OWNER issues its written statement. Any disputed portion of the Claim, as identified by CONTRACTOR in writing, shall be submitted to nonbinding mediation administered by the AAA under its construction industry mediation rules. The expenses and fees of the mediator and the administrative fees shall be divided among the parties equally. Each party shall pay its own counsel fees, witness fees, and other expenses. OWNER and CONTRACTOR shall mutually agree to a mediator within ten (10) business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. The foregoing notwithstanding, pursuant to Public Contract Code section 9204(f), the parties may mutually agree in writing to waive mediation.

16.11 ***CONTRACTOR's Obligation to File Government Code Claim (All Claims):***

Nothing in this Contract, including Article 16, waives or modifies CONTRACTOR's obligation to present a timely Claim under Government Code section 910, et seq. Therefore, in addition to complying with the contractual Claims procedures, CONTRACTOR is required to present Claims to OWNER pursuant to Government Code section 910, et seq. If after the requirements of Articles 16.8, 16.9 and 16.10 are satisfied, and all or a portion of the Claim remains unresolved, and if the Government Code Claim is rejected by OWNER, CONTRACTOR may proceed under Article 16.12.

16.12 ***Litigation (All Claims):***

The sole forum for resolution of unresolved Claims shall be in the Superior Court of the State of California in the county in which the Project is located. Each party shall pay its own counsel fees, witness fees, and other expenses in such litigation.

16.12.1 Claims of $375,000 or Less: The provisions of Public Contract Code section 20104.4 shall apply. Pursuant to Public Contract Code section 20104.4(a), within sixty (60) days, but no earlier than thirty (30) days, following the filing of responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. Pursuant to Public Contract Code section 9204(d)(2)(D), a mediation conducted pursuant to Article 16.10 shall excuse the obligation under Public Contract Code section 20104.4(a) to mediate after litigation has been commenced unless otherwise agreed to by the parties in writing.

16.13 ***Waiver:***

A failure by OWNER to enforce any time or other requirement in the Contract Documents, including those in Articles 9, 10, 11, 12 or 16 in connection with any Claim shall not constitute a waiver of, and shall not preclude OWNER from enforcing, such requirements in connection with any Claim.

16.14 ***District Claim Approval:***

CONTRACTOR agrees and understands that any approval, either express or implied, of any Claim shall not be binding upon OWNER unless and until such approval is approved or ratified by execution of a written Change Order approved by the Board of Education or Deputy Chief Procurement Officer under the delegated authority of OWNER's Board of Education or by a Settlement Agreement executed by the Board of Education or Deputy Chief Procurement Officer under the delegated authority of OWNER's Board of Education or a person to whom the OWNER's Board of Education has delegated authority to execute a Settlement Agreement within the dollar amount of the Settlement Agreement which he or she is executing.

16.15 ***No Cessation of Work:***

Notwithstanding the making of any Claim or the existence of any dispute regarding any Claim, unless otherwise directed by OWNER, CONTRACTOR shall not cause any delay, cessation, or termination in or of CONTRACTOR's performance of the Work, but shall diligently proceed with performance of the Work in accordance with the Contract Documents. OWNER will continue to make payments in accordance with the Contract Documents.

16.16 ***Strict Compliance:***

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, and as an express, material condition of OWNER accepting CONTRACTOR's bid for this Contract as responsive, CONTRACTOR agrees that strict compliance with the requirements of Articles 9, 10, 11, 12 and 16 is an express condition precedent to CONTRACTOR's right to prosecute an action in any forum.

16.17 ***No Payment for Claim Preparation Costs:***

CONTRACTOR shall bear all costs, fees and expenses of CONTRACTOR, its Subcontractors and suppliers in preparing and presenting any Claim to OWNER.

ARTICLE 17 – ADDITIONAL PROVISIONS

17.1 ***Governing Law:***

This Contract shall be governed by and interpreted in accordance with the laws of the State of California. The Parties agree that the exclusive venue for any action or proceeding arising from or relating to the Contract or Work shall be in the County of Los Angeles, State of California.

17.2 ***Successors and Assigns:***

OWNER and CONTRACTOR respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract in whole or in part without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

17.3 ***Written Notice:***

In the absence of any other specific notice requirements set forth elsewhere in the Contract Documents, regarding a specific subject matter, notice shall be in writing, dated and personally signed by party giving notice or their duly authorized representative. Mechanical and/or electronically generated signatures are not acceptable under the terms and conditions of this Contract. Notice shall be deemed to be duly served if delivered in person to the individual, member of the firm or entity, or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice. Copies of notice or correspondence shall be distributed amongst the various parties of the Work by the party generating such notice or correspondence.

17.4 ***Communications Facilitating Contract Administration:***

Except as otherwise provided in the Contract Documents or when direct communications are warranted by special circumstances, CONTRACTOR shall communicate to OWNER and OWNER Consultants, through the OAR and then only in writing with copies to all affected and/or mentioned parties. Official communications and notice shall be in writing only. Verbal communications are not official or binding under the Contract. Verbal communication, including directions, cannot be, and shall not be, the basis for: any change in the Contract Amount; Milestones; Contract Time; or any dispute, Claim, action, cause of action or other remedy regarding the Work and/or Contract and/or a breach thereof.

17.5 ***Rights, Remedies, Duties and Obligations Cumulative:***

Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder, shall be in addition to any duties, obligations, rights, and remedies otherwise imposed or available by law.

OWNER's rights and remedies under the Contract Documents and at law are non-exclusive and are cumulative to one another.

17.6 ***Time is of the Essence:***

CONTRACTOR acknowledges that all time deadlines under the Contract are of the essence.

17.7 ***No Waiver:***

No action or failure to act by OWNER, OAR, OWNER Consultant, the Project Inspector, or ARCHITECT, shall constitute a waiver of a right afforded them under the Contract Documents, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed to in writing.

17.8 ***Contract Language Controls:***

Custom and practice, industry standards, past (pre-Project) course of dealings, shall not be used to explain, interpret, supply or contradict the express text of this Contract unless a different intent is expressed in this Contract.

17.9 ***Claims Involving Injury or Damage to Person or Property:***

If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, any of the other party's employees or agents, or others for whose acts such party is legally liable, written notice of such injury or damage, whether or not insured, shall be given to the other party with sufficient detail to enable the other party to investigate the matter.

17.10 ***Computation of Time:***

17.10.1 When any period of time is referred to in the Contract Documents by days and/or calendar days, it will be computed to exclude the first and include the last day of such period;

17.10.2 a day of twenty-four hours measured from midnight to the next midnight will constitute a day and/or calendar day.

17.11 ***Oral Agreements or Modifications:***

No oral conversation, representation or agreement with the OAR and/or any representative of OWNER, OWNER Consultant, ARCHITECT, the Project Inspector or any other employee or agent of OWNER shall affect, or modify any of the terms and conditions contained in any of the documents comprising this Contract.

17.12 ***Unfair Business Practice Claims; Assignment to OWNER:***

Pursuant to Public Contract Code Section 7103.5, in entering into a public works Contract or a subcontract to supply goods, services, or materials pursuant to a public works Contract, CONTRACTOR and/or Subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under section 4 of the Clayton Act (15 U.S.C. sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to CONTRACTOR without further acknowledgement by the parties.

17.13 ***Discrimination:***

It is the policy of OWNER that there be no discrimination against any prospective or active employee engaged in the Work because of race, color, ancestry, national origin, religion, sex, sexual orientations, age, physical disability, medical condition, or marital status. CONTRACTOR agrees to comply with applicable federal and California laws prohibiting discrimination including, without limitation, the California Fair Employment and Housing Act, beginning with Government Code section 12900 and Labor Code section 1735. In addition, CONTRACTOR shall require like compliance by its employees, and by its Subcontractors and suppliers of all tiers.

END OF ARTICLE

SECTION 00 7300

SUPPLEMENTARY CONDITIONS

VERDUGO HILLS HIGH SCHOOL - NEW SCOREBOARDS FOR SOFTBALL & BASEBALL PROJECT BY

THE LOS ANGELES UNIFIED SCHOOL DISTRICT

(OWNER)

OCTOBER 2026

(DATE)

SUPPLEMENTARY CONDITIONS

The following supplements modify the General Conditions. Where a portion of the General Conditions is modified and or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

Article 1 – GENERAL CONDITIONS

1.34 Notice to Proceed – Administrative ("NTP1") -- The written notice issued by OWNER to CONTRACTOR following the Notice of Award authorizing and/or directing CONTRACTOR to proceed with its administrative obligations under the Contract including, but not limited to, submittals, mobilization and other activities as identified in the written notice.

Article 2 – GENERAL CONDITIONS

2.2 ***Notice to Proceed and Contract Time Commencement:***

2.2.1 The Contract Time will commence on the date specified in the Notice to Proceed – Administrative ("NTP1"). OWNER will issue the Notice to Proceed – Construction ("NTP2") within the period of days identified in the Contract unless otherwise modified as outlined hereinafter.

2.2.2 If, for any reason, OWNER does not issue the NTP2 within the period of days identified in the Contract due to reasons not caused or contributed by CONTRACTOR, OWNER shall pay to CONTRACTOR commencing on the first day from the date the NTP2 was scheduled to be issued until the date the NTP2 is officially issued or Contract is terminated, actual field costs CONTRACTOR has incurred plus, as a liquidated damage, not as a penalty, but rather as a reasonable approximation of all damages to CONTRACTOR (including home office-overhead, acceleration, loss of efficiency, or any other non-field cost or impact or claim, regardless of tier), the sum per day based on the Contract Amount are as follows: $100 per day for contracts less than $1,000,000; $250 per day for contracts between $1,000,000 and $10,000,000; $500 per day for contracts between $10,000,001 and $40,000,000; and $1,000 per day for contracts in excess of $40,000,000. The payment of incurred field costs plus the amount of liquidated damages is CONTRACTOR'S exclusive remedy for delay of issuance of the NTP2.

If, for any reason, OWNER does not issue the NTP2 within the period of days identified in the Contract due to reasons caused by CONTRACTOR'S failure to complete its Work or obligations set forth in NTP1, CONTRACTOR shall provide a recovery schedule to OWNER as a pre-condition to OWNER'S processing of CONTRACTOR'S next

application for payment identifying to OWNER'S satisfaction how CONTRACTOR will perform so as to complete the WORK within the original Contract Time pursuant to Article 12.5.1. All such costs incurred by CONTRACTOR for such recovery or other measures to make up any such delay between NTP1 and NTP2 shall be at CONTRACTOR'S sole cost and expense.

Article 5 – GENERAL CONDITIONS

5.1.3 Owner will purchase and maintain Builder's Risk insurance in the amount of the initial Contract Amount (and thereafter adjusted pursuant to any Change Orders issued to CONTRACTOR) for the full replacement value of the Work. The Builder's Risk insurance will cover the interests of OWNER, CONTRACTOR and Subcontractors of every tier covering for all risk of direct physical loss, excluding earthquake and flood, and insuring against fire, extended coverage, theft, vandalism, and malicious mischief at limits and sub-limits determined by OWNER. CONTRACTOR will be provided a detailed Certificate of Insurance for the Work. CONTRACTOR shall be responsible for payment of a $50,000 deductible for each occurrence. CONTRACTOR is exclusively responsible, at its sole expense, for obtaining any additional insurance to protect its interests including coverage for CONTRACTOR's $50,000 deductible per occurrence required by the OCIP Insurance Policies.

5.4.8 Use only mechanical, electrical and plumbing ("MEP") Subcontractors that are licensed pursuant to Sections 7056–7059 of the Business and Professions Code, specifically holding A, B, C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, and C-46 licenses, and prequalified by the OWNER at least five (5) business days prior to the date of bid for the Project, if the Project includes MEP components that will be performed by first-tier MEP Subcontractors.

For all other trades, CONTRACTOR shall use only Subcontractors that it has safety pre-qualified in accordance with the procedures outlined in the Safety Standards Manual and verified by CONTRACTOR to have an Experience Modification Rate (EMR) that complies with OWNER's requirement upon the date of bid. CONTRACTOR shall be responsible to provide documentation verifying all Subcontractors of CONTRACTOR have an EMR that complies with OWNER's requirement upon the date of bid. OWNER may prohibit access to the Project Site by CONTRACTOR or any Subcontractor for which CONTRACTOR has not provided documentation of an EMR that complies with OWNER's requirement upon the date of bid or waiver by OWNER of this requirement or has not met the safety pre-qualification requirements outlined in the Safety Standards Manual.

5.4.10 submit an online payroll report for each completed payroll period and Application for Payment. Instructions for online access are provided in Section 8 of the OCIP Manual. This obligation includes compliance with all existing requirements and all new requirements implemented during the term of the Project. OWNER may decline to process or may apply a Withhold against, until receipt of the online payroll report, any Application for Payment submitted without completion of the online payroll report that is consistent with CONTRACTOR and Subcontractor (all tier) information submitted for the corresponding Certified Payroll Report periods.

5.7.3 CONTRACTOR represents on its own behalf, and on behalf of its Subcontractors, that the costs of OCIP Coverages were deducted in CONTRACTOR bid or proposal for the Work, the Contract Amount, and will not be included in any Change Order Proposals or any Application for Payment relative to the Work;

5.7.4 CONTRACTOR acknowledges OWNER shall not pay or compensate CONTRACTOR or any Subcontractor, in any manner, for the costs of OCIP Coverages or any other insurance costs of the CONTRACTOR or Subcontractors.

Article 6 – GENERAL CONDITIONS

Article 6.48.4 Working Hours:

6.48.4.1.4 Where a single shift is worked, eight (8) consecutive hours between **6:00AM** and **7:00PM** shall constitute a workday at the applicable prevailing wage rate(s).

6.48.4.1.5 Forty (40) hours between **Monday, 6:00AM** and **Friday, 3:00PM** shall constitute a work week at the applicable prevailing wage rate(s).

Article 11 – GENERAL CONDITIONS

11.10.2 where Subcontractors are included in the change, the intent of Articles 11.8.1, 11.8.2, 11.8.3 and 11.11 is that the Subcontractor who actually performs or furnishes the Work, regardless of tier, will be paid a fee of fifteen (15) percent of the costs incurred by such Subcontractor under Articles 11.8.1 and 11.8.2, and CONTRACTOR will be paid a fee of ten (10) percent, for a maximum total fee of twenty five (25) percent;

Change Order Exceeding $1,000,000:

11.13 Any individual Change Order in an amount that exceeds $1,000,000 and which has been approved by the Deputy Chief Procurement Officer (Facilities), or designee, shall be subject to audit by OWNER as set forth in Article 14.8.

Article 12 – GENERAL CONDITIONS

Article 12.7 – Add Subarticle 12.7.1

Article **12.7.1** CONTRACTOR will be liable to OWNER for liquidated damages pursuant to Article 12.7 for each calendar day of delay in the amount of $ 500/per day.

Article 14 – GENERAL CONDITIONS

14.7 If the certified Application for Payment is undisputed and properly submitted as per Articles 14.2 and 14.3, payment, less **5** percent (**5**%) retention, any OWNER assessments and withholds will be made within thirty (30) days from receipt.

14.7.1 If the certified Application for Payment is not properly submitted and/or is otherwise disputed, the OAR will return it with a written statement setting forth the reason why the payment request is not proper.

14.7.2 If the payment request is properly submitted, and only a portion thereof is disputed, OWNER may pay the undisputed portion thereof and refuse to pay the disputed portion thereof until the dispute is resolved.

14.7.3 If CONTRACTOR disputes any OWNER assessment, then CONTRACTOR shall give written notice as set forth in Article 16.

14.7a At any time after fifty percent (50%) of the Work value of the Contract Amount is completed, CONTRACTOR may request in writing to the OAR a reduction of retention. OWNER may do one or more of the following, provided that the amount on retention is not reduced to less than 5% of the Contract Amount.

14.7a.1 Make any of the remaining progress payments in full after determining that the Work has progressed satisfactorily.

14.7a.2 Retain up to **5** percent (**5**%) of any of the remaining progress payments as OWNER determines appropriate.

14.7a.3 Pay CONTRACTOR any amount of the retention above that amount legally required to be retained or withheld.

Any reduction of retention is at OWNER's sole and absolute discretion and may be later revoked or modified.

14.8 Individual Change Orders exceeding $1,000,000 require an audit by OWNER. Following approval of the Change Order and completion and acceptance of the Change Order Work, OWNER shall pay CONTRACTOR up to 80% of the value of the Change Order pending completion of the audit. Payment of the remaining amount, reflecting any adjustments as required by OWNER's audit, will be made upon completion of the audit.

END OF SUPPLEMENTARY CONDITIONS

SECTION 00 7316

OWNER CONTROLLED INSURANCE PROGRAM (OCIP)

1.01 RELATED DOCUMENT:

A. LAUSD Owner Controlled Insurance Program - The School Repair and Construction Program Insurance Manual (7/13/2026)

B. LAUSD School Repair and Construction Project Safety Standards

1.02 ELIGIBILITY:

A. Bidder is instructed to fully review the enclosed/following LAUSD OCIP Insurance Manual and Safety Standards, especially Section 3, Pages 5-6, Section 4 and Section 5, as to their eligibility for coverage under the OCIP Program.

B. Bidder is required to determine eligibilities prior to tendering a bid for this Contract. To enroll in OCIP, bidder must be prequalified and subcontractors may not have an Experience Modification Rate exceeding 1.00.

1.03 EXCLUDED PARTIES:

A. Excluded Parties must meet the insurance requirements established in Section 5 of the LAUSD OCIP Insurance Manual and Safety Standards and provide evidence of coverage to the OWNER.

B. Excluded Parties must provide evidence of Workers' Compensation, General Liability, Excess/Umbrella Liability, Automobile Liability, and Pollution Liability insurance for all activities, including both on-site and off-site activities per the insurance requirements of the Contract.

1.04 COST OF INSURANCE IN BID PRICE:

A. Each OCIP eligible bidder is required to exclude from its bid amount the cost of the OCIP Coverages provided by the OWNER.

B. Each OCIP excluded bidder is required to include in its bid amount, the cost of all insurance coverages required under the Contract.

END OF SECTION

OCIP V Insurance Manual

LOS ANGELES UNIFIED SCHOOL DISTRICT

The School Repair and Construction Program

Owner Controlled Insurance Program (OCIP)

Revised 07/13/2026 – Revision 1.9

THIS MANUAL IS A CONTRACT DOCUMENT

July 13, 2026

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I. Introduction

Welcome to the Los Angeles Unified School District (LAUSD or District) School Repair and Construction Program Owner Controlled Insurance Program.

LAUSD has arranged for its construction projects to be insured under its Owner Controlled Insurance Program (OCIP). An OCIP is a single insurance program that insures the District, the Board, all Enrolled Contractors and Enrolled Subcontractors, and other designated parties for Work performed at the Project Site(s). Certain Contractors and Subcontractors are excluded from this OCIP. These parties are identified in Section 3 of this Manual.

Each contractor enrolled in the OCIP will be provided coverage for: Workers' Compensation, Employer's Liability, General Liability, Excess Liability, Builders Risk, and Contractor's Pollution Liability Insurance ("OCIP Coverages") for operations of Enrolled Parties at the Project Site.

The District will pay the insurance premiums for the OCIP coverages described in this Manual. You should notify your insurance broker/insurer(s) of the coverages provided under this OCIP to avoid the duplication of coverage.

Each bidder is required to EXCLUDE from its bid price the cost of the OCIP Coverages provided by the District.

DISCLAIMER:
The information in this Manual is intended to outline the OCIP. If any conflict exists between this Manual and the OCIP insurance policies, the OCIP insurance policies will govern.

II. OCIP Directory

SPONSOR		
Los Angeles Unified School District (LAUSD) **Division of Risk Management & Insurance Services** 333 South Beaudry Avenue, 28th Floor Los Angeles, CA 90017		
LAUSD OCIP Manager	**LAUSD Interim OCIP Coordinator**	
Amalia Sánchez amalia.sanchez@lausd.net	**Jesús Rico** jxr6146@lausd.net	
Position	**Contact**	**Email(s)**
Senior Insurance Technician	**Jean Launder (Buenaflor)**	**OCIP@lausd.net**

OCIP ADMINISTRATOR			
Willis Towers Watson Insurance Services West, Inc. (WTW) 300 South Grand Suite 2000 Los Angeles, CA			
Position	**Contact**	**Phone Number(s)**	**Email(s)**
WTW OCIP Client Service Specialist	**Irene Montes**	415-244-9858	LAUSD.OCIP@wtwco.com
WTW OCIP Client Service Specialist Back-Up	**Maria Maravilla**	415-696-4411	
WTW OCIP Client Service Lead	**Nancy Jarmon**	214-535-1887	Nancy.Jarmon@wtwco.com
WTW OCIP Senior Claims Associate	**James Hensley**	720-591-0692	James.Hensley@wtwco.com *Non-WC claims:* claimwest@willistowerswatson.com
WTW OCIP Claims WC	**April Korpal**	414-524-0211	April.Korpal@wtwco.com
WTW Account Executive	**Meg Withrow**	304-561-7269	Meg.Withrow@wtwco.com

III. Project Definitions

The following definitions apply to the terms used in this OCIP Manual.

Term	Definition
Approved Off-Site Locations	A location 100% dedicated to the Project can be considered. A request must be submitted in writing to LAUSD OCIP Manager and OCIP Administrator must be approved in writing by the LAUSD OCIP Manager or OCIP Administrator.
Certificate of Insurance	A document providing evidence of the existence of coverage for a particular insurance policy or policies.
ComPAS (Enrollment System for Contractors)	WTW Comprehensive Project Administration System (ComPAS) is the Administration Portal for the online OCIP Administration managed by WTW. The web address is https://cp.wtwcompas.com The recommended browser is Chrome.
Contract	A written agreement between the Sponsor and the Contractor for specific work and includes written agreement between a Subcontractor and any tier of Subcontractor.
Contractor	For purposes of this OCIP Manual, the term Contractor will mean Contractor and Subcontractor of any tier, as appropriate.
Eligible Parties	Parties performing labor or services at the Project Site are eligible to enroll in the OCIP, unless they are an Excluded Party.
Enrolled Parties	Those eligible Contractors and Subcontractors that have submitted all necessary enrollment information and have been accepted into the OCIP as evidenced by a LAUSD OCIP Confirmation Letter and LAUSD OCIP Certificate of Insurance provided by the OCIP Administrator.
Excluded Parties	The LAUSD OCIP does not cover the following: • Vendors, suppliers, truck carriers or haulers, material dealers, delivery persons, • Structural demolition operations, blasting operations, • Surveyors, any and all professional trades, any security patrol or guard services, • Hazardous waste removal, abatement contractors, • Manufacturers, or fabricators, • Any other organization performing activities outside of the "designated project(s)" that do not have on-site dedicated payroll associated with construction activities, • Independent Crane operators, and physical damage to any crane, • Any parties or entities not specifically identified or excluded by LAUSD in its sole discretion, even if otherwise eligible.

Term	Definition
OCIP Coverages	LAUSD-provided OCIP Coverages for Eligible and Enrolled Parties that include Workers' Compensation, Employer's Liability, General Liability, Excess Liability, Builders Risk, and Contractor's Pollution Liability Insurance for operations performed at the Project Site.
OCIP Insurance Manual	For purposes of this Manual and Contracts, OCIP Insurance Manual includes "Los Angeles Unified School District - The School Repair and Construction Program-Insurance Manual", "OCIP Manual" and "Insurance Manual".
OCIP Insurer	The insurance company (carrier) is the entity that *underwrites, issues, and supports the wrap-up insurance policy* that covers the entire construction project.
OCIP Program Administrator	LAUSD and Willis Towers Insurance Services West, Inc. (WTW)
Owner Authorized Representative (OAR)	The OAR assigned to the LAUSD project administers and oversees the OCIP on behalf of the Owner, ensures compliance by all participating contractors, coordinates coverage, claims, safety and documentation and acts as the Owner's central authority for all OCIP-related matters.
Owner Controlled Insurance Program (OCIP)	LAUSD's Owner Controlled Insurance Program – A coordinated insurance program providing certain coverages, as defined herein, for the District, Eligible and Enrolled Contractors, and Eligible and Enrolled Subcontractors performing Work at the Project Site.
Project Site	Project Site shall mean those areas designated in writing by Sponsor in the Contract for performance of the Work and such additional areas as may be designated in writing by Sponsor for Contractors use in performance of the Work
Sponsor	Los Angeles Unified School District, LAUSD or the District, and is the Named Insured on all OCIP insurance policies
Third Party Administrator (TPA)	A TPA is an independent company (separate from the District) responsible for monitoring OCIP Workers' Compensation and General Liability claims at the project site and closing them in a timely manner.
Work	Operations as fully described in the Contract.

IV. OCIP Coverages

The OCIP (Owner-Controlled Insurance Program) coverages and exclusions are outlined in full within the respective insurance policy forms. The summaries of these coverages provided in the General Conditions or the Insurance Manual are intended for reference only and should not be considered complete or authoritative. In the event of any conflict between the descriptions in the General Conditions, the OCIP Insurance Manual, or the Contract Documents and the actual OCIP policies, the terms and provisions of the OCIP policies will take precedence.

It is important to note that each line of coverage is different and may vary in deductibles, limitations, and exclusions. LAUSD reserves the right to adjust these limits, and contractors will be notified of any such changes. For any questions, contact OCIP@lausd.net. The following sections will provide a detailed overview of the key OCIP coverages.

Deductible Notice for All Lines of Coverage: As a contractor enrolled in the LAUSD OCIP, please be aware that our insurance policies include deductibles, which vary by coverage. If a loss results from contractor/subcontractor negligence, LAUSD may charge the responsible contractor up to the full deductible amount.

Builders' Risk

	Limits of Liability Shared by All Insureds for All Projects
Each Occurrence Limit	$50,000,000
Contractor or Subcontractor Deductible	Policy Terms.
Deductible	$ 50,000

*All projects with a construction value exceeding $25 million are considered **high-value projects**. High-value projects must be submitted for individual underwriting prior to binding coverage.*

LAUSD has secured Builders' Risk coverage for Work performed under all construction bond-funded projects.

Commercial General Liability

	Limits of Liability Shared by all covered parties for All Projects
Bodily injury and Property Damage - each occurrence	$2,000,000
General Aggregate for all Enrolled Parties	$4,000,000
Personal/Advertising injury – each occurrence	$2,000,000
Products & Completed Operations/Aggregate	$4,000,000
Deductible	$ 500,000

Coverage Form: *Equivalent to ISO Occurrence Form CG 001 edition 2001 or later. 10-year Products & Completed Operations Extension beyond final acceptance of the entire Project with a single, non-reinstated aggregate limit.*

Workers' Compensation & Employers Liability

		Coverage in CA – An individual Workers' Compensation Policy will be issued to each Enrolled Party
Part One:	Workers' Compensation	Statutory Limit
Part Two:	Employer's Liability	Annual Limits Per Insured
	Bodily Injury by Accident, each accident	$1,000,000
	Bodily Injury by Disease, each employee	$1,000,000
	Bodily Injury by Disease, policy limit	$1,000,000

Contractor's Pollution Liability

	Limits of Liability Shared by All Insureds for All Projects
Each Occurrence Limit	$50,000,000
Annual General Aggregate Limit	$50,000,000
Deductible	$500, 000

Contracting operations performed by or on behalf of the named insured associated with the Los Angeles Unified School District OCIP V performed between 05/01/2023-04/30/2028.

Excess Liability

	Limits of Liability Shared by All Insureds for All Projects
Each Occurrence Limit	$100,000,000
General Aggregate for all Enrolled Parties	$100,000,000
Products & Completed Operations/Aggregate	$100,000,000

Evidence of Coverage

Each Enrolled Party will be issued an individual Workers' Compensation policy. The OCIP Administrator will also provide a Certificate of Insurance evidencing the OCIP coverages to each Enrolled Party. Other documentation including forms, posting notices, if any, will be furnished to each Enrolled Party. A copy of the General Liability policy and evidence of Builders' Risk will be available for review upon written request to the LAUSD OCIP UNIT; Contact ocip@lausd.net

Assignment of Return Premiums

The District will pay the cost of the OCIP insurance coverage. The District will be the sole recipient of any return premiums or dividends from the OCIP coverages. All Enrolled Parties shall assign to the District all adjustments, refunds, premium discounts, dividends, credits, or any other monies due from the OCIP insurers.

Excluded Parties

Excluded Parties must meet the insurance requirements as more fully outlined in the Contract documents and provide evidence of coverage to the District.

Additional Information

Insurance coverage and limits provided under the OCIP are limited in scope and are specific to Work performed after the inception date of enrollment into this OCIP. Contractors and Subcontractors are advised to have their insurance representative review this information. Any additional coverage purchased will be at the option and expense of the Contractor and Subcontractor.

Contractors and Subcontractors are advised to arrange their own insurance for Contractor-or Subcontractor-owned, used, leased, or rented equipment and materials. The OCIP will not cover Contractor or Subcontractor property.

WARNING:
There are financial repercussions if the reporting requirements are not met. Please read and understand all reporting requirements. Failure to submit any required OCIP forms or supporting documentation as required may result in the withholding of payments until required documentation is received or a Penalty assessed for failure to comply.

V. Contractor & Subcontractor Insurance Requirements

Contractors and all Subcontractors are required to maintain coverage to protect against losses that occur away from the Project Site or that are otherwise not covered under the OCIP.

Contractors and Subcontractors are required to maintain insurance coverage for the duration of the Contract(s) that protects the District from liabilities. These liabilities may arise from the Contractor's and Subcontractor's operations performed away from the Project site, from coverages not provided by the OCIP, or from operations performed by Excluded Parties. The OCIP places Contractors and Subcontractors into one of two main categories: Enrolled Parties and Excluded Parties.

Enrolled Parties

Enrolled Parties must provide evidence of Workers' Compensation, General Liability, and Excess/Umbrella Liability insurance for off-site activities and Automobile Liability insurance for both on-site and off-site activities as specified in the Contract. Contractors must provide their Certificate of Insurance to LAUSD Procurement, (Contract Administrator), and OCIP@lausd.net and Irene.Montes@wtwco.com

Excluded Parties

Excluded Parties must provide evidence of Workers' Compensation, General Liability, Excess/Umbrella Liability, Automobile Liability and Pollution Liability insurance for all activities including both on-site and offsite activities as per the insurance specifications in the Contract. See Section 3 for the definition of Excluded Parties. All Excluded Prime Contractors must provide their Certificate of Insurance to LAUSD Procurement, (Contract Administrator), and OCIP@lausd.net and Irene.Montes@wtwco.com

Certificate Requirements

Enrolled Parties and Excluded Parties must submit verification of insurance in the form of a Certificate of Insurance (COI) on a standard ACORD form 25. They must provide verification of insurance as outlined in the Contract to LAUSD Procurement, (Contract Administrator), and OCIP@lausd.net and Irene.Montes@wtwco.com. All Contractors and Subcontractors are responsible for monitoring their Enrolled Subcontractors Certificates of Insurance whether they are enrolled or not. The District reserves the right to disapprove the use of Subcontractors unable to meet the insurance requirements. Certificates of Insurance evidencing compliance must be made available to the District or the OCIP Administrator upon request.

VI. Contractor and Subcontractor Responsibilities

Throughout the course of the Project, Contractors and Subcontractors will be responsible for reporting and maintaining certain records as outlined in this section. Contractors and Subcontractors are required to cooperate with the District and its OCIP Administrator in all aspects of OCIP implementation and administration.

Responsibilities of the Contractor and Subcontractors of all tiers include all Contract responsibilities, including but not limited to the following:

- Safety Pre-Qualification prior to submitting a bid. Contractors may only contract with Subcontractors that have safety pre-qualified
- **EXCLUDE the cost of OCIP insurance from their bids, if eligible for the OCIP**
- Provide each Subcontractor with a copy of this Insurance Manual & Safety Standards
- Enrollment in the OCIP, if eligible, within ten (10) working days of Notice of Intent to Award of Contract
- Include OCIP provisions in all contracts with Subcontractors
- Provide timely evidence of other insurance or contractor-required insurance within ten (10) working days of notice of intent to award of contract as well as renewal COIs in the event that coverage expires before the contract completion
- Notify the OCIP Administrator of all subcontracts awarded
- Maintain and report monthly payroll records
- Cooperate with the OCIP Administrator's and/or the OCIP Manager's requests for information
- Comply with insurance, claim and safety procedures
- Monitor and maintain its Subcontractors' Certificates of Insurance on-site
- Notify OCIP@lausd.net and Irene.Montes@wtwco.com immediately of any insurance cancellation, modification, material change, or non-renewal of Contractor required insurance
- **Ensure that their own eligible and enrolled subcontractors EXCLUDE the cost of OCIP insurance from their bids**

Contractor Bids

The District provides insurance for all Enrolled Contractors and Enrolled Subcontractors under the OCIP for Work performed at the Project Site(s).

Adjustments for OCIP Insurance Costs

Each Contractor and Subcontractor eligible for Enrollment is required to EXCLUDE the Costs of OCIP coverages from your bid price for the proposed scope of work (including subcontracted work whether the Subcontractor is identified at the time of the bid). Change orders must also be priced by Enrolled Parties to EXCLUDE the cost of insurance.

Contractors are solely responsible for ensuring that their Subcontractors of all tiers also remove the cost of OCIP-provided insurance from their bid.

Enrollment

Each Enrolled Party shall provide details about themselves and their Subcontractors to the OCIP Administrator to enroll them in the OCIP. The Contractor and Subcontractor must each complete Online Enrollment Application in WTW ComPAS. Instructions for online access and enrollment are included in this Manual. **A separate enrollment must be completed for every contract, even if they already have another contract enrolled on the same project.** Enrollment must be completed and submitted to the OCIP Administrator via the WTW ComPAS system prior to entering the Project Site(s).

Each Enrolled Party will receive an OCIP Confirmation Letter with an OCIP Certificate of Insurance. An OCIP Confirmation Letter is a letter issued by the OCIP Administrator and confirms acceptance into the LAUSD OCIP. The OCIP Certificate of Insurance evidence the OCIP coverage.

In addition, a separate OCIP Workers' Compensation policy will be issued to each Enrolled Party.

EACH CONTRACT MUST BE ENROLLED INTO THE OCIP:

Enrollment into the OCIP is not automatic. Every contract must be enrolled separately. All Eligible Contractors and all Eligible Subcontractors **must** complete the online enrollment and participate in the enrollment process for OCIP coverage to apply. Access to the Project Site will not be permitted until Enrollment into the OCIP is complete. Contractor Portal: https://cp.wtwcompas.com

Change Order Procedures

Change orders must also be priced by Enrolled Parties to **EXCLUDE** the cost of OCIP insurance.

Contractors are solely responsible for ensuring that their Subcontractors of all tiers also remove the cost of OCIP-provided insurance from their bid.

Warranties

All Enrolled Parties authorize the release of claim and audit information for all policies covered under LAUSD OCIP to the District and the OCIP Administrator. Insurance costs covered by the LAUSD School Repair and Construction Program Owner Controlled Insurance Program have been removed from the Contract, Subcontracts, and any Change Orders. The cost of premiums for non-OCIP coverage specified in the contract are the responsibility of Contractor and Subcontractors of all tiers.

Maintaining Enrollment in the OCIP

If you do not comply with all the terms of this Manual in a timely manner, including the Construction Safety Standards, you may not remain enrolled in the OCIP. Contractors eligible for enrollment in the OCIP who are not enrolled in the OCIP will not be granted access to the Project Site(s).

Safety Standards

Each Contractor and Subcontractor is required to have a written safety program and to provide a designated safety representative who is on Site when any Work is in progress. Safety Representative Requirements are as specified in the contract and LAUSD Safety Program. Minimum standards for Contractor safety programs are outlined in the LAUSD's Safety Standards.

Payroll Reports

Each Enrolled Contractor and Enrolled Subcontractor of every tier must submit monthly payroll reports. The reports will identify worker-hours and payroll by Workers' Compensation classification code for all Work performed at the Project Site. This information will be used to provide the District's insurers with information required for determining the District's premium.

All Enrolled Contractors and Enrolled Subcontractors must submit payroll reports prior to the 10th of the following month. Payroll must be reported online. Instructions for online access are provided in Section 8. The monthly worker-hour and payroll reports should include all on-site workers. Supervisory and clerical personnel payroll should also be included if it occurred on-site and covered only Work performed directly at each Project Site.

Failure to submit the payroll reports as required may result in a fine, the withholding of contract progress payments or final payment until the reports are received and may also result in being barred from future opportunities with the District

Insurance Company Payroll Audit

Each Enrolled Contractor and Enrolled Subcontractor is required to maintain payroll records for each Contract. Such records will allocate the payroll by Workers' Compensation classification(s) code and exclude the excess or premium paid for overtime (i.e., only the straight time rate will apply to overtime hours worked).

Furthermore, such records will limit the payroll for Executive Officers and Partners/Sole Proprietors to the limitations as stated in the State of California manual rules.

It is important that you properly classify payrolls, as these are reported to the rating bureau for promulgation of future Experience Modifiers for your firm. All Enrolled Contractors and Enrolled Subcontractors shall make available their payroll records, vouchers, contracts, documents, and records, of all kinds, to the auditors of the OCIP insurer(s) or the District's representatives. Availability of records must be for the policy period, any extension, or during a final audit period as required by the insurance policies.

Demolition/Abatement Work

Contractors/ subcontractors performing this type of work must provide and maintain a Pollution Liability Policy covering hazardous materials abatement. The contractor/subcontractor shall complete and submit to OCIP Manager, Amalia Sanchez the **00620 Certificate of Insurance for Hazardous Materials** form as verification of insurance coverage for hazardous materials work. Demolition projects with no hazardous materials abatement or disturbances that may be performed by properly trained personnel according to Specification Sections 13280 and 13282.

No portion of the demolition will be eligible for insurance coverage through the OCIP. Contractors will be required to name LAUSD as an **Additional Insured** and provide a **Certificate of Insurance** of Workers' Compensation, General Liability, Excess/Umbrella Liability, Automobile Liability, and Pollution Liability insurance for all activities including both **on-site** and **off-site** activities as per the insurance specifications in the Contract.

The OAR assigned to the project shall ensure that the appropriate insurance is maintained by the Contractor for the duration of the project **FOR DEMOLITION ABATEMENT**

Crane Work

As respects any operations requiring **CRANES**, contractors are required to notify the LAUSD OCIP Manager prior to use so that an appropriate plan can be developed in advance of the work beginning. Such notification shall give LAUSD time to participate in the review, preplanning, and monitoring phases of crane operations.

Independent Crane operators and operations are excluded from the OCIP program; therefore, the OAR assigned to the project shall ensure that the appropriate insurance is maintained by the contractor for the duration of the Work. **FOR ALL CRANE OPERATIONS, the Los Angeles Unified School**

District, the Board, its officials, employees, and agents must be added as Additional Insureds as respects to general liability and automobile liability. The coverage is Primary and Non-Contributory. Certificates must be sent to OCIP@lausd.net

Close Out and Audit Procedures

Enrolled Parties must submit the Notice of Work Completion when they have completed their Work at the LAUSD School Repair and Construction Program Project Site(s) and no longer have workers on the Project Site(s) covered by the contract. The Notice of Work Completion will initiate the final payroll report and audit of payroll and worker hours by the OCIP Insurer. This should be completed online. Coverage ceases upon completion of Work at the Project Site as documented by a Certificate of Substantial Completion from the Owner.

VII. Claim Reporting Procedures

This section describes the basic procedures for reporting LAUSD OCIP claims based on the following lines of coverage:

- Damage to the Project (Builders Risk)
- General Liability
- Automobile Liability Claims
- Pollution Liability
- Workers' Compensation

WARNING:
There are financial repercussions if the reporting requirements are not met. Please read and understand all reporting requirements. Failure to submit any required OCIP forms or supporting documentation as required may result in the withholding of payments until required documentation is received or a Penalty assessed for failure to comply.

Builder's Risk Claims

All risk of direct physical loss or damage, excluding earthquakes and floods, is subject to policy terms, conditions, and exclusions. Alliant is the broker for the Builders Risk program. All Builders Risk claims must be reported promptly to LAUSD via email at OCIP@lausd.net.

When reporting a Builder's Risk claim: **Complete the Builder's Risk Incident Report Form** (found on the LAUSD OCIP Webpage).

Process

Reference Appendix II.

Required Information:

1. **OAR Name**
2. **OAR Contact Information**
3. **Project Site/School Site Name**
4. **Information of any third parties involved**
5. **Contractor(s)/Subcontractor(s) name(s) that are involved**
6. **Current estimated total loss amount (including repairs and/or mitigation, labor, materials, and any costs)**

Required Documentation:

1. **School map/blueprint (indicating the exact location(s) of the damage)**
2. **If applicable, proposals, quotes, invoices, payroll, work orders, etc.**
3. **Additional photos, videos, and reports of the damage/loss, including all areas where the damage may have spread. Areas must be within the project scope.**
4. **Copy of contract (must include: General Conditions, Supplementary Conditions, Copy of OCIP Manual provided at time of contract execution)**
5. **Police reports, if any**

Email Completed Form with supporting documentation to: ocip@lausd.net

General Liability Claims

Accidents at or around the Project Site(s) resulting in damage to the property of others (other than your own work product) or personal injury or death must be reported immediately. Report all GL Claims to **844-713-5516.** Cooperate with the District and the OCIP insurer representatives in the accident investigation. **Do not voluntarily admit liability.**

When reporting a General Liability claim: **Complete the General Liability Incident Report Form** (found on the LAUSD OCIP Webpage).

Process

Reference Appendix II.

Required Information:

1. **OAR Name**
2. **OAR Contact Information**
3. **Project Site/School Site Name**
4. **Information of any third parties involved**
5. **Contractor(s)/Subcontractor(s) name(s) that are involved**
6. **Current estimated total loss amount (including repairs and/or mitigation, labor, materials, and any costs)**

Required Documentation:

1. **School map/blueprint (indicating the exact location(s) of the damage)**
2. **If applicable, proposals, quotes, invoices, payroll, work orders, etc.**
3. **Additional photos, videos, and reports of the damage/loss, including all areas where the damage may have spread. Areas must be within the project scope.**
4. **Copy of contract (must include: General Conditions, Supplementary Conditions, Copy of OCIP Manual provided at time of contract execution)**
5. **Police reports, if any**

Email Completed Form with supporting documentation to: ocip@lausd.net

Automobile Liability Claims

No insurance coverage is provided for automobile accidents under the OCIP. It is the sole responsibility of each Contractor and Subcontractor to report accidents/claims involving their automobiles to their own insurance carriers.

However, all accidents occurring in or around the job site must be reported to the Owner Authorized Representative. The accident will be investigated to determine any liability arising out of the project construction activities that could result in a future claim against the LAUSD OCIP. Each Contractor and Subcontractor shall fully cooperate in the investigation of all automobile accidents.

Pollution Liability Claims

The District's OCIP policies may provide coverage for certain pollution conditions. Any known or suspected pollution conditions or incidents must be **reported promptly** via email to LAUSD, at OCIP@lausd.net.

When reporting a Pollution Liability claim: **Complete the Pollution Liability Incident Report Form** (found on the LAUSD OCIP Webpage).

Process

Reference Appendix II.

Required Information:

1. **OAR Name**
2. **OAR Contact Information**
3. **Project Site/School Site Name**
4. **Information of any third parties involved**
5. **Contractor(s)/Subcontractor(s) name(s) that are involved**
6. **Current estimated total loss amount (including repairs and/or mitigation, labor, materials, and any costs)**

Required Documentation:

1. **School map/blueprint (indicating the exact location(s) of the damage)**
2. **If applicable, proposals, quotes, invoices, payroll, work orders, etc.**
3. **Additional photos, videos, and reports of the damage/loss, including all areas where the damage may have spread. Areas must be within the project scope.**
4. **Copy of contract (must include: General Conditions, Supplementary Conditions, Copy of OCIP Manual provided at time of contract execution)**
5. **Police reports, if any**

Email Completed Form with supporting documentation to: ocip@lausd.net

Workers' Compensation Claims

The main responsibility for any Contractor and Subcontractor is first to see that the injured worker receives immediate medical care. Immediately contact 911 for any serious, traumatic, and life-threatening injuries. For all minor or non-life-threatening injuries, the injured worker must seek treatment within the Medical Provider Network ("MPN"). MPN Locations provided on page 15.

Once medical care has been arranged, the next step is to notify the OCIP Third Party Administrator, ESIS, Inc., of the injury. You can report your WC First Report of Injury 24 hours a day, 365 days per year.

When reporting a claim: Immediately report any injury to ESIS LAUSD OCIP V Dedicated Claim via **reporting number: 1-844-713-5516 or reporting email: LAUSDOCIP.ClaimStart@esis.com**

Client VND: 8002933420

Required Information:

1. **Project/school name,**
2. **Project/school address,**
3. **Employer name,**
4. **Prime contractor's contract number with LAUSD**
5. **Employer's WC policy number.**
6. **Owner Authorized Representative. (Name and Phone Number)**

Required Documentation:

1. **Claim form**
2. **Employee statement**
3. **Witness statement**
4. **Payroll and employee work status**

Note: This process applies to all claims, litigated and non-litigated.

When you report the Workers' Compensation injury using the special reporting telephone number, the OCIP Third Party Administrator, ESIS will make the necessary filing with the State of California (form 5020). It is the employer's responsibility to provide the injured worker with the Employee's Claim Form within 24 hours of the employer's knowledge of the injury. The employer must also send a copy of the completed Employee's Claim Form and the Supervisor's Accident Investigation Report to the OCIP Third Party Administrator at the following e-mail: **LAUSDOCIP.ClaimStart@esis.com**

The OCIP Administrator provides Claims Kits to all Enrolled Contractors and Enrolled Subcontractors at time of enrollment. These kits include required claim forms and postings. Additional kits or claims forms can be obtained from the OCIP Administrator upon request.

All Contractors are required to comply with California laws regarding notifying their respective

Workers' Compensation carrier (for Excluded Parties) and the OCIP carrier (for Enrolled Parties) every time one their respective employees test positive for COVID. Contractors, whether enrolled or excluded in the OCIP, are also required to notify the COVID Captain assigned to the Project Site of a positive test. Instructions on how Enrolled Parties are to report a COVID-positive case to the OCIP carrier are set forth in the "California COVID Reporting Requirements". **https://www.dir.ca.gov/dosh/coronavirus/Reporting-Requirements-COVID-19.html**

Medical Provider Network (MPN) Requirements

Once enrollment is complete, the Enrolled Party will receive the Medical Provider Network (MPN) notice. The MPN is a network of authorized medical providers and facilities arranged by the OCIP's Third Party Administrator ESIS, Inc. to treat all minor and non-life-threatening injuries. Information about the MPN is:

- MPN website: www.esis.com/awcmpn
- MPN effective date: 5/1/2023
- MPN identification number: Log ID #2433
- If you need assistance locating an MPN physician, please call your MPN access assistant at: 844.622.3747
- If you have questions about the MPN or want to file a complaint against the MPN, please call our MPN contact at: 503.598.1492

No ADR Processes for OCIP Workers' Compensation Claims

Should an Enrolled Party subscribe to or has implemented any Alternative Dispute Resolution (ADR) processes for Workers' Compensation claims outside of the OCIP, the OCIP Insurance Company is unable to recognize or acknowledge these ADR claim processes for any reported OCIP Workers' Compensation claims. Prior to coming onsite, Enrolled Parties shall notify/advise their employees working onsite at the Project that ADR claim processes will not apply.

VIII. Enrolled Contractors Incident/Claim Investigations

LAUSD is the "Named Insured" and shall act as sole agent for LAUSD enrolled insured(s) with respect to incident / claim investigations, claim payments and claim settlements under LAUSD's OCIP policies and contract General Conditions. LAUSD is entitled to all material relating to incidents, reports and claims on District project job sites, including, but not limited to authorized/unauthorized investigation reports, pictures, witness statements, incident reports, medical reports, etc. This information shall not be contingent upon any payment or reimbursement from the District. Any additional investigation cost will only be approved if written authorization has been obtained from the OCIP Insurer prior to the initiation of the requested investigation.

Penalties

If an Enrolled Party does not comply with its obligations under the LAUSD OCIP as set forth in the Contract or this Manual, Contractor and LAUSD agree that LAUSD has the right to assess a Penalty. The schedule of Penalties:

Penalties	Item Description
Disclaimer: Contractor will continue to incur penalties until the item has been resolved	
Delayed Enrollment Penalties	
$2,500 per form	May be assessed by LAUSD for failure to provide requested OCIP information or documentation within 48 hours.
Additional $2,500	May be assessed by LAUSD for failure to provide the requested OCIP
Claims Reporting Penalties	
$2,500 per event	May be assessed by LAUSD for any claims not reported within 48 hours of occurrence.
Additional $2,500	May be assessed by LAUSD for any claims not reported within 45 days of occurrence.

IX. WTW ComPAS Online Portal Instructions

This section contains instructions for WTW ComPAS Contractor Portal that allows your company to enroll in the CCIP, notify WTW of subcontract awards, and run various reports.

WTW ComPAS – WTW Project Administration System

- Online Portal Instructions
- How to Add Notice of Award
- Processing an Enrollment

WTW ComPAS – Online Portal Instructions

1. Online Enrollment is recommended
2. If you are unable to complete the enrollment online paper forms can be provided upon request.
3. Completion of online Notice of Award triggers the system to send the subcontractor's primary contact the request to enroll email. The email will include the following:
    a. Brief description of program
    b. URL
    c. Username
    d. Password
    e. Insurance Manual

Documents users should have available to upload and complete their enrollment are the following

1. Declaration and Rating Pages for
2. Workers' Compensation
3. General Liability
4. Excess Liability

Enrollment Information:

- Company Name
- Company Address
- Company FEIN
- Primary Enrollment Contact Information
    - Name
    - Phone Number
    - Email Address

• Estimated Contract Value
• Estimated Start Date
• Scope of Work
• WC Class Code
• Estimated Payroll by Class Code
• Experience Modifier

Users must enter data in all fields marked with a red asterisk to submit enrollment requests.

Certificate of Insurance will be issued once the Client Service Specialist confirms compliance.

The OCIP certificate will be issued and available to download from WTW ComPAS. It will also be sent via email to the Subcontractor and Awarding Contractor for their records.

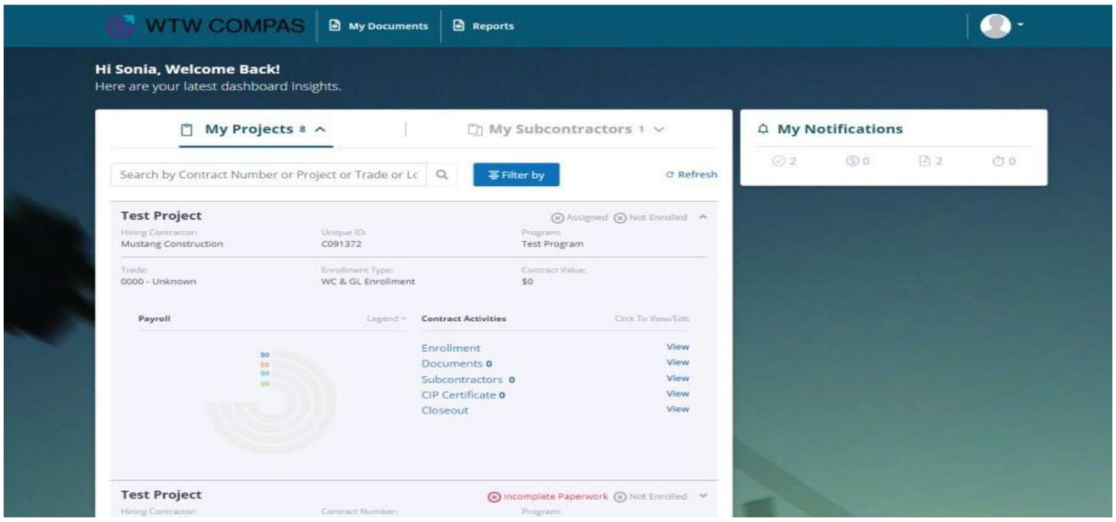
Contractors will receive separate system notifications for Payroll Reporting, Renewal Certificates of Insurance, and contract close-out.

Additional information can be found in the appendix

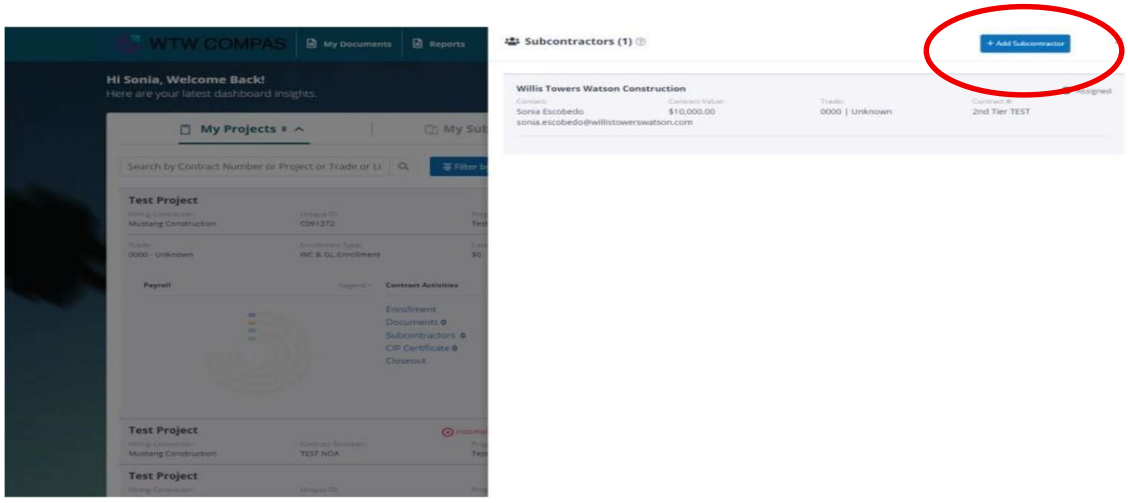
X. Appendix I

How to add a Notice of Subcontract Award

1. When an Enrolled Contractor awards a subcontract, the awarding Contractor shall begin the enrollment process by completing Notice of Award for each Contract award via Add Subcontractor Icon via the Contractor Portal – Contract Activities to open the Add Subcontractor screen. Select Subcontractors in the Contract Activities section of the Awarding Contractor Portal.



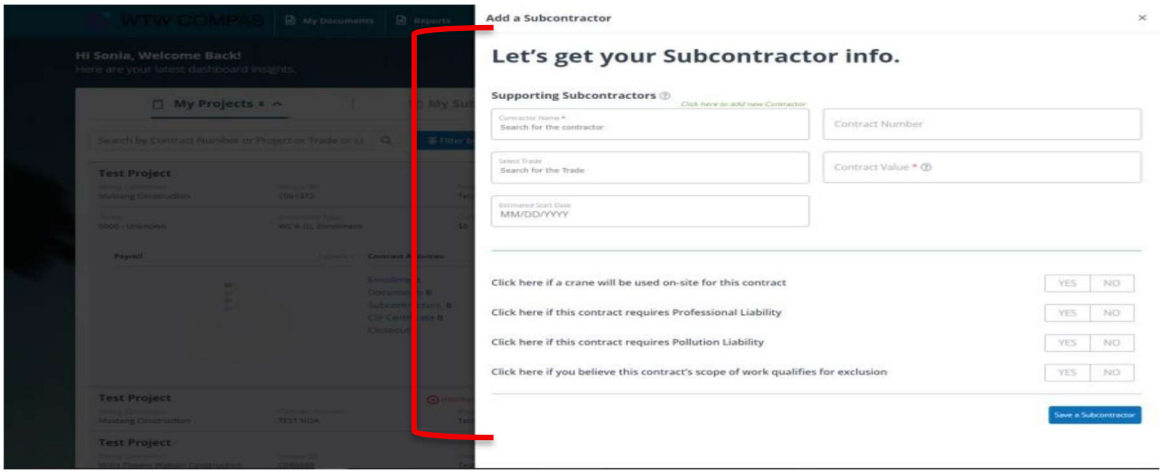
2. Select + Add Subcontractor from the upper right hand of the Subcontractors screen.



3. Enter your subcontractor information. The required fields for Notice of Award are as follows:
   a. Contract Value – Enter Estimated Contract Value
   b. Select Contractor – User can begin to enter the company name and if the company is already in the system select from the drop-down list. If the company is not included in the list, select "Click here to add a new contractor".
   c. The following fields are optional but if the information is available, please populate.

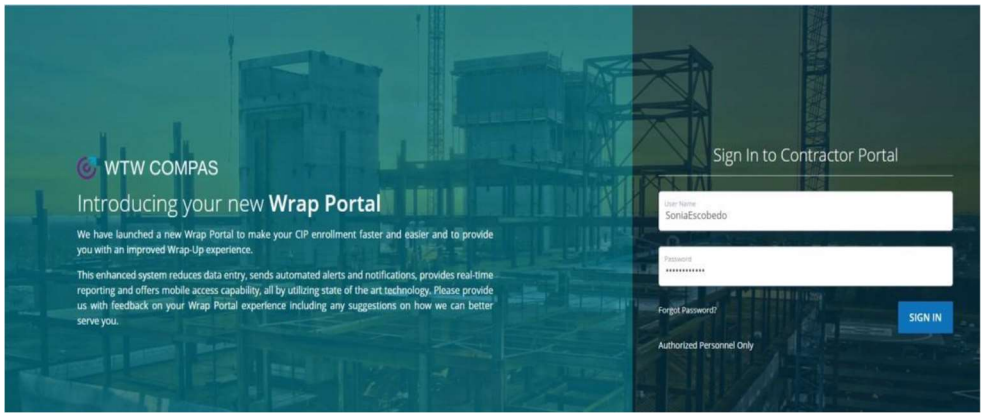
d. Trade – Select SIC Code from drop down list. If SIC code is not available, select "Click here to add a your SIC Code"
e. Contract Number – Provide Contract Number for contract award.

The awarding Contractor shall ensure that their subcontractors complete the remaining sections of the Contractor Package Enrollment and immediately submit.

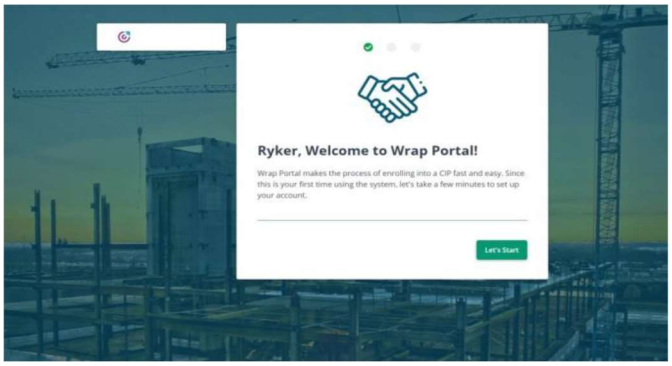


Processing an Enrollment

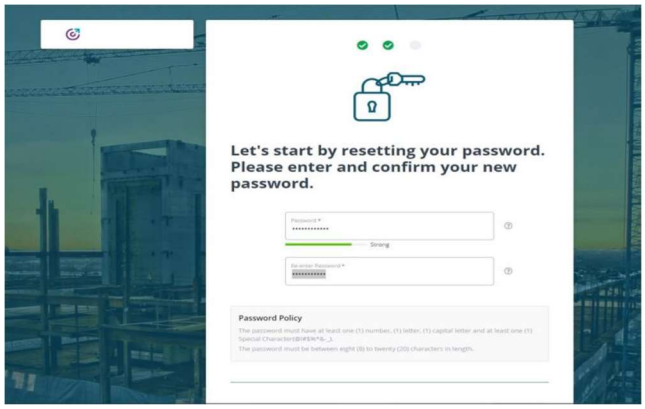
Once the Notice of Award is completed the Contractor will receive a Request for enrollment e-mail. The email will include a brief description of the Program and the program requirements. They will also receive the URL, username, and password to login to the system. **If this is the first time logging into the system, the user will login in using the system generated password and proceed to Account Setup - *enter the system generated username and password, select logon.***



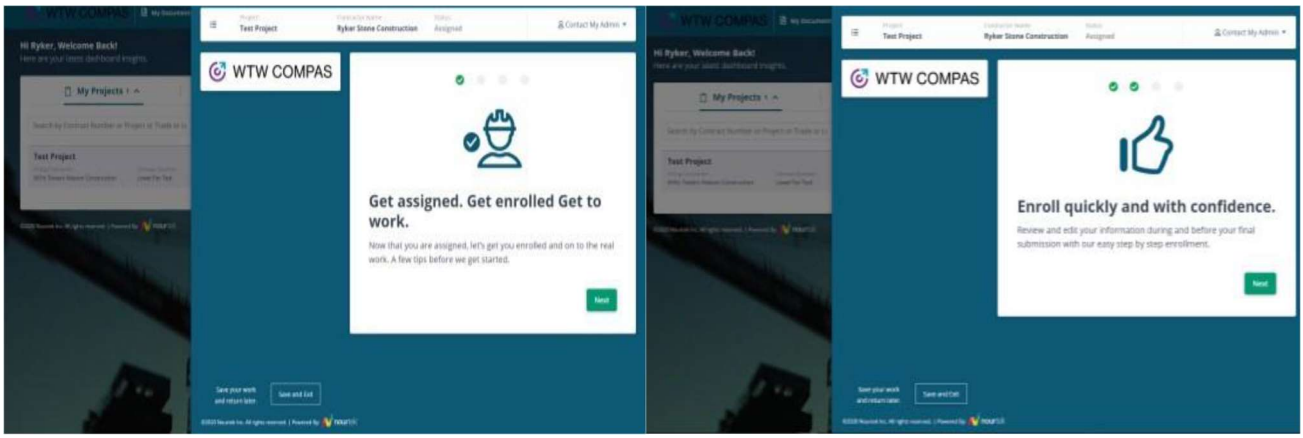
Welcome screen will open select Sign In. The Welcome screen will launch, select Let's Start.

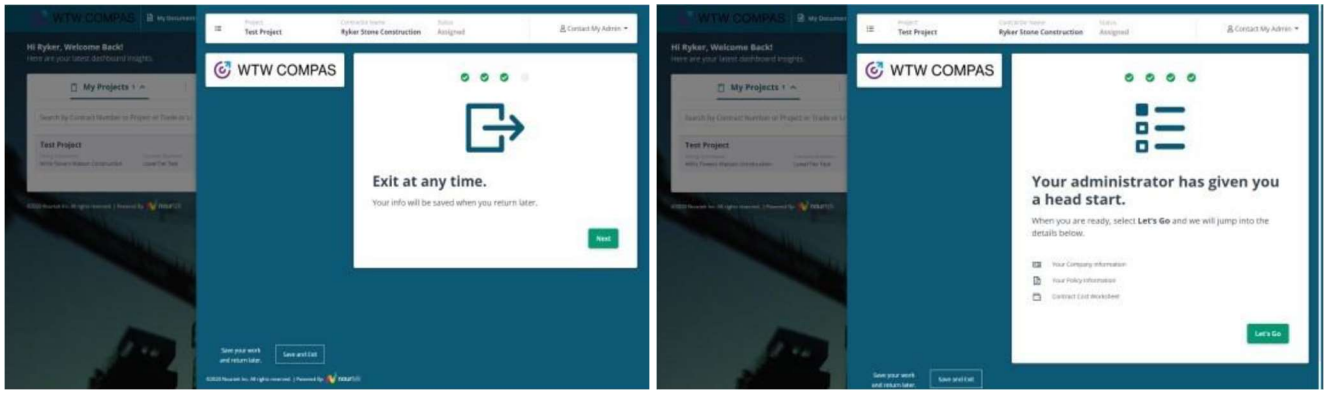


1. Re-set the system generated password. The password policy for the contractor portal is included at the bottom of the screen. Select Continue.

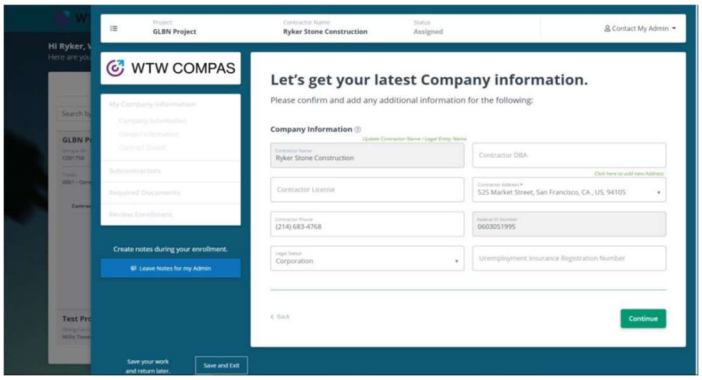


2. If this is your first-time logging in the wizard will launch to begin the enrollment process. Select Next until you reach the screen with the Let's Go icon.

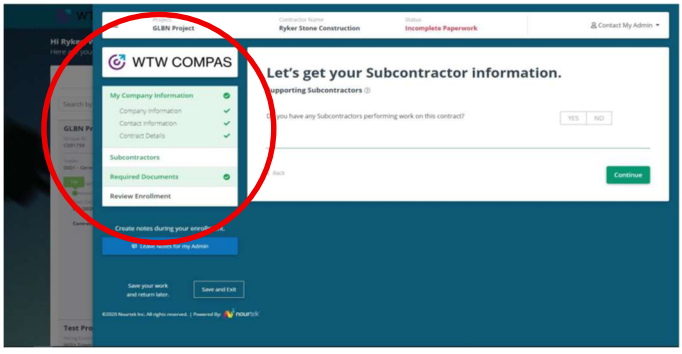




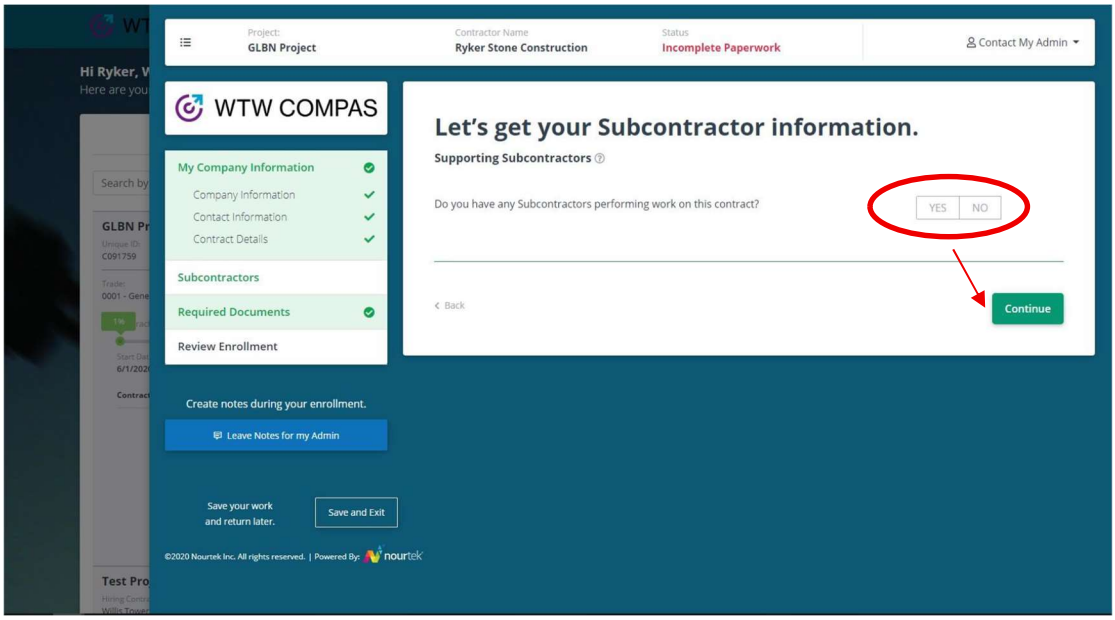
3. To continue with the enrollment process, the user will need to select the contractor package with Assigned status. Under the Contract Activities select Enrollment. Enter and/or update all sections under Company information select Continue in the lower right-hand side of each section to continue through the enrollment process. Users are required to populate all fields with red asterisks.
   If a user is unable to complete the enrollment, use the Save and Exit icon to save data to return at a later point to complete the enrollment.
   If a user has questions regarding the enrollment process, select Leave Notes for my Admin icon to send a question to your Client Service Specialist.



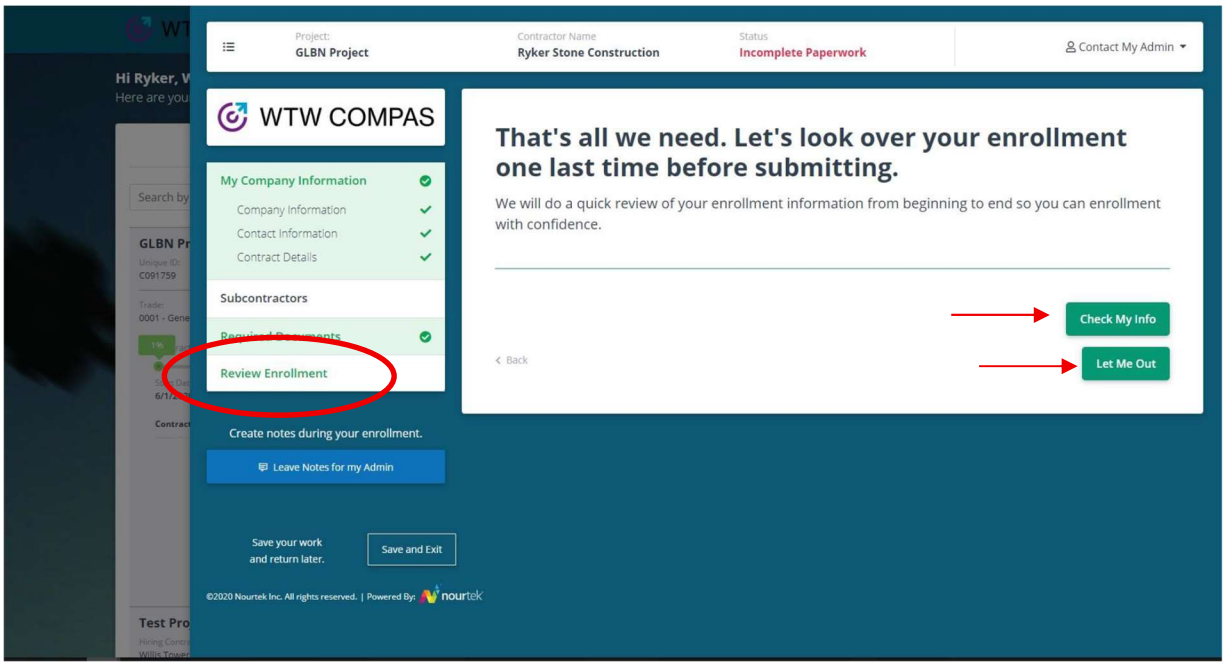
4. Sections that are complete will have a green checkmark to indicate that the section has been completed. At the completion of the My Company Information users will have the opportunity to review information submitted before moving on to add Subcontractor information. If any changes are required select the Edit icon next to the section that needs updates.



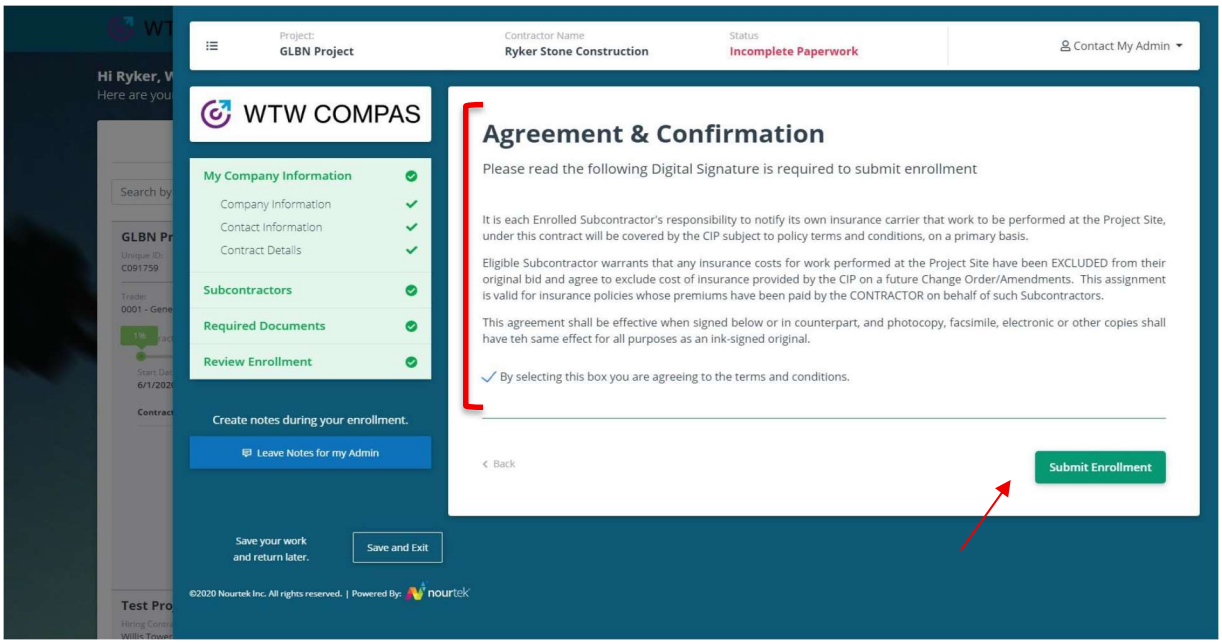
5. Users will be able to enter their subcontractor information if Subcontractors have been identified. Select Yes in the subcontractor section and enter subcontractor information. If Subcontractors have not been identified select No and select Continue to continue to the next section.



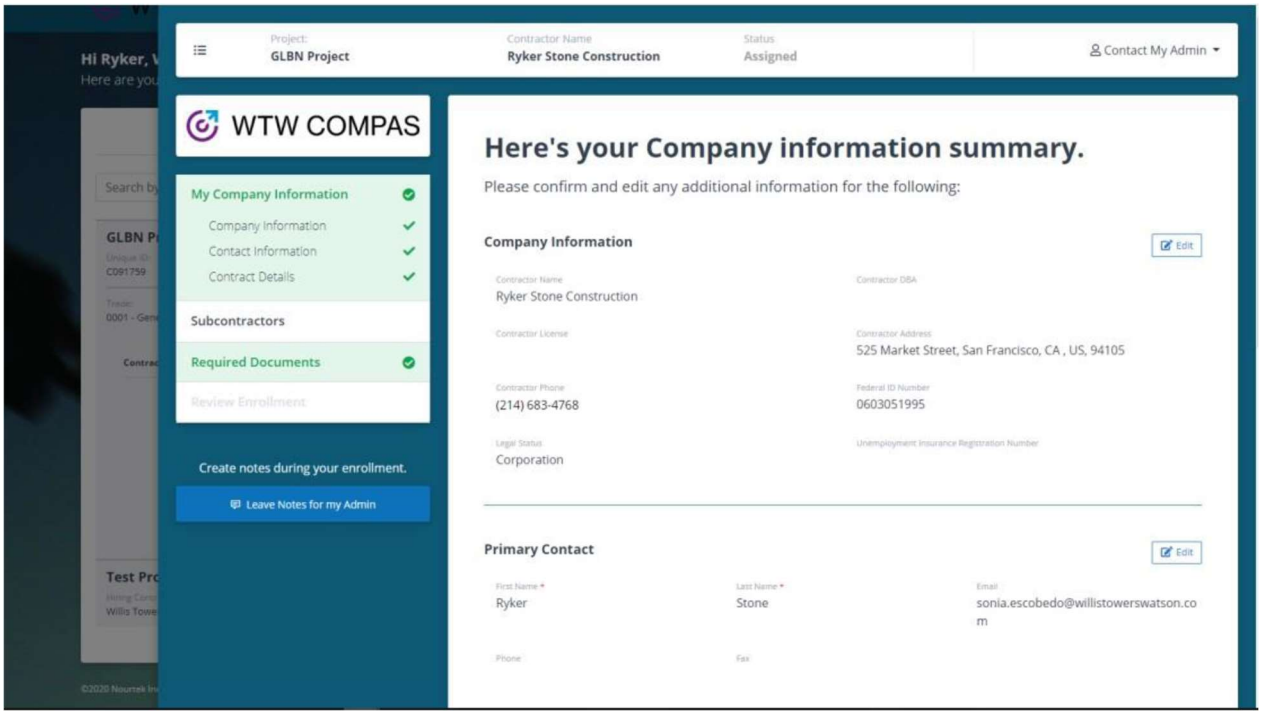
6. Once all enrollment and subcontractor information has been entered select Review Enrollment. Users will have an opportunity to review all information entered and confirm nothing has been missed by selecting Check My Info. When the user selects Let Me Out the terms and conditions screen will display.



7. Review and agree to the terms and conditions by selecting the box and agreeing to the terms and conditions. Then select Submit Enrollment.



8. Users will receive a confirmation screen that the enrollment has been submitted and will be able to download a pdf version of the enrollment submitted for their records. Select Complete to return to the dashboard. Once the enrollment is reviewed and confirmed your Certificate will be available in the Documents Section.



XI. Appendix II

Builder's Risk/General Liability Claim Reporting Checklist

Required Document / Information	
☐	**Complete the Builder's Risk Incident Report Form (found on the LAUSD OCIP Webpage).**
☐	**School map/blueprint (indicating the exact location(s) of the damage)**
☐	**Current estimated total loss amount (including repairs and/or mitigation, labor, materials, and any costs)**
☐	**If applicable, proposals, quotes, invoices, payroll, work orders, etc.**

About WTW

At WTW (NASDAQ: WTW), we provide data-driven, insight-led solutions in the areas of people, risk and capital. Leveraging the global view and local expertise of our colleagues serving 140 countries and markets, we help you sharpen your strategy, enhance organizational resilience, motivate your workforce and maximize performance. Working shoulder to shoulder with you, we uncover opportunities for sustainable success — and provide perspective that moves you. Learn more at wtwco.com.

Facilities School Maintenance and Operations Repair & Construction Safety Standards







LAUSD FACILITIES SERVICES DIVISION SAFETY POLICY STATEMENT

Safety is the Los Angeles Unified School District's (LAUSD) first priority for all contractors, vendors, staff, employees and the public when performing construction, maintenance and operations, and related support activities at all LAUSD sites.

Every person is entitled to a safe and healthy place in which to work. Establishment and maintenance of safe environments are the shared responsibility between the District, contractors, staff, and vendors at all levels of the program. Reasonable efforts will be made in achieving the goal of zero incidents preserving the health and welfare of people and the environment.

LAUSD promotes safety and health as an integral part of the District's sustainability initiatives and strives to include all entities with an active interest in the success of education and community services for each city, township, and neighborhood that LAUSD serves.

As an employer, educator, and business partner, LAUSD provides opportunities for contractors, vendors, and the public to actively participate in the LAUSD safety and health training activities through multiple venues including: the We-Build programs; various forums including conferences, meetings, trainings, and presentations. LAUSD encourages all interested parties to participate in safety by supporting the efforts to build modern schools and facilities designed to educate and inspire future generations.

The Los Angeles Unified School District leadership understands that the success of the safety at LAUSD Facilities Services Division, Maintenance and Operations, and Construction Safety is dependent on the partnerships with our contractors, employees, and the local communities. It is the expectation of LAUSD that our partners share our values for providing a safe and healthful working environment which includes promoting regulatory compliance with regard to Safety, Health, and the Environment; (SHE); identifying and prioritizing risks; and implementing proactive controls and Best Management Practices (BMPs) to reduce risk to lowest level reasonably achievable.

LAUSD believes that all incidents and accidents are preventable. Safety is the responsibility of everyone while on LAUSD sites and accountability lies with line management.

Safety is a line management function and line management shall ensure that the tenets of the LAUSD Facilities Services Division Safety and Health program are effectively implemented.

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1. LAUSD SAFETY PHILOSOPHY

'All Incidents and Injuries are Preventable"

LAUSD is dedicated to the principle that all Construction, Maintenance and Operations, and related activities may be performed safely without incidents through proper planning, engineering, education, training, and proper supervision.

Once the need for Construction or Maintenance and Operation (M &O) activities has been identified, LAUSD will plan the nature and scope of the work based on best available information including, the various mechanisms established through Federal, State, Local and regulatory agencies as well as National Consensus Standards and identified and agreed upon Best Management Practices (BMPs). Safety will be integrated into all planning activities including site conception and design; construction activities; and maintenance and operations.

Safety program integration of all stakeholders including LAUSD employees', contractors, Construction Management firms, Vendors, the public, LAUSD officials and labor unions is imperative to ensure all personnel may have input into the LAUSD-Facilities Service Division (LAUSD-FSD) safety program to ensure the program's sustainability...

In the design process, the main goal should be to turnover a site that is regulatory compliant and can be safely maintained by LAUSD maintenance and operations personnel once the work is completed.

LAUSD has the responsibility for implementing processes to ensure sites are completed in a manner that strives to prevent accidents. These processes include ensuring that only qualified CM firms, Contractors, and Vendors are utilized for work-related activities. Depending upon the size and scope of the site, the oversight for each site may include: a CM firm; General Contractor (GC), subcontractors, vendors, consultants, and staff to implement safety at each site. LAUSD or its contracted representative has responsibility for safety at the site project to include initiating, maintaining, supervising and enforcing all safety precautions and programs in connection with the performance of the contract. In addition, all Contractor employees are expected to work safely and to contribute to the safety of others. This is a critical responsibility for everyone working on LAUSD School Modernization and Repair, New Construction, and M and O Sites.

Accident/incident prevention is viewed as an integral component of the construction process along with productivity and quality, all of which will have a positive impact on reducing site costs. The community also benefits directly from accident prevention efforts when potential damage to the environment, property, or injuries to members of the community is effectively mitigated.

All incidents can be prevented in part by eliminating hazards and unsafe behaviors. But where this is not practical, safety engineering controls, administrative controls, proper training, safe operating procedures and personal protective equipment can be used to safeguard against the hazards,

PROGRAM OBJECTIVES

The Safety Standards contained in this document were developed as minimum guidelines to eliminate or reduce hazards and risk associated with maintenance and construction activities within LAUSD. These

standards shall not conflict with any negotiated governing document such as the General Conditions or PSA agreement provided the agreements do not pose a negative impact on safety or the environment.

However, LAUSD, its authorized representatives, and the OCIP Administrator and Insurer will neither assume nor relieve any entity of their direct responsibility for the safety and health of their employees, the protection of students, faculty, visitors and the public and the protection of equipment, property, and the environment.

LAUSD, their authorized representatives and the construction management teams will monitor these Safety Standards and review the efforts of all contractors', subcontractors', and staff in the performance of the following:

- Ensuring a safe and healthy environment for LAUSD students, faculty and the public during construction and maintenance activities;
- Minimizing conflict, by communication with the Owner Authorized Representative (OAR), LAUSD Safety and Construction Management to coordinate work and keep school administration informed about all construction schedules;
- Implementing and including safety planning/pre-planning protocol in all site management and Contractor progress and/or safety meetings. The Job Safety Analysis/Job Hazard Analysis (JSA/JHA) format shall be utilized to assist with safety pre-planning;
- Provide safety audits/inspections to *identify, prioritize, and correct* non-compliance conditions;
- Protect public and private property adjacent to all construction site work zones;
- Provide a safe work environment for all workers by implementing and enforcing compliance with the following training protocol:
    1) New hire safety orientations
        i. Mandatory LAUSD New Hire Orientation Checklist must be maintained for each employee on site.
        ii. In addition, the OCIP manual requires the MPN letter be signed by the employee upon hire and retained on site;
    2) Toolbox/tailgate safety meetings;
    3) Safety training, i.e., hazard communication, fall protection, equipment operations, trenching, shoring, confined space entry, etc.;
    4) Mandatory personal protective equipment (PPE) uses and enforcement.
    5) Mandatory employee compliance with the Contractors' and LAUSD Safety Standards.
- Injury reporting and record keeping maintaining up-to-date accident experience and trend analysis;
- Using accident investigation and safety inspection information to correct unsafe acts and conditions identified in order to eliminate or reduce the probability of additional losses;

- Informing the OAR and/or the LAUSD Safety staff of any visit from a regulatory agency such as Cal-OSHA, OSHA, EPA, AQMD or other regulatory agency.
- Conflicts shall be brought to the attention of the OAR and/or LAUSD Safety. The OAR and/or LAUSD Safety reserve the right to issue a final determination for conflicts.
- **During the competitive and/or negotiated bid process, Contractors shall incorporate the most protective safety requirements as found in Federal, State, Local regulatory, and National Consensus standards such as ANSI/ASSE, NFPA, NSF, CGA, NIST, ADA or other relevant and applicable standards. It is the bidder's responsibility to be knowledgeable of all EHS regulatory and National Consensus Standards.**
- **No change order for safety purposes shall be approved without the review and recommendation of the construction safety director in conjunction with the site management team.**

2. REGULATORY COMPLIANCE

2.1 CONFLICTS BETWEEN SAFETY CODES AND STANDARDS

Unless otherwise specified in the LAUSD School Repair and Construction Site Safety Standards and/or the Contractors' Safety Standards, Contractors shall comply with all applicable provisions of Federal, State, and local laws, ordinances, codes, regulations and other contract document criteria pertaining to or affecting safety and health, including but not limited to the Cal/OSHA Safety Orders (California Code of Regulations, Title 8 and Title 29 Code of Federal Regulations (29 CFR)) and National Consensus Standards whether or not incorporated by reference in this manual.

In all cases the most protective safety rules, policies, procedures and/or standards will apply regardless of source. LAUSD Safety in conjunction with LAUSD-FSD management reserves the right to impose more stringent requirements as may be necessary depending upon the nature of the hazards and the associated risk to the district, employees, the public and the environment.

2.2 DEFINITIONS

The following titles may not reflect the actual titles in use by all entities on LAUSD sites and therefore do not have any force or effect beyond the LAUSD Safety Standards. Due to such differences in nomenclature between LAUSD and contractors, the following are used throughout the LAUSD Safety Standards to establish the functional framework for compliance with LAUSD job site safety protocol.

Authorized Person: (In reference to an employee's assignment) Selected by the Contractor for that purpose.

Competent Person: One who is qualified to identify existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them and has the authority to stop work if an unsafe condition cannot be corrected.

Contractor: The entity with which LAUSD enters into this contract.

Contractor/Company Safety Plan (C/CSP): The Contractors/Company Safety Plan prepared in accordance with the requirements of this document and any other applicable LAUSD contract documents. The C/CSP will include the Site-Specific Safety Plan and IIPP.

Contractor's Site Manager (CPM): The senior management person for the Contractor with responsibility for execution of the contract, including compliance with the LAUSD Safety Standards. The CPM is responsible and accountable for the development, implementation, and monitoring compliance with the Contractor's Site-Specific Safety Program.

Contractor's Site Superintendent (CPS): The senior on-site Superintendent for the Contractor with responsibility for execution of the contract, including compliance with the LAUSD Safety Standards. In some cases, the actual on-site representative may be an Assistant Superintendent or a Foreman. In such cases, this is the applicable person when the CPS is referenced. The CPS is responsible and accountable for project implementation and enforcement of the Contractor's Site-Specific Safety Program and the LAUSD Safety Standards.

Contractor's Safety Manager (CSM): Qualified Contractor safety management representative assigned responsibility for drafting and monitoring compliance with the Contractor's Site-Specific Safety Program and the LAUSD Safety Standards, including ongoing identification and correction of hazards.

Contractor's Safety Representative (CSR): Qualified on-site Contractor employee assigned the responsibility of implementing and monitoring compliance with the Contractor's Site-Specific Safety Program and the LAUSD Safety Standards, including ongoing identification and correction of hazards.

Employee: Person employed by a Contractor as defined by this section.

Employer: Firm or entity that has employees working on site. The term employer includes the contractor and subcontractors of all tiers. For the purposes of the safety standards, vendors, suppliers, and service providers on the site for the furtherance of the site are covered by this definition and are subject to the provisions of the LAUSD Safety Standards even though they are not covered by the OCIP.

IIPP (Injury Illness Prevention Program): In California every employer has a legal obligation to provide and maintain a safe and healthful workplace for employees, according to the California Occupational Safety and Health Act. An Injury and Illness Prevention Program (IIPP) is required for every California employer, employers with 10 or more employees must have a written IIPP. The Injury and Illness Prevention Program must be a plan that includes procedures and is put into practice. These elements are required:

- Management commitment/assignment of responsibilities;
- Safety communications system with employees;
- System for assuring employee compliance with safe work practices;
- Scheduled inspections/evaluation system;
- Accident investigation;
- Procedures for correcting unsafe/unhealthy conditions;
- Safety and health training and instruction; and
- Recordkeeping and documentation

Insurance Carrier (IC): Principle companies providing the coverage for Workers' Compensation, General Liability, Excess Liability, and any other insurance coverage.

LAUSD Safety Engineer: LAUSD Safety Engineer(s) responsible for monitoring, coordinating, and auditing the Contractor's compliance with all applicable safety, health, and environmental standards defined in the contract documents.

Loss Control Consultant (LCC): Insurance Administrator or Insurance Carrier Safety representative(s) providing technical construction safety expertise, conducting loss control safety audits, and performing other pertinent construction safety tasks on behalf of LAUSD.

Los Angeles Unified School District (LAUSD): The Owner.

OCIP Administrator: The party responsible for brokering and administering the OCIP Insurance Program.

OEHS: Office of Environmental Health and Safety – has primary responsibility for the safety and health of all employees, including Facilities Maintenance and Operations, LAUSD structures, property and grounds not covered by the construction Owner Controlled Insurance program (OCIP).

OSHA: OSHA as used in the context of these Safety Standards refers to the State or Federal agency with jurisdiction over workplace occupational safety and health at the site.

Owner: Los Angeles Unified School District (LAUSD).

Owner's Authorized Representative (OAR): The Owner's Employee or agent with overall responsibility for the site.

Owner Controlled Insurance Program (OCIP): Owner's (LAUSD) wrap-up insurance program which provides insurance coverage for eligible and enrolled Contractors, and Subcontractors of any tier, working on LAUSD construction site(s). The Owner identifies OCIP participants.

Qualified Person, Attendant or Operator: A person designated by the Contractor who by possession of a recognized degree, certificate, or professional stands, or who, by extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems relating to the subject matter, the work, or the site.

Site-Specific Safety Program (SSSP) [IIPP which will apply or be referenced in the Standards]: The Contractor's Site-Specific Safety Program prepared in accordance with the requirements of this document and the Contracts.

Subcontractor: Firm or other entity awarded work by a Contractor on a particular construction site. Subcontractor as used herein shall apply to all tiers of Subcontractors, as well as vendors and service providers performing work for the benefit of the Contractor. For the purposes of the LAUSD Safety Standards, vendors, suppliers, and service providers on the site for the furtherance of the site are covered by this definition and are subject to the provisions of the Safety Standards even though they are not covered or may not be enrolled in the OCIP.

Subcontractor's Site Manager (SPM): The senior management person for the Subcontractor with responsibility for execution of the contract, including compliance with the LAUSD Safety Standards. The SPM is responsible and accountable for development, implementation, and monitoring compliance with the Subcontractor's Site-Specific Safety Program and LAUSD Safety Standards.

Subcontractor's Site Superintendent (SPS): The senior on-site management person for the Subcontractor with responsibility for execution of the contract, including compliance with the LAUSD Safety Standards. In some cases, the actual on-site representative may be an Assistant Superintendent or a Foreman. In such cases, this is the applicable person when the SPS is referenced. The SPS is responsible and accountable for site project implementation and enforcement of the Subcontractor's Site-Specific Safety Program and LAUSD Safety Standards.

3. EMERGENCY PROCEDURES

3.1 JOB SITE EMERGENCIES (FIRE, ACCIDENTS/INCIDENTS, & MEDICAL EMERGENCIES)

Job site emergencies must be reported immediately to the *LAUSD OAR,* the Contractor and LAUSD Safety Department. M and O personnel must use the procedures outlined by the LAUSD Office of Environmental Health and Safety (OEHS) most current reporting system for all emergencies.

Job Site Emergency Telephone Numbers shall be posted on the job site bulletin board and, where applicable, in every Contractor's job site office trailer.

A local street map clearly identifying the site and active entrances/exits shall be maintained and posted on the job site bulletin board next to the Emergency Telephone Numbers.

All first line supervisors and construction management personnel (foremen and above) shall be trained in First Aid, CPR, and use of an Auto External Defibrillator (AED). AEDs shall be maintained on site for all construction sites that will exceed 25 personnel at any time during the project with a projected 911 paramedic response time of more than 4 minutes.

In the event that there are no hard-wire ("land line") telephones available at the site, the contractor shall identify and post an alternate phone number (in addition to 911) to be used to contact emergency service providers via cell phone. This policy is necessary since dialing 911 on a cell phone does not always provide a direct connection to local Emergency Services.

3.2 FIRE

Call 911 or the Local Fire Department

- At minimum, provide the street address and location (floor/area) of the fire.

In case of fire in any building:

- Evacuate the immediate area,
- Activate the fire alarm system (if available), and
- Call the Fire Department
- Call/notify the OAR and/or LAUSD Safety

For fire outside of buildings:

- Evacuate the immediate area, and
- Call the Fire Department.
- Call/notify the OAR and/or LAUSD Safety

3.3 MEDICAL EMERGENCY

Render first aid promptly to the injured employee. Call 911 or the local Emergency Medical Services. Call or report the job site medical emergency immediately to the OAR & LAUSD Safety. A medical emergency includes but is not limited to: unconsciousness; chest pain; difficulty breathing; excessive bleeding; acute

trauma related to neck and/or spine and any other illness or injury deemed to require paramedic or emergency response medical professionals. WHEN IN DOUBT, CALL 911 OR OTHERWISE INITIATE THE EMERGENCY RESPONSE PROTOCOLS.

The preferred provider for serious traumatic injuries is: Consult the Job Site Postings Notice, also reference the LAUSD Insurance Manual and Accident Reporting and Investigation Procedures in the LAUSD Safety Standards.

The designated provider for non-life threatening or minor injuries requiring medical treatment. The Contractor Safety Representative (Supervisor) shall be responsible for transporting employees with non-medical emergency injuries to the designated OCIP (Owner Controlled Insurance Program) clinic(s) for evaluation and treatment. This responsibility ensures timely care and compliance with site-specific incident response procedures. Consult the Job Site Posting Notice, also reference the LAUSD Insurance Manual and Accident Reporting and Investigation Procedures in these Safety Standards. Call/notify the OAR and LAUSD Safety.

3.4 EMERGENCY CONTACT LIST

Each Contractor shall provide LAUSD, OAR and LAUSD Safety with an Emergency Contact List.

- This list shall include 24-hour contact information for key site personnel.
- The Contractor shall maintain this list throughout the duration of the contract and provide a revised copy to all parties when made necessary by changes to personnel or their contact information.

3.5 EMERGENCY ACTION/EVACUATION PROCEDURES

Construction activities which could interfere/compromise LAUSD emergency action/response protocol to include emergency evacuation procedures and routes will require coordination between all Contractors involved, LAUSD representatives, school administration and emergency response personnel to determine if alternate emergency evacuation protocol will be required.

Contractor shall know the location of school evacuation routes, exits, gates and assembly areas utilized by school/personnel, students and the public and shall ensure that during construction work activities all evacuation routes, exits, gates and assembly areas are always accessible, open and clear.

When required or warranted, Contractors will post signage on temporary fencing used during construction to identify evacuation routes to ensure LAUSD Staff, Students and the public know the correct routes.

LAUSD school emergency action/evacuation procedures (when required) will be integrated with the Contractor's emergency action plan.

Contractors will know the location of and will not block access to the school's emergency supplies/equipment (first-aid kits, fire extinguishers, etc.).

In the event of an emergency scenario, Contractors will provide, inspect, and maintain on site first-aid, fire extinguishers, etc. Contractors will, if partial, avoid the use of LAUSD emergency supplies/equipment. If an emergency situation arises which warrants the use of LAUSD emergency supplies, equipment the

Contractor will expedite the used supplies/equipment, so it is available if needed by LAUSD representatives.

Contractors will know the location of utility shut offs.

The General/Prime Contractor is responsible for the development of a site-wide Emergency Action Plan that shall consider all potential emergency situations.

- Each Contractor shall develop a written job-specific Emergency Action Plan that will take into consideration all potential emergency situations specific to their scope of work.
- This Emergency Action Plan shall be shared and coordinated with all Contractors and LAUSD representatives on site. Job site personnel will be trained in the emergency procedures incorporated in the Emergency Action Plan.
- The Emergency Action Plan shall be revised throughout the course of the project to reflect changed conditions.

The Emergency Action Plan shall be maintained at the site, and available for review upon request.

At minimum, the Emergency Action Plan shall contain:

- Site map
- Street map of immediate area showing Site location that clearly identifies one-way and dead-end streets.
- Building Plan, including a plan for each floor
- Emergency notification list
- Emergency notification procedures
- Evacuation procedures
- Evacuation route(s)
- Evacuation refuge area
- How Employees will be trained on the contents of this plan
- Intervals for refresher training

4. EMPLOYEE CONDUCT

All employees on the site must maintain professional behavior at all times. Horseplay, fighting, any type of harassment or discrimination, possession, or use of alcohol and/or unauthorized drugs, possession of firearms and gambling are not allowed and will result in immediate removal of the Contractor employee(s) from the site.

Schools are not like other job sites! Control noise, eliminate profanity and use proper refuse disposal. TOBACCO USE IS PROHIBITED ON ALL LAUSD PROPERTY! LAUSD PROPERTIES ARE DRUG FREE WORKPLACES!

School restroom facilities are off limits to Contractor personnel.

4.1 NEWS MEDIA AND COMMUNICATION

The Contractor shall refer questions from news media personnel (radio, television, newspaper) to the *LAUSD Public Relations Spokesperson*.

The Contractor and its employees must refer all inquiries from the news media (radio, television, newspaper) pertaining to job site incidents/accidents to the LAUSD *Public Relations Spokesperson* or their designated representative.

4.2 CONSTRUCTION VEHICLE PARKING

Contractors must park in authorized areas only. Do not block or obstruct intersections, traffic or fire lanes, fire hydrants, driveways, or parking lot entrances. Do not park in red, yellow, or green zones marked on curbs. Offending vehicles may be towed without notice at the vehicle owner's expense.

Private vehicles are not permitted on the job site except in authorized/designated areas.

4.3 IDENTIFICATION

All Contractors and Subcontractor employees must have a company photo ID listing their name, company, site identification, ID issue date and tracking number.

All Contractor employees will wear shirts or hard hats which display the Contractor's name and/or logo.

Contractor equipment and vehicles entering and/or working at the site must have the Company name/identification clearly displayed on the vehicle.

4.4 ASSIGNED WORK AREA(S)

Contractors and Subcontractors are confined to their assigned work areas. Wandering throughout the job site is strictly prohibited.

5. LAUSD SCHOOL CONSTRUCTION AND RENOVATION PUBLIC SAFETY REQUIREMENTS

The protection of LAUSD staff, students and the public are a priority and will be an integral and required component of every Contractors Site-Specific Safety Plan. Contractors will implement and enforce "best practices" safety guidelines that are specific to potential public exposure hazards affiliated with their scope of work. In addition to the requirements in this section, ANSI A10.34 (MANDATORY) shall be followed.

Both new school construction and existing school renovation job sites are closely monitored by parents, LAUSD staff and the community therefore Contractor compliance with all applicable safety criteria defined in these Safety Standards, Federal, State, and local and National Consensus standards, regulations, ordnances, and laws, is mandatory.

LAUSD CONSTRUCTION PUBLIC SAFETY REQUIREMENTS

Be aware of your work environment:

- Determine Lead and Asbestos content of building materials PRIOR to any construction/demolition activities.
- It is the Contractor's responsibility to review both the Asbestos Survey/Inspection Report and the Lead Survey/Inspection Report prior to commencement of work and take the necessary steps to ensure the safety of students, faculty/staff, the public and Contractor employees.
- Contractors are responsible for hazardous waste disposal per contract specifications.
- Schedule dusty, noisy, or odorous activities with School Administration and the OAR/IOR in order to avoid disrupting normal school activities.
- Install barricades when needed to protect students and faculty/staff from construction activities.
- Keep equipment and extension cords away from students. [Equipment and extension cords should not be stored or utilized in areas where students/faculty is present.]
- All exits, emergency exits, must be clear, free, and unobstructed. Panic hardware must remain unobstructed, functional, and intact.
- All alarm systems must remain operable unless approval has been granted by the designated/authorized LAUSD representative and Authority Having Jurisdiction (AHJ).
- Fire watches must be maintained at all times during hot work activities and fire watch shall be a minimum 30 minutes following hot work.
- Escort deliveries onto the school site or make deliveries when students and faculty/staff are not present.

- SDS sheets for all chemicals must be available on the job site. Hazardous materials must be stored in designated/approved secured area(s) a minimum of 50 ft. from school buildings and 50 feet from adjacent neighboring properties and stored in a locked properly designed hazardous storage facility or containment. For roofing jobs block off air intakes or shut off air conditioners to prevent fumes from entering buildings.
- Any construction activities that impact neighbors' adjacent properties such as fence removal or installation of fencing on neighboring properties, excavation or undermining of sidewalks, or any other activity that may pose a direct impact to the property or occupants of the neighbors shall be reviewed by the construction safety department authorized representative.

In order to ensure that the above safety protocol is implemented and followed, public safety pre-planning will be incorporated into all construction site management meetings.

Additional public safety requirements are summarized in the applicable sections throughout these Safety Standards.

5.1 PEDESTRIAN HAZARDS

At the construction site, areas for public pedestrian traffic will be clearly marked at all times.

Public pedestrian traffic areas will be maintained so that slipping, tripping, and falling hazards are reduced.

Non-level surfaces will be delineated with high-visibility markings, signs, or notices.

Stairs or ramps will have handrails on both sides.

Elevated areas will have standard guardrails.

Building exits, sidewalks, and areas accessible to pedestrian traffic which are adjacent to overhead construction work areas shall be provided with falling object protection and/or barricaded/fenced a minimum of 10 feet from the falling object exposure.

The Contractor will monitor public ingress and egress routes to make sure that construction operations do not block stairways, doors, entrances, and exits, paths of travel, and gates or hallways.

When construction activities may require closing or blocking any stairways, doors, exits, entrances, gates, paths of travel or hallways the Contractor will notify LAUSD school administration and the OAR in advance so alternate access/egress routes which comply with all applicable safety standards, codes, ordinances, and regulations can be identified.

Contractors shall know the location of school evacuation routes, exits and assembly areas utilized by school personnel, students, and the public and shall ensure that before, during and after construction work activities all evacuation routes, exits, gates and assembly areas are accessible, open, and clear.

When required or warranted Contractors will post signage on temporary fencing used during construction to identify evacuation routes to ensure LAUSD staff, students, and the public will know the correct paths of travel.

Special attention will be given to the emergency evacuation of buildings, structures, and jobsites and how the construction may affect this evacuation.

5.2 LIGHTING

Lighting and welding flash on the jobsite that may project or illuminate areas offsite will be directed or shielded so that they do not create a public hazard.

Walking surfaces and other public areas affected by the construction site will be adequately illuminated.

5.3 RADIATION

Operations that may produce public radiation exposure hazards will be controlled and shielded.

The area must be barricaded to prohibit public access.

Signage that designates what type of radiation exposure may cause public harm or injury will be clearly displayed.

Ionizing and non-ionizing radiation hazards, including x-ray, laser, microwaves, ultraviolet and infrared radiation, welding rays or high-radiant heat sources and exposure, will be considered. If the site is located near a nuclear power facility, additional coordination for the evacuation must be considered.

5.4 EQUIPMENT/MACHINERY/VEHICLES

All equipment or devices, machinery and vehicles shall be inspected, tested, and maintained in accordance with manufacturer's guidelines/criteria and all applicable regulatory standards.

Sufficient barricades, shields, guards, alarms, signs, markings, and safety systems will be provided or installed on all equipment.

If any machinery or vehicles require special licenses, permits or operator training before they are used, the Contractor should secure or provide these before working with that equipment.

Areas with mobile equipment that is accessible to the public will be barricaded/fenced or guarded before and during the operation of the equipment. Warning signs, fencing, barricading or personnel should be placed at a sufficient distance from the areas to prevent the public from entering the areas by mistake.

If loads are hoisted or if other overhead hazards exist, a clear area below, which is sufficient to prevent public hazards, will be barricaded or fenced to prevent inadvertent public access. The area will be monitored during overhead work to ensure that it remains clear.

If noise makes it difficult to hear warnings or signals from mobile equipment, the decibels will be increased so that the warnings or signals can be heard. If this cannot be done, visual signals should be established to protect the public. Visual or radio contact will be maintained between the equipment operators and those who will provide the signals.

5.5 FALLING AND WINDBORNE OBJECTS

To prevent construction objects or debris from creating a public hazard, barriers, fencing, catch platforms, enclosures, perimeter, or vertical debris netting or other required administrative or engineering controls must be employed.

Public areas adjacent to the jobsite will be protected by fencing, sheds, overhangs, perimeter netting systems, platforms, scaffolding, or similar structures to protect pedestrians from falling objects or debris.

Construction material, tools, debris, waste, equipment, or other items will be contained, secured, tied-off, removed, braced, enclosed, or restrained so that they do not fall, blow away or enter public areas.

5.6 SECURITY

Measures will be established to restrict public access to the jobsite.

If access control is not possible, items that may create a hazard will be locked, barricaded, or removed.

Security systems or personnel may be employed during or after work hours to ensure that the public cannot gain access to the jobsite.

Authorities and security personnel should receive a list of those individuals who are authorized to access the jobsite during non-work hours.

Local enforcement authorities will be made aware of all security plans, and they will receive a list of personnel who will assist them.

5.7 VIBRATIONS AND SUBSIDENCE

Construction operations that produce ground or air vibration will be analyzed to prevent damage or subsidence of adjacent land or structures.

A pre-construction survey of the surrounding area, structures and accessories will be required and conducted before any construction activity begins. Any weaknesses or deterioration found during the survey should be reported to the presiding authority before construction

The Contractor will provide data that show the maximum limits of expected vibrations or subsidence. These limits must not exceed those specified by the presiding authority. Seismographic recordings will be made if required.

If warranted during the pre-construction survey, structural and geological investigation may be conducted.

Adjacent roadways, waterways, airways, sidewalks, buildings, and utilities will be monitored periodically during construction operations.

All excavations, cuts and trenches in public areas will be backfilled with approved material and then tamped and compacted as soon as possible.

Any public areas or structures that are disturbed, cracked, or broken during construction operations will be inspected, repaired, or replaced.

6. LAUSD CONTRACTOR SAFETY PRE-QUALIFICATION REQUIREMENTS

The **Contractor Safety Prequalification Questionnaire** has been developed to evaluate each contractor's overall past safety performance. Note: Not applicable to LAUSD M and O. The OEHS department shall follow existing LAUSD policy for M and O.

All Contractors seeking to bid on, or receive award of, LAUSD Sites must have an active Safety Prequalification. Verification of prequalification of subcontractors may be performed at the sites during construction safety audits.

The Safety Prequalification Questionnaire is no longer included in the Safety Standards. Current Safety Prequalification Questionnaires must be obtained from the following sources:

To obtain a current Prequalification Questionnaire for both Formal and Informal Contracts contact the:

- Facilities Construction Contracts Prequalification Unit:

To download current forms and information, go to the LAUSD Facilities Contracts Administration website,

http://www.laschools.org/new-site/

A copy of the Safety Prequalification Questionnaire is also included in the addendum.

General/Prime Contractors are contractually required to prequalify all their Subcontractors of all tiers using the LAUSD Contractor Safety Prequalification Questionnaire prior to executing a contract with the Subcontractor. Instructions for evaluating and scoring Subcontractors Safety Prequalification Questionnaires are contained in the Questionnaire.

The General/Prime Contractor shall not permit any Subcontractors to perform work on a LAUSD site without a current approved safety prequalification. Failure to safety prequalify all Subcontractors utilizing the most current revision of the Safety Prequalification Questionnaire may adversely affect the Contractors' prequalification status. Use of Subcontractors that do not meet the minimum LAUSD safety prequalification requirements may also adversely affect the General/Prime Contractors prequalification status. Note: Labor compliance issues will be handled by the Labor Compliance Department.

LAUSD and/or their designated representatives will, at their discretion, audit Subcontractor Safety Prequalification Questionnaires to verify the accuracy of the data.

7. RESPONSIBILITIES

7.1 PRIMARY SAFETY RESPONSIBILITIES

The Prime Contractor or Construction Management (CM) firm shall be responsible for initiating, maintaining, supervising, and enforcing all safety precautions and programs in connection with the performance of the construction contract for the on-site safety of their employees and (if applicable) their subcontractors performing work under their authority. To that end, an Environmental Health, and Safety Management System (EHSMS) is required of all contractors. THE EHSMS may be modeled after ISO 14000, 14001 and OHSAS 18001 or equivalent. At the site location, this includes responsibilities for vendors, delivery and transportation services, service providers, LAUSD facility, students, and the public. Note: Not applicable to LAUSD M and O. The OEHS department shall follow existing LAUSD policy for M and O.

The Contractor shall comply with all applicable provisions of Federal, State, and local laws, ordinances, codes, regulations, standards, and practices affecting the safety and health of employees, the public and environment.

Each Contractor and Subcontractor shall comply with the most stringent of the following:

- Applicable Cal OSHA Standards and Safety Orders or Federal OSHA Standards (Code of Federal Regulations, Title 29),
- The Contractor's Site-Specific Safety Program,
- Applicable National Consensus Standards (NCS) including ANSI, NFPA, etc.,
- These LAUSD Safety Standards.

Each Contractor shall have available for use and reference on the job site at a minimum; the contractor's Site-Specific Safety Program, one copy of all applicable OSHA regulations and the LAUSD Safety Standards.

7.2 SUBCONTRACTOR SAFETY RESPONSIBILITIES

General/Prime Contractors will be responsible for ensuring their Subcontractors initiate, maintain, supervise, and enforce the safety requirements of the LAUSD Safety Standards and the General/Prime Contractor's Site-Specific Safety Program, even though the requirements may be above and beyond the Subcontractor's own safety policies and Federal and Cal OSHA requirements. SITE-SPECIFIC SAFETY PROGRAM (SSSP)

Each Contractor shall have a written "Site-Specific [SSSP] Safety Program" in accordance with the provisions contained in the California Labor Code § 6401.7, 8 CCR § 1509 and § 3203, OSHA and LAUSD Safety Prequalification criteria. The Site-Specific Safety Program shall include, but not be limited to, the following site-specific components as they apply to the Contractor's scope of work. Note: This section is not applicable to LAUSD M and O. The OEHS department shall follow existing LAUSD policy for M and O.

- Safety and Health Policy Statement
- An Environmental Health and Safety Management System (EHSMS) with assignment of accountability and responsibilities for key personnel responsible for implementation and enforcement of the Site-Specific Safety Program
- Identification of Competent Persons and Qualified Persons
- Audit/Inspection Program
- Leading and Lagging safety metrics
- Scope of Work Evaluation
- Job Safety Analysis/Job Hazard Analysis Program (JSA/JHA) Task-specific Hazard Assessment (THA)
- Hazard/Risk/Exposure Assessment
- Control Measures/Activity Hazard Analysis
- Minimum Three Week Look Ahead Safety Pre-planning incorporated into the Job Site Progress Meetings.
- Procedures for effectively communicating safety and health matters to Employees
- Safety Incentive Program/Safety Recognition Program
- Progressive Disciplinary Action Program
- Job Site Hazard Identification Inspection and Corrective Action Program
- Safety Training Program (including provisions for Supervisory and Craft Employee training)
- Site-specific Employee Safety Orientation Program
- Provisions for maintaining orientation, training, inspection, corrective action, and accident/incident investigation records
- Written Hazard Communication Program and Respiratory Protection Program
- To include Safety Data Sheets for all products at the site
- Emergency Response and Evacuation Plan
- Storm Water Pollution Prevention Program (SWPPP)
- Fire Prevention Program
- Hot Work Program
- Drug Free Workplace/Substance Abuse Prevention Program
- Accident/Incident Reporting and Investigation Program
- Disability Management Program (Light Duty/Return to Work Program)
- Near Miss Incident Investigation Program
- Fall Prevention Program

- Scaffold Safety
    - Scaffold Inspection shall be addressed in the Scaffold Safety Program
    - Scaffold Erector and User Training shall be addressed in the Scaffold Safety Program
- Confined Space Entry Program
- Lockout/Tagout/Control of Hazardous Energy Program
- Excavation Safety Program
- Site Logistics Plan
- Other written programs required by this and other contract documents or regulatory agencies (i.e., heat stress, respiratory, equipment inspection program, etc.)
- Barricades and fencing protocols
- List of Attachments

The Contractor shall submit to LAUSD Safety within 10 days of the contract award an electronic copy of the Corporate/Company Safety Plan and Site-Specific Safety Plan for review and approval.

- The Program(s) will be reviewed for inclusion of the requirements of California Code of Regulations, Section 3203 (T8 CCR 3203) Federal OSHA Standards, the LAUSD Safety Standards and applicable sections of the Site Contract Specifications.
- The approval of the Program(s) will be based solely on the content of the Program relative to compliance with California Code of Regulations, Section 3203 (T8 CCR 3202) Federal OSHA Standards, the LAUSD Safety Standards and Site Contract Specifications. The Contractor retains responsibility for regulatory compliance, and the means and methods employed to implement the contents of the Program(s).
- Failure to attain approval of the Program prior to the scheduled commencement of contract work is not grounds for a time extension.
- Upon approval of the Program(s) for conformance to said requirements, the Contractor shall submit two copies of the Program signed by the Contractor's Owner or CEO to the OAR.

Prior to mobilizing on site or during "Notice to Proceed I" (NTP-I) the General Contractor will submit to the OAR and/or LAUSD Safety copies of their Sub-Contractors Job Hazard Analysis (JHA) for review and recommended improvement suggestions/comments.

Each JHA will summarize specific job task(s) performed, potential hazards associated with each task and the safety protocol required/implemented to reduce the injury /accident potential. Reference the Job Hazard Analysis section of these Standards.

Prior to beginning work each Contractor will ensure and review with their employees the JHA specific to the work to be performed. As evidence of training each employee will sign the applicable JHA. Copies of the JHA will be maintained on site for review by LAUSD Safety.

The General/Prime Contractor shall be responsible for ensuring that their Subcontractors comply with the provisions summarized above.

The Contractor's scope of work shall include compliance with the LAUSD Safety Standards. This shall include all services required for the complete performance of the *LAUSD Site* contract work and all related site work in accordance with the LAUSD Safety Standards and all applicable State and Federal regulatory criteria/standards.

Every Contractor and/or Subcontractor is responsible for planning and executing work in harmony with stated objectives of the LAUSD Safety Standards and all applicable State and Federal regulatory criteria/standards.

Every Contractor and/or Subcontractor shall furnish all information concerning the safety of their LAUSD job site operations upon demand to LAUSD authorized representatives.

Every Contractor and/or Subcontractor will enforce compliance with all job site safety work practices and procedures applicable to their scope of work as defined in the contract.

Drugs and Alcohol - The Contractor must support and encourage a drug-free workplace.

Alcohol, drugs, and weapons shall not be allowed on the job site under any circumstances, and violation of this policy shall be the cause for immediate removal.

All contractor and subcontractor site management/supervisory personnel shall have evidence of completing an OSHA 10/30 Hour Construction Outreach Training Program prior to mobilization.

Specifically, the following is required:

- A minimum of 20% of the jobsite workers to be OSHA 10-hour General or Construction Industry Safety and Health Certified.
- All foreman/first-line supervisors shall have either the OSHA 10/30 Hour Construction Outreach Training Program prior to mobilization.
- Hazardous Waste Operations and Emergency Response (HAZWOPER) workers must comply with the Federal and State mandated HAZWOPER regulations, including physical exams and training;
- Asbestos Workers must comply with the Asbestos Training requirements of the Asbestos Hazard Emergency Response Act (AHERA) and licensing requirements;

Applicable personnel assigned to the site after mobilization shall complete this training within 30 days of assignment.

Prior to beginning work, all employees shall fill-out new-hire paperwork (MANDATORY) are to receive a site safety orientation which at a minimum review the IIPP, site safety rules, policies, procedures, regulations and applicable emergency and evacuation plans. This shall be done at the jobsite trailer prior to any job-setup, dropping off of tools, or taking part in any work-related activity.

Authorized vendors, suppliers, haulers, visitors, etc. shall either be accompanied by a qualified Contractor employee or be provided with an orientation that is appropriate for their job task exposures during their time on site.

In order to address specific areas of concern LAUSD reserves the right to request additional Site Safety Meetings be conducted.

Every site shall schedule and conduct (at a minimum) monthly site safety meetings with their onsite personnel to properly coordinate the work within the trades and resolve matters related to safety and health associated with site work. The General/Prime Contractor's safety pre-planning shall be incorporated into the job site progress/schedule meetings. Minutes shall be kept of each meeting which will include topics covered and attendees.

The Contractor will ensure that all personnel are properly trained and instructed for all jobs which require specific training and/or competency to meet all applicable Cal OSHA and Federal OSHA regulations, State and Federal laws, and compliance with the LAUSD Safety Standards and the contractor's Site-Specific Safety Program.

The Contractor shall conduct toolbox safety meetings with their Employees at least once a calendar week. Minutes of these toolbox meetings are to be prepared and maintained by the Contractor, and available for review by authorized LAUSD representatives.

- Meeting minutes shall contain the following:
  - Employee names in a legible format
  - Signature of each Employee
  - Contractor name
  - Date of meeting
  - Description of meeting topics
  - Name(s) of person(s) conducting the meeting

Prior to starting work, each Contractor and Subcontractor (via the General/Prime Contractor) shall submit to the OAR a list of (a) Competent Persons and Qualified Persons as applicable to the Contractor's scope of work, and (b) First Aid/CPR trained personnel.

- Each list shall be clearly dated and updated as required throughout the contract period. Each time the list is updated, a copy shall be provided to the OAR.

Each Contractor is responsible for handling, on a daily basis, rubbish and debris generated by its work. The Contractor must keep the workplace clean.

The Contractor is responsible for ensuring that corrective action is taken when *Loss Control Survey* forms are issued to the Contractor.

The *Safety Audit Corrective Action* form must be completed by the Contractor and returned to the OAR as required by these Safety Standards. Copies of these forms are provided in the appendix.

The Contractor will cooperate with inspections conducted by Cal OSHA/Federal OSHA and other regulatory agencies. The Contractor will immediately notify the OAR and LAUSD Safety of these inspections.

The cited Contractor(s) shall immediately upon receipt submit copies of all regulatory agency citation notices (if applicable) to the General/Prime Contractor, LAUSD OAR and LAUSD Safety.

- The General/Prime Contractor shall ensure that the cited Contractor posts copies of all citations as required by OSHA or the applicable regulatory agency.

8. CONTRACTOR SAFETY MANAGER, CONTRACTOR SAFETY REPRESENTATIVE AND SUBCONTRACTOR SAFETY REPRESENTATIVE

In order to ensure/maintain a safe work site, Contractor(s) shall designate a responsible and qualified member of its company who has the authority to assure compliance with the Contractor and LAUSD Safety Standards.

8.1 DEFINITIONS

Contractor Safety Manager (CSM): Projects which at any time throughout the duration of the contract will exceed 50 or more employees or contracts exceeding $10,000,000 or more in contract value will require a professional Contractor Safety Manager (CSM). The Contractor Safety Manager will be assigned to the site full time to carry out the duties as described in this document. The Contractor Safety Manager shall have no other duties other than maintaining the OCIP and Safety Programs.

Alternate Contractor Safety Manager (ACSM): An individual meeting the same requirements of the CSM that assumes the role of the CSM on a temporary basis.

Contractor Safety Representative (CSR) Less than 50 employees: A Contractor employee assigned safety responsibilities for shift work and distinct work locations as required. The CSR reports to the CSM. Additional SSR personnel shall cover shift work and distinct work locations as required. The Contractor can delegate the CSR duties to a qualified on-site Field Supervisor. CSR responsibilities cannot be delegated to an office or staff employee.

Alternate Contractor Safety Representative (ACSR): An individual meeting the same requirements of the CSR that assumes the role of the CSR on a temporary basis.

Subcontractor Safety Representative (SSR): Subcontractor employees assigned safety responsibilities for shift work and distinct work locations as required. Additional SSR personnel may be required to cover shift work and distinct work locations. The Subcontractor can delegate the SSR duties to a qualified on-site Field Supervisor. SSR responsibilities cannot be delegated to an office or staff employee.

Contractor Safety Manager (CSM)/Alternate Contractor Safety Manager (ACSM)

- The CONTRACTOR shall provide at a minimum, one (1) FULL TIME on-site competent and qualified English-speaking Contractor Safety Manager, with a proven record of accomplishment on sites of similar scope and complexity and the appropriate number of years as a Contractor Safety Manager on sites of this scope and complexity as evidenced by submitted background information. This person shall be physically present at the site while any aspect of the Work is being performed and shall have no tasks other than administering the Safety Program and ensuring adherence to the LAUSD Safety Standards. The Contractor Safety Manager shall be retained in this capacity for the duration of the Work. Should there be a need to replace the Contractor Safety Manager, the CONTRACTOR shall submit to LAUSD Safety for approval, within thirty (30) days prior to the proposed date of replacement, the

appropriate background information for the new Contractor Safety Manager prior to such replacement. At a minimum, the Contractor Safety Manager shall be on-site full-time from NTP-1 through Substantial Completion of the project. Contractor Safety Manager Personnel change requires 30 days' written notice to be sent to the following; LAUSD Safety Director, OAR, Senior Project Manager and the Regional Director.

Note: LAUSD construction safety will facilitate the proper transition of safety personnel in the event a Safety Manager leaves without knowledge or notification to their employer.

The following minimum qualifications:

- Degreed Safety Professional– (bachelor's or higher) plus three (3) years as full-time construction safety professional.
- Certified Safety Professional (CSP) Board of Certified Safety Professionals plus three (3) years as full-time construction safety professional.
- Certified Health and Safety Technician (CHST) Board of Certified Safety Professionals plus three (3) years as full-time construction safety professional.
- Training and certification in the OSHA 30-Hour Construction Safety Program and must have received additional training, when required by OSHA standards, on specific hazards of the site, and has completion of the OSHA 500 Basic Instruction Course in Occupational Safety and Health Standards for the Construction Industry is recommended. This individual must have performed full-time safety responsibilities for a minimum of five (5) years in the construction industry.
- At the discretion of LAUSD, other certifications and qualifications may be considered.

In accordance with the Owner Controlled Insurance Program (OCIP), If at any time a Subcontractor has over 50 workers on the jobsite, the Subcontractor shall also have a DEDICATED, FULL TIME Subcontractor Safety Representative (SSR) on the site. If Subcontractors provide a FULL TIME SSR, it will not absolve the General/Prime Contractor of their responsibilities to provide a FULL TIME, qualified CSM. The Subcontractor(s) Safety Representative(s) shall have no other tasks other than administering the Safety Program and ensuring adherence to the LAUSD Safety Standards. The Subcontractor(s) Safety Representative(s) shall also meet the minimum qualifications identified above.

- If the General/Prime Contractor and/or their Subcontractors daily job site work force will at no time throughout the duration of the site exceed 50 combined total employees, the Contractor and/or Subcontractor can delegate a Contractor Safety Representative (CSR) or Subcontractor Safety Representative (SSR) duties to an on-site supervisor who meets one of the following criteria.
  - The CSR/SSR must be credentialed with a Safety Trained Supervisor (STS) certification.
  - Or have successfully completed the OSHA Construction Outreach 30 Hour Programs within the past 3 years and have a minimum of two (2) years of construction safety experience.

- Prior to or during NTP-1, Contractor will submit to LAUSD Safety the resume of the person(s) who will manage their safety responsibilities on site. Once approved by LAUSD Safety, the safety representatives regardless of their job title designation will not be changed except with the approval of LAUSD Safety. Such approval is not an acceptance of responsibility. The Contractor shall submit for approval, within thirty (30) days prior to the proposed date of replacement, the appropriate background information for the new Contractor Safety Manager.
- All pre-qualified Contractor safety personnel regardless of their job title will have:
  - Construction safety experience relevant to the scope/type of work the Contractor performs.
  - Current First Aid training from a provider recognized by OSHA.
  - Current CPR training from a provider recognized by OSHA.
- The CSR and/or SSR must be allocated sufficient time to perform their job site safety duties and responsibilities.
- If necessary, LAUSD Safety reserves the right to direct the removal and replacement of the CSM, CSR or SSR.
  - **A CSM, CSR or SSR shall be present at all times, including overtime and weekends when work is being performed within the scope of their employer's authority or responsibility.**
  - The CSM shall be provided on the job site from NTP-1 through Substantial Completion. The CSR(s) and/or SSR(s) shall be provided on site for the duration of work performed by their employer.
- An Alternate Contractor Safety Manager (ACSM) or Alternate Contractor Safety Representation (ACSR) meeting the same qualifications as the CSM, or CSR shall be present when the CSM or CSR is not present on the job site. The ACSM or ACSR shall have the same responsibilities as the CSM or CSR. ACSM, ACSR or SSR duties may be assumed by a similarly qualified site supervisor.
- The Contractor will notify the OAR when the CSM and CSR will not be present on the job site. This notification will include the name of the ACSM or ACSR.
- The General/Prime Contractor shall maintain a list of all Contractor and Subcontractor safety representatives on the job site. Upon request this list will be made available for review by authorized LAUSD representatives.
- The OCIP Coordinator or Risk Manage may exclude contractors form the OCIP or claims may be denied for failure to follow the OCIP Manual requirements as part of the employer contract including the provision to have a full-time safety representative as stated in this section.

8.2 CONTRACTOR SAFETY MANAGER, CONTRACTOR SAFETY REPRESENTATIVE, AND SUBCONTRACTOR SAFETY REPRESENTATIVE RESPONSIBILITIES

All Contractor Safety Representatives (regardless of their job title designation) responsibilities and authority must include but are not limited to the following:

- Authority to enforce COMPLIANCE WITH the Contractor's Site-Specific Safety Program, IIPP and LAUSD Safety Standards.
- Responsibility to assure compliance with the OSHA Act and any other safety standards relative to their scope of work.

In addition to requirements described elsewhere in the Safety Standard, the Contractor's Safety Manager, Alternate Construction Safety Manager and Contractor's Safety Representative and Subcontractor Safety Representative shall have at minimum:

- Authority to stop work when a serious safety or imminent danger/hazard is identified.
- Authority to implement corrective action(s).
- Authority to remove individuals, supervisors, or subcontractors from the site for refusing to comply with Contractor, LAUSD and OSHA Safety Standards.

Specific responsibilities of the Contractor's Safety Manager/Representative must include, but are not limited to assisting, completing, or overseeing completion of the following by their Employer and Subcontractors:

- Assist Contractor Management with the planning and scheduling of work operations to prevent personal injury and/or property damage hazards.
- The CSM or CSR shall conduct safety orientation sessions for employees new to the site, prior to their beginning work. Documentation of site safety orientation will be maintained, and identification made by the use of a hardhat sticker specific to the site.
- Conduct, participate in, or assist field supervisors with weekly toolbox safety meetings.
- Conduct weekly supervisor/management safety meetings.
- Instruct and inform supervisors/management on safety rules and regulations.
- Assist supervision with correcting unsafe acts by employees through proper job placement, training, and the use of good discipline.
- With the support of Contractor Management, setup/draft, implement, monitor, and enforce, the Job Hazard Analysis (JHA) Program.
- Instruct supervision and employees in the proper use and care of personal protective equipment (PPE).
- Instruct supervision and employees concerning special procedures for imminent hazard exposures (e.g. confined space entry, excavations, lock out/tag out, fall protection, etc.)
- Conduct OSHA required training.

- Complete and maintain on site for review OSHA, State, Federal, Company and site-specific safety reports.
- Complete accident reporting and investigation reports in accordance with the LAUSD Insurance Manual and LAUSD Safety Standards. Take corrective action to prevent recurrence of similar type accidents. Records will be maintained on the site and distributed as described in the Safety Standards.
- Ensure that required first aid supplies are adequate.
- Coordinate transportation of employees with minor injuries to the designated Medical Clinic.
- Maintain training documentation on site for review by authorized LAUSD and/or regulatory representatives.
- Implement site-specific safety policies and procedures.
- Demonstrate, by example, proper safety behavior.
- Keep the Project Manager, OAR, and LAUSD Safety informed of any safety related problems that have or may develop.
- Conduct and document (at a minimum) daily site safety inspections. Documentation shall be created and maintained on site listing action(s) taken to correct deficiencies identified during inspections.
- Forward copies of inspection and corrective action records to the OAR and LAUSD Safety.

Review LAUSD Safety Audit Reports received from LAUSD Safety or the Insurance Carrier Safety Representatives that note safety non-compliance items.

- Disseminate the LAUSD Safety Audit Reports to Subcontractors if necessary.
- Ensure corrective action is taken.
- Return the completed LAUSD Safety Audit Report Corrective Action Plan to the OAR and LAUSD Safety and others as required on the project within three (3) business days. LAUSD Safety Audit Report Corrective Action Plan will be reviewed at the Weekly Progress meeting.

9. LAUSD SAFETY RESPONSIBILITIES

LAUSD Safety is responsible for auditing the Contractor's Company/Corporate Safety Plan (C/CSP), including their Injury Illness Prevention Plan (IIPP) and Site-Specific Safety Program (SSSP). Note: This section is not applicable to LAUSD M and O. The OEHS department shall follow existing LAUSD policy for M and O.

LAUSD Safety reports these findings to LAUSD Construction Management, the OAR, and the Contractor for corrective action and enforcement. Responsibilities and duties of LAUSD Safety may include, but are not limited to the following:

- Compile and maintain safety performance statistics for the site.
  - Communicate the above information to LAUSD Construction Management, the OAR and other authorized LAUSD representatives to ensure they are informed and/or involved with safety management activities.
- Keep apprised of and communicate to Contractor management new regulations and developments to assist Contractors with keeping safety policies and procedures current and effective.
- Conduct safety program audits and site safety surveys of Contractors and Subcontractors work activities to verify compliance with LAUSD, and Contractor safety protocol, confirm regulatory compliance, identify, and document non-compliance items, and make recommendations for improvements.
- LAUSD Safety will document non-compliance items, recommendations, and or comments on the *Safety Audit Report*. Copies of the completed *Safety Audit Report* will be submitted to the OAR and Contractor(s). The *Corrective Action Plan* form will be submitted to the Contractor when a written response is required.
- Review and communicate safety methods and procedures to the Contractor's Safety Manager/Representative, and authorized LAUSD representative(s) to foster the highest level of accident/incident prevention performance possible.
- Provide special consulting to LAUSD Construction Management, OAR, Contractor and Subcontractors regarding safety issues and challenges that may arise on the site(s).
- If required, conduct, or participate in accident/incident investigations.

LAUSD Accident Investigation Reports shall not relieve Contractor(s) of their obligation to conduct their own investigation, or of any responsibility they have to complete and file notices, reports, and forms in accordance with applicable regulatory requirements and LAUSD accident reporting protocol as defined in the LAUSD Insurance Manual.

Review all Contractor incident investigation reports to ensure thorough investigations were conducted and controls instituted to prevent future accidents or incidents.

10. CONTRACTOR PROGRESS MEETINGS

The following is a suggested agenda for the Safety and Loss Control component of the Progress Meeting. This agenda may be modified to reflect the site's needs. Note: This section is not applicable to LAUSD M and O. The OEHS department shall follow existing LAUSD policy for M and O.

Contractor:

Report on accidents/incidents involving the Contractor or its' Subcontractors since the last progress meeting.

If the SAF 3 accident/incident form has been completed, it shall be distributed and discussed with the Contractors during this meeting.

Contractor discussion is to include corrective or preventative action taken to prevent a reoccurrence.

The contractor shall report on the work status of each injured Employee until said Employee returns to full duty.

Report on near-miss incidents involving the Contractor or its' Subcontractors since the last meeting.

If the SAF 4 form has not been filed relevant to any incident discussed, it shall be distributed and discussed with the Contractors during this meeting.

Contractor discussion is to include corrective or preventative action taken to prevent a reoccurrence.

Provide a description of work activities until the next meeting, including anticipated Employee and public safety concerns and non-routine tasks/activities.

The contractor is to report on safety pre-planning that has been done to include steps that will be taken to minimize hazards.

The contractor will be prepared to discuss potential public and vehicular exposure hazards and the loss prevention controls to be implanted to reduce the exposure potential.

In order to reduce the probability of schedule delays, provide a brief description of work activities anticipated (utilizing the job schedule) covering the next three weeks to identify in advance potential concerns to facilitate safety pre-planning by all parties.

A Job Safety Analysis (SAF-6) or Activity Hazard Analysis may be requested from the responsible Contractor(s) for future activities.

LAUSD Safety, OCIP Safety:

Report on non-compliance violations/hazards identified on Loss Control Surveys that have not been corrected.

Report on non-compliance violations/hazards identified on Loss Control Surveys that are repeat items (i.e., the same or substantively similar type violations/hazards that has been identified in the past and has reoccurred).

Report on accidents/incidents involving the Contractor or its' Subcontractors since the last progress meeting.

Report on Near-Miss Incidents involving the Contractor or its' Subcontractors since the last progress meeting.

Report on any existing or emerging trends in the Contractor's safety performance

Report on future activities that require safety pre-planning.

Identify Potential Public and vehicular exposure hazards.

Review of Job Safety Analysis issues.

LAUSD OAR:

Reporting or discussion of any item(s) described herein.

Any additional/other topic(s)/item(s) not described herein.

10.1 SITE PRE-PLANNING/PLANNING AND PROGRESS COORDINATION MEETING(S)

Safety and loss control activities are to be integrated into the work plan such that safety is an integral component of the construction management process, rather than a separate activity.

There are five main elements to the preplanning and schedule component of the LAUSD Safety Standards.

- **Site Survey**: Prior to the start of work, the Contractor shall review the plans and specifications and conduct a physical survey of the job site.
- **Construction Process Plan:** From the Site Survey, the Contractor shall develop in conjunction with the job schedule a written Construction Process Plan. The Construction Process Plan shall identify tasks and activities under four main categories:
  - Construction sequence and procedures
  - Temporary Structures/Shoring/Reshoring/Bracing/Retention Systems required
  - Critical Structures or Processes
  - Description of required tests and approvals
- **Job Hazard Analysis:** Job Hazard Analysis (JHA) needs may be pre-determined in part by reviewing the Construction Process Plan and Construction Schedule. The JHA should be prepared far enough in advance of the task or activity to ensure that

changes or revisions will not affect the scheduled execution of the task or activity. Refer to Job Hazard Analysis Section for specific program criteria.

- **Site Progress Meetings**: These meetings are typically held on a weekly or bi-weekly basis and are typically chaired by the OAR. Safety pre-planning should be incorporated into these meetings.
  - The Contractor shall prepare a Three-Week Look-Ahead Schedule and submit same for review prior to each Site Progress Meeting.
- **Pre-Planning Meetings:** Pre-planning meeting needs may be identified from the Construction Process Plan and/or job schedule. The Pre-planning agenda should be incorporated into the Site Progress meetings.
  - The Contractor shall schedule Pre-Planning into the Master Schedule far enough in advance of the start of the relevant phase to ensure that changes or revisions to JHA's and coordination efforts will not affect the scheduled execution of the relevant phase of work.
  - The pre-planning shall include the OAR, as well as all Contractors and Subcontractors involved in that phase of work. At their discretion, LAUSD Safety may also be involved. This meeting shall identify and address the safety and coordination issues of the relevant phase of work.
  - Job Hazard Analysis' shall be prepared using the JHA form (or an acceptable equivalent); specific JHA's are to be prepared using the Job Hazard Analysis as a guide.
  - Subsequent meetings may be required throughout the phase of work to maintain safety and coordination efforts.

11. JOB HAZARD ANALYSIS (JHA)

The Job Hazard Analysis (JHA) is a written work plan that incorporates safety into work procedures to ensure that job task(s) or operations receive proper safety planning prior to beginning work.

Prior to mobilizing on site or during "Notice to Proceed I" (NTP-I) the General Contractor will submit to the OAR and/or LAUSD Safety copies of their Sub-Contractors Job Hazard Analysis (JHA) for review and recommended improvement suggestions/comments.

A Job Hazard Analysis (JHA) is to be developed by the site competent person designee for each job task. Each JHA will summarize specific job task(s) performed, potential hazards associated with each task and the safety protocol required/implemented to reduce the exposure potential.

Prior to the start of each shift each employee/crew shall review the JHA(s) applicable to their scope of work. As evidence of training each employee will sign the applicable JHA.

Copies of the JHA will be maintained onsite for review by LAUSD Safety.

JHA's are to be completed by a supervisor familiar with the task(s) to be performed. A particular task is chosen, and employees begin to identify potential hazards associated with performing the task.

- When specific tasks require that a JHA be completed, the CSM/CSR/SSR shall facilitate the JHA process and document review of the JHA with the supervisor(s) in advance of the work shift.

Following is the process which should be used to develop the JHA:

Select the job to be analyzed. Use the following factors as a guide in selecting jobs to be analyzed, remembering that those with the highest incident/accident severity potential shall be evaluated first.

- Frequency of incidents
- Disabling injuries
- Potential for severe injury
- New operations/jobs

Break the job down into successive steps. (Avoid making the breakdown too detailed or too general)

- Select an experienced and cooperative employee/crew to perform the job.
- Explain the purpose of the analysis.
- Observe the employee/crew as the job is performed.

- Record each job step in the breakdown.
- Review with the employee/crew and seek comments.

Identify the hazards and the potential incidents.

- Is there a danger of striking against, being stuck by, or incurring other injurious contact with an object?
- Can the work be caught in, between, or by objects?
- Is there a potential slip, trip, or fall hazard?
- Are there strain exposures from pushing, pulling, reaching, twisting, or lifting?
- Are there environmental hazards in the form of gases, vapors, fumes, mists, or dusts?

Develop ways to eliminate hazards and prevent potential incidents.

- Find a new way to do the job.
- Change the physical conditions that create hazards.
- Implement:
    - Engineering Controls
    - Administrative Controls
    - PPE

12. SAFETY MEETINGS

12.1 ACCIENT/INCIDENT REVIEW MEETINGS

The Contractor's Safety Manager (CSM), Contractor Safety Representative (CSR) or immediate supervisor shall adopt a practice of scheduling an Accident/Incident Review Meeting within 72 hours of the occurrence of an accident/incident. Note: This section is not applicable to LAUSD M and O. The OEHS department shall follow existing LAUSD policy for M and O.

For the purposes of this section, "Accident/Incident" may be defined as any or all of the following:

- Near-Miss Incident
- First-Aid Case
- Recordable Injury
- Lost-Time Injury
- Vehicular Incident
- General Liability/Third-Party Incident
- Property Damage

The intent and purpose of this meeting is to interactively and cooperatively identify causal factors that had, or may have had, a role in the accident/incident, and to identify corrective action(s) and practice(s) which, when implemented, will reduce the probability of similar type occurrences in the future. It is NOT a fault-finding or blame-finding event.

Attendees should include:

- OAR (Owner Authorized Representative)
- CPM (Contractor Site Manager)
- CPS (Contractor Site Superintendent)
- CSM/CSR (Contractor Safety Manager/Representative)
- SSR (Subcontractor Safety Representative) [if applicable]
- LAUSD Safety
- Senior Project Management Representative and the Contractor/Subcontractors' Foremen accountable for the incident via the functional structure of the site
- Craftsperson(s) involved with and/or witness to the incident.

12.2 PRE-SHIFT EMPLOYEE/CREW PRODUCTION AND SAFETY COORDINATION MEETINGS

At the start of every shift, each Contractor and Subcontractor crew shall conduct a pre-shift production and safety pre-planning meeting.

These meetings shall:

- Review the scope of work for the shift.
- Review of safety activities that are a component of the job tasks (JHA) to be performed.

Such meetings are to generally be five (5) to ten (10) minutes long, and are, at minimum, to focus on the following:

- Tasks for the shift
  - Applicable Job Hazard Analysis
- Tools and equipment needed for those tasks
- Materials needed for those job tasks
- Proper material handling techniques
- Safe work procedures to perform those job tasks
- PPE needed to safety perform those tasks
- Questions from the crew

These meetings shall be documented in the same manner as the weekly Safety Meeting.

13. REPORTS AND FORMS COMPLETION

The Contractor will cooperate with and participate in inspections conducted by OSHA inspectors. Copies of all OSHA citation notices will be submitted to LAUSD Safety immediately upon receipt by the Contractor. Note: This section is not applicable to LAUSD M and O. The OEHS department shall follow existing LAUSD policy for M and O.

The Contractor is responsible for ensuring that corrective action is taken when Loss Control Survey forms are issued to the Contractor. The *LAUSD Corrective Action* plan must be completed by the Contractor and returned to the OAR and LAUSD Safety.

Each Contractor shall maintain copies of weekly safety toolbox meeting reports, inspection reports and corresponding corrective action records, on site for periodic review by authorized LAUSD representatives and/or LAUSD Safety.

Contractor(s) will furnish LAUSD representatives and/or LAUSD Safety with a copy of completed Incident/Accident reporting and investigation forms, as described in the LAUSD Safety Standards and Insurance Manual, no later than 24 hours after knowledge of the incident/accident.

NOTE: The accident investigation report forms do not constitute notice of injury and do not replace the "Employers First Report of Injury" (Form 5020) form that must be completed by the Contractor and provided to the LAUSD OCIP Insurance Company and/or LAUSD Risk/Claims Management.

Forms summarized throughout the LAUSD Safety Standards are provided in the Appendix.

14. CONTRACTOR SAFETY VIOLATIONS

14.1 CONTRACTOR DISCIPLINARY ACTION – POLICY ENFORCEMENT

It is imperative that all Contractor employees at every level comply with all safety protocol relative to their scope of work at all times while working on LAUSD sites. Note: This section is not applicable to LAUSD M and O. The OEHS department shall follow existing LAUSD policy for M and O.

- All Contractors/Subcontractors will be contractually required to comply with all applicable Federal, State and LAUSD safety polices/procedures and regulations. When a Contractor/Subcontractor fails to correct unsafe conditions and/or unsafe actions of their employees, LAUSD will undertake corrective action(s) and, at their discretion, deduct the cost thereof from the responsible Contractors' progress payment. LAUSD cannot be held responsible for safety or security related work delays associated with violations of LAUSD Safety Standards and Federal or State regulatory requirements.
- Contractors/Subcontractors that are not responsive to safety issues, that have unsatisfactory safety evaluations(s) and/or repeated or willful safety violations by their employees will indicate non-compliance with the safety provisions included in the contract documents which may result in removal from the LAUSD bid lists and/or denial of job-site access for a period of time designated by LAUSD.
- Authorized LAUSD representatives have the right at any time to stop work activity that is dangerous to life or health until safety violations are corrected.
- An initial violation of a non-life-threatening safety policy by a Contractor's/Subcontractor's employee(s) will result in a notification to the Contractor(s) supervisory personnel the OAR and/or LAUSD Safety. A second violation may result in the Contractor employee being excluded from the site for a period of time designated by LAUSD.
- Willful or repeat safety violations by Contractor employee(s) will result in permanent denial of LAUSD site access.
- The removal procedure may be accelerated and/or expanded to include removal of a Contractor's or Subcontractor's supervisory personnel and/or their entire workforce where violation(s) of safety regulations is widespread, or where the Contractor does not demonstrate good faith effort.
- Foremen/supervisors who give direct orders in violation of the safety protocol or are found to be present at the time and knowingly allow an employee safety infraction may be denied LAUSD site access for a period of time deemed appropriate by authorized LAUSD representatives.
- Should an imminent danger/hazardous condition be discovered, all work in the area of the danger/hazard must be stopped until corrective action has been taken.

- Contractors shall report legitimate unsafe actions/ conditions of other Contractors to the OAR, IOR or other LAUSD site representative(s) and/or LAUSD Safety.

15. SUBSTANCE ABUSE & ALCOHOL POLICY

15.1 PURPOSE

In order to maintain a safe, healthful, and efficient work environment, Contractors and Subcontractors shall implement a Substance Abuse & Alcohol Policy. Note: This section is not applicable to LAUSD M and O. The OEHS department shall follow existing LAUSD policy for M and O.

15.2 FUNDAMENTAL REQUIREMENTS

All Contractors shall implement and enforce a policy which prohibits the possession, distribution, promotion, manufacture, sale, use or abuse of illegal and unauthorized drugs, drug paraphernalia, controlled substances and alcoholic beverages by any Contractor employee, agent or any person otherwise under the control of the Contractor, including employees and agents of Subcontractors and consultants while on any LAUSD construction site, including the work site, or while otherwise working on the project. Further, employees shall be prohibited from reporting to the premises under the influence of drugs or alcohol.

This Policy will apply to all employees, including but not limited to regular, part-time probationary, casual and contract employees of the Contractor, as well as to employees and agents of Subcontractors and consultants. The Contractor shall take whatever legally permissible steps are necessary or appropriate to enforce compliance with this policy.

Employees governed by this policy may possess a prescription medication in its original container and prescribed for current use by an authorized medical practitioner. The Contractor shall ensure that employees taking prescription medication inform their employer about potential side effects of medication which may affect the employees' ability to work safely.

At the discretion of the Contractor and/or LAUSD any Contractor employee working on LAUSD sites may be drug and alcohol screened in accordance with the protocol outlined in the LAUSD Safety Standards to include:

- A post-accident/incident drug screen for those persons involved in any type of accident/incident whether or not injury or property damage was incurred.

Any employee who tests positive for drugs and/or alcohol or refuses to take a drug and alcohol screen shall be removed from the site.

15.3 GENERIC DRUG PROGRAM

16.3.1 Drug Free Work Environment

A. It is the responsibility of the Contractor/supplier/vendor to implement and maintain a drug free work environment and screening program to ensure a drug free workplace.

B. A post-accident drug screen shall be required for those persons involved in accidents/incidents resulting in injury and/or property damage on LAUSD property.

C. Contractor/supplier/vendor employees who are reasonably suspected of being under the influence of narcotics or alcohol shall be drug tested as deemed appropriate by Contractor/supplier/vendor management, their designee and/or LAUSD.

D. Substance Abuse Testing

LAUSD reserves the right to require Contractor employees to undergo medical and/or physical examinations or tests at any time as a condition of being granted access onto LAUSD property, including urine drug tests, breathalyzer tests, hair samples, blood tests or other examinations to determine the use of any illegal or unauthorized drugs or substances prohibited in this policy

LAUSD shall reserve the right to approve the facility utilized for sample collection and/or testing utilized by Contractors/suppliers/vendors. Workplace testing may be altered or changed at the discretion of LAUSD.

These tests may be utilized under the following circumstances:

1. Post-Accident. If a Contractor employee suffers an Occupational on-the-job injury (requiring treatment from a medical practitioner) or following a serious or potentially serious accident or incident in which safety precautions were violated, equipment or property was damaged, unusually careless acts were performed, or where the cause was due to an employee's or other person's failure to wear prescribed personal protective equipment or follow prescribed safety rules while working on LAUSD property, the employee will be tested. Refusal to undergo drug testing will be considered as a violation of the drug policy and the employee will be denied access to Owner's property.

2. Reasonable Suspicion Testing: "REASONABLE SUSPICION" means a suspicion based upon the observation of objective facts or specific behavior (or the report of such facts or behavior by a person believed to be reliable) which would lead a prudent person of ordinary intelligence to conclude that an individual may be using drugs and/or alcohol or in some other way is unfit to safely perform their job tasks.

3. For Cause, Reasonable Suspicion Testing will be used when there is a reasonable suspicion that a Contractor employee shows signs of possible intoxication, or is under the influence of drugs, or other facts that would lead a prudent person to be concerned about the individual's safety, the safety of others due to the person's physical condition or behavior covered under this policy.

4. All Contractor employees must agree to abide by this policy and must consent to drug testing and to the release of test results to their employer and/or LAUSD designated representatives as a condition of continued LAUSD job site access.

E. General Testing Procedures

1. The drug test will be taken from urine specimens or other standard testing methods and analyzed by a certified professional laboratory and may be administered by a Certified Third Party such as ASAP, DISA, LACC or equivalent .

2. The contracted facility will assure proper handling of the specimens so that the sample results can be traced to the proper individual. A chain-of-custody procedure will be developed to show a paper trail of the custody of samples at all times. The facility will also take necessary steps to avoid any dilution or alteration of specimens. This will be facilitated by using tamper resistant seals on all sample bottles.

3. Confirmation of test results will be reported to the employee's employer. The process normally takes 24 to 48 hours to complete.

4. Testing will check for the following drugs:

Amphetamines	Cocaine
Phencyclidine	Opiates
Marijuana (THC)	

5. Any Contractor employee who is tested will have the right, if requested by that Contractor employee, to see the results of their test.

6. Contractor employees who have a positive test result will have a follow up confirmation drug test supervised by the designed testing facility.

7. Once documentation of a positive drug test is received, the Contractor will be notified. LAUSD will be notified of positive test results by the Contractor.

8. Contractor employees whose tests are confirmed positive by the confirmation drug test will be notified by the Medical Review Officer (MRO). At the earliest reasonable time, an interview with the MRO will be scheduled with the Contractor employee to discuss the impact of the positive test results on continued access to Owner property.

9. LAUSD and the Contractor will:

   - Maintain confidentiality of records associated with the administration of this policy.
   - When required or requested, LAUSD will counsel Contractor management regarding the administration of this policy.

10. Prescription Drugs

    - Contractor employees are required to inform their employer of any use of current prescribed medicine that could affect their performance. They may be required to obtain written statements from their doctor(s) regarding the drug(s) effect on the Contractor employee's performance of job duties and to present this statement to their employer.
    - Contractor employees will not be allowed to operate equipment or perform their assigned job tasks if medication could interfere with safe equipment operations or work performance.
    - Contractor employee failure to notify their employer with a written statement from their doctor regarding the use of medication that could affect performance on the job could lead to denial of job site access.

F. Post-Accident Drug Testing

1. Any Contractor employee involved in an accident/incident resulting in injury/illness or property damage will be required to be tested for chemical substances within two hours of the incident (medical circumstances permitting). Failure or refusal to be tested will be considered as an insubordinate act and the Contractor employee will be denied access to LAUSD property. All accidents/incidents reported after the fact will be subject to drug testing.

2. The designated medical treatment facility will be responsible for the collection of specimens assuring proper handling of samples.

3. Contractor employees may be required to sign a consent form for drug or alcohol screening in the event of an occupational injury/illness.

4. In the case of an accident/incident requiring drug screening, it will be the Contractor supervisor's responsibility to see that the appropriate releases have been signed and that the Contractor employee proceeds with testing per above. This can be completed when the supervisor transports the employee to the designated medical facility.

5. If the test results indicate alcohol concentration at or above (.02%) or other regulatory standards, the Contractor employee is subject to having LAUSD site access denied.

G. Testing for Just Cause

1. Upon reasonable suspicious acts, a Contractor employee may be required to take a drug test. "Just cause" testing must be approved by the employee's supervisor.

2. The individual observing a Contractor employee who, in their objective opinion, shows abnormal behavior, impairment, or incoherent tendencies must confirm such observation through their immediate supervisor.

3. If the immediate supervisor confirms such observations, the Contractor employee shall be tested by the Contractor's designated testing facility. If the employee refuses, disciplinary action to include denial of LAUSD site access will be warranted. It is the Contractor's responsibility to see that a drug test requisition is signed, and that the employee is provided transportation to the collection site for testing.

4. If the test results indicate alcohol concentrations at or above (.02%) or at or above regulatory standards, the employee is subject to LAUSD site access being denied.

H. Collection Procedures

The contracted collection facility shall adhere to procedures assuring the security and Chain of Custody of the testing procedure consistent with regard for individual privacy.

I. Positive Detection Procedure

1. No information on drug types or amounts will be released to anyone other than the employee's employer, and if applicable, the General/Prime Contractor supervising construction activities.

2. In order to ensure the accuracy of the initial test results, all positive test results will have an additional confirmation test. If the confirmation test results are positive the employee will be notified by the MRO. The employee and his supervisor will meet the following notification in a confidential setting.

3. If the test results are positive for cocaine, opiates, phencyclidine, barbiturates, amphetamines, marijuana, the Contractor employee will be denied access to LAUSD property until evidence of drug treatment through a State recognized program is obtained.

4. If the test results show an alcohol concentration equal to or above .02%, the Contractor employee will be denied access to LAUSD property.

5. The above provision (3 and 4) also applies to incidents where an employee refuses to submit to a drug screen. Refusal to test will be considered a positive test result.

J. Violations Meriting the Denial of Access to LAUSD Property

Any employee or person will be denied access to property for the following violations, even if such violations are "first offense":

1. The Contractor employee or person refuses to submit to a search, and/or inspection, and/or drug test when requested by their employer, LAUSD and/or (if applicable) the General/Prime Contractor.

2. The Contractor employee or person has submitted to a drug test and, in the judgment of their employer, LAUSD, (if applicable) the General/Prime Contractor and/or the approved drug testing facility, has degraded, diluted, switched, altered, or tampered with their sample.

3. While on LAUSD property, the Contractor employee or person was using, manufacturing, distributing, dispensing, selling, or possessing any alcohol or illegal drugs.

K. Reinstatement to Work on LAUSD Following a Failed Drug Screen

1. Applicable Union applicable rules and agreements shall apply.

2. Non-Union workers shall show proof of drug and alcohol rehabilitation;

   a. Minimum Level 1 Outpatient Treatment

   b. Verification documentation of completion is required.

16. DISABILITY MANAGEMENT/RETURN TO WORK PROGRAM

16.1 DISABILITY MANAGEMENT/RETURN TO WORK POLICY

It is the policy of LAUSD, with support from all the Contractors working on LAUSD sites to assist a Contractor employee to return to work from an on-the-job injury at their regular rate of pay, as soon as possible after the Contractor employee has recovered sufficiently from the adverse effects of the injury and in accordance with guidance from the treating physician. Contractors will assist in this endeavor by finding their employee a productive task to accomplish. The employee will draw their regular rate of pay even if the designated task to which the Contractor employee is assigned is outside of their normal work assignments because of temporary physical limitations imposed by the consulting physician.

LAUSD, in conjunction with the Contractor, recognizes that an on-the-job injury can impose financial hardships upon a Contractor employee, in addition to other burdens. Through this return-to-work policy, we will endeavor to assist the Contractor employee in returning to productive employment. Under normal circumstances, restricted duty positions will be provided for as long as recommended by the treating physician. Employee refusal to accept limited or restricted duty, when appropriate and approved by the treating physician, can be considered as a voluntary resignation and Workers Compensation benefits will cease.

16.2 PURPOSE

This policy is implemented to establish basic guidelines for an Early Return to Work (transitional duty) Program which will minimize the time away from the job for injured Contractor employees who are unable to work or perform the normal functions of their jobs due to work-related injuries but are able to work in a limited capacity assignment.

Each Contractor shall have a written Early Return to Work Program that shall be implemented on LAUSD sites unless specifically prohibited by the terms of a Collective Bargaining Agreement.

16.3 PROCEDURE

The specified steps taken to return an employee to work through modified/light duty must be carefully thought out to avoid aggravating the injury or illness. For this reason, each decision will require input from the attending physician and the Contractor.

- The Worker's Compensation Claims Coordinator and/or the LAUSD Claims Manager and construction safety department will contact and advise the Contractor of the need to develop a modified duty position for the employee involved.
- The attending physician will determine the work restrictions necessary to ensure that the employee does not aggravate the existing injury. The physicians work restrictions will be listed on the Work Status Report form.

- If necessary, after the modified/light duty job description is finalized the Worker's Compensation Claims Coordinator and/or the LAUSD Claims Manager will contact the attending physician to determine if the employee can be released to perform the proposed work assignment.
- If the employee refuses the modified/light duty work assignment the Contractor will notify The Worker's Compensation Claims Coordinator and/or the LAUSD Claims Manager. [In most cases, Workers Compensation indemnity payments will be immediately suspended.
- As soon as it can be determined through effective employee and physician contact that an employee is sufficiently recovered from a disability every effort will be made to quickly bring them back to work.
- If the employee accepts the modified/light duty work assignment, every effort should be made to bring them back to work at their normal pay rate.
- Injured employee considered for light duty work assignment will comply with the attending physician's work restrictions.

17. CONTRACTOR SAFETY STANDARDS

No attempt has been made to restate applicable Cal OSHA, Federal OSHA, ANSI, NFPA, standards in their entirety. Contractors are reminded it is their responsibility to have at least one copy of all applicable OSHA Standards, as well as other Standards incorporated by reference into the LAUSD Safety Standards, available on their sites for reference and review.

In some instances, the LAUSD Safety Standards are more stringent than the applicable Cal OSHA and Federal OSHA standards. In other instances due to variables in the Cal/OSHA program, the applicable Cal/OSHA standards may be more stringent than the LAUSD Safety Standards.

The Contractor is reminded that, in most instances, the most stringent safety requirements, regardless of source, shall apply.

Access for Maintenance and Operations (M and O):

All items requiring maintenance including all those related to Mechanical, Electrical, and Plumbing (MEP) require safe access for M and O personnel.

A safe means of access and egress to all mechanical unions, shutoff valves, pumps, HVAC, Utility Vaults, Interstitial Spaces, or similar locations must be evaluated for safe access with regard to:

Electrical safety, Confined Space, Fall Protection or other recognized hazards and safe access are provided as part of the construction project.

This may require locating valves, unions, and associated MEP equipment as to be accessible preferably without the use of Personal Fall Arrest Systems (PFASs)

18. AIR TESTING EQUIPMENT

- Approved air testing equipment shall be used to test utility holes, cable vaults, pits, confined spaces and similar spaces for flammable, toxic, or oxygen deficient atmospheres. The exposing Contractor(s) is responsible for the use, maintenance, calibration, and testing of said equipment.
- Air testing equipment shall be UL classified for use in Class I, Division 1, Groups A, B, C & D hazardous locations as defined by the National Electrical Code.
- Before each use air testing equipment must be tested and calibrated as required by the manufacturer to verify that it is fully functional.
- The use and repair of air testing equipment shall be in accordance with the manufacturer's operating manual and instructions.
- Prior to use, Contractor employees must be trained per manufacturer requirements on the use, limitations, and alarm modes of each air-testing device that they use. Verification of training must be maintained on the job site.
- Employees must immediately leave a work area whenever an equipment alarm sounds due to:
    - Low or high oxygen level (acceptable range is 19.5% to 23% oxygen).
    - Flammable/combustible gas detected above 10% of the lower explosive limit (LEL).
    - Set point for a toxic gas level is reached (e.g., 10 ppm hydrogen sulfide)
    - Sensor failure
    - Low battery alarm.
- Equipment must be carried with the Contractor employee or placed immediately adjacent to the work area and set to operate in a continuous monitor mode.
- Never enter an enclosed work/confined workspace (i.e., utility hole, vault, pit, etc.) without:
    - Completing required air testing.
    - Purging the space.
    - Providing continuous ventilation.
    - Following all applicable regulatory guidelines specific to **"**Confined Space Entry" and "Utility Hole" work. Also reference "Confined Space Entry" and "Utility Hole" sections in these Safety Standards.

19. ASBESTOS

- Asbestos is to be handled only by qualified and certified Contractors. Asbestos Contractors/Subcontractors must be approved in accordance with applicable State, Federal, and Local regulations and must be approved by LAUSD to perform abatement and disposal of asbestos containing materials (ACM) and asbestos containing construction materials (ACCM), as defined.
- It is the Contractor's responsibility to review the Asbestos Assessment Report (Phase I) and the Abatement Design (Phase 2) prepared for a site prior to the commencement of work and take the necessary steps to ensure the safety of students, faculty, Contractor employees, and the general public through compliance with regulatory and LAUSD specification requirements.
- Contractors must verify the presence or absence of asbestos content in building materials **PRIOR** to impacting these materials during construction remodeling or demolition work.
- Upon discovery of any asbestos containing materials (ACM or ACCM) or presumed asbestos containing materials (PACM) not identified in the Phase I report, the Contractor will stop work in such areas and notify the LAUSD Construction Inspector. The material will be inspected and tested, if necessary, by the District's Asbestos Technical Unit (ATU) or by a LAUSD assigned environmental consultant.
- The Contractor shall ensure employees are trained in asbestos awareness to identify ACM, ACCM and PACM. Training will be in compliance with the requirements of the District's Standard Specification Section 13280 – Asbestos Abatement and Asbestos Related Disturbance – and be documented. Proof of such training is required to be submitted to a LAUSD authorized representative prior to commencement of work.
- All asbestos abatement/removal work must follow all regulations of OSHA, the U.S. Environmental Protection Agency (EPA), and/or the applicable State agency and the South Coast Air Quality Management District (SCAQMD).
- Maintenance and Operations personnel working in areas with ACM or PACM must have appropriate asbestos training which may include minor abatement and compliance with Negative Exposure Assessment Protocols. OEHS is responsible to ensure all asbestos surveys have been completed and information and training disseminated to affected employees and contractors per the applicable asbestos standards and LAUSD protocols.

20. BARRICADES AND FENCING

- Contractors shall provide and erect barricades around unprotected excavations, holes or openings in floor or roof areas, edges of roofs and elevated platforms, around certain types of overhead work, and wherever necessary to warn or protect people against falling in, though, off of, or being struck by falling objects. Barricades may also be used to isolate people (such as employees of other Contractors, LAUSD personnel, faculty, students and the public) from vehicular and pedestrian traffic and/or work activities as required by the activity, potential hazards created by the activity, or the location of the activity.
- The type(s) barricades/barricade tape/fencing/perimeter protection required, its location and duration of use shall be reviewed during pre-construction and/or job progress meetings.
- To ensure the safety of students, faculty, and the general public, the Contractor, as directed by LAUSD, must provide and maintain adequate perimeter protection, such as chain link fences, gates, barricades, etc. to separate work areas from areas outside the perimeter of the job site.
- Void of sufficient illumination, lighting may also be required to sufficiently warn vehicular and/or pedestrian traffic of obstacles, trenches, evaluations, overhead work, etc.
- Barricades must be at least 42 inches high and must be square and level.
- Barricades must be suitable for the area of use (i.e., blinker type barricade for traffic control or protective barricade to provide physical protection from falling). Barricades/fences are to be placed around all construction trenches. However, barricade tape may be utilized to warn construction personnel of trenches/ excavations or overhead work inside construction sites which are provided with perimeter fencing.
- Construction work areas utilizing barricade tape shall be posted and protected using nationally accepted color coding as follows:
    - **RED – IMMEDIATELY DANGEROUS**
    - **YELLOW – CAUTION**
- Red barricade tape shall include placards/signage with work duration dates, responsible Contractor's name and contact person's telephone number.
- Entry into immediately dangerous (red tape barricaded) areas shall be by authorized personnel and only after being advised on the dangerous condition. Unauthorized entry into red tape barricaded areas is prohibited unless prior approval has been granted by a representative of the responsible Contractor.
- All barricade tape must be appropriately removed and discarded upon job completion or when the hazardous condition no longer exists.

- Projects extending over 30 days will require barriers that are not easily removed (must withstand 200 lbs. pressure).
- Portable/temporary fencing shall be installed around construction work areas, Contractor storage areas, and Contractor's heavy equipment if these areas are not otherwise protected within the confines of the site's perimeter fencing. Fencing must be in good repair and installed to ensure stability of the fencing from being knocked over by students, employees, or the general public.
- Chain link fencing shall be free from barbs, icicles (excess galvanizing material that may form sharp projections) or other projections that may cause injury.
- Portable fencing shall be installed/braced to prevent its being blown over during windy conditions. Portable fence braces shall not create a trip and fall exposure.
- Base supports of portable fencing shall be installed/placed to eliminate tripping hazards when fencing is placed adjacent to sidewalks and walkways.
- LAUSD reserves the right to prohibit use of temporary fence panel systems that require the use of a tubular pedestal base support system that presents a potential trip hazard to pedestrians.

21. HOT WORK, WELDING, CUTTING

- For fire prevention all Contractors performing hot work activities shall at a minimum implement and enforce the following Hot Work Program criteria:
- The Contractor's Hot Work Program shall meet or exceed the requirements of NFPA SIB, "Standard for Fire Prevention during Welding, Cutting and Other Hot Work."
- Hot work includes, but is not limited to, the following activities: grinding, cutting, welding, brazing, or soldering, heating, hot air welding or other operations that generate heat, flames, arcs, sparks, or other sources of ignition.
- Prior to performing hot work the Contractor shall evaluate the following: type of hot work to be performed, site preparation, atmospheric conditions, use of appropriate personal protective equipment, and firefighting equipment.
- Site preparation should include a survey for the following: flammable/combustible materials; hazards posed by heat transfer; flammable, corrosive, or toxic residues; equipment linings; appropriate lock/tagout application; confined space exposure and housekeeping.
- Contractor shall also evaluate the work area for the potential consequences of thermal conduction. Thermal conduction is the transfer of heat that could cause ignition by/through an object heated by the hot work operation.
- Contractor shall furnish their own UL/FM approved pressurized/charged portable fire extinguishers and/or other required fire protection equipment for all "hot work." This equipment shall be located on the same elevations as the work and within 25 feet of the hot work activity.
- The need for a fire watch in New Construction buildings will be contingent on the fire potential and/or at the discretion of LAUSD Safety.
- A fire watch person will be required for "hot work" operations conducted inside all Existing Facility school buildings.
- Fire watch personnel responsibilities/duties:
  - Fire watch personnel shall have fire-extinguishing equipment readily available and be trained in its use.
  - If available, they shall be familiar with alarm systems for sounding an alarm in the event of a fire.
  - They shall watch for fires in all exposed areas, try to extinguish them only when obviously within the capacity of the firefighting equipment available, or otherwise sound the alarm.

- A fire watch shall be maintained for at least a half-hour after completion of welding, cutting or other hot work operations to detect and extinguish possible smoldering fires.
- Fire watch personnel may be required on different floor/surface levels and possibly in other rooms depending on the configuration of the building.

- Oxygen Acetylene Torches: Goggles approved for use when employees are working with oxygen acetylene torches will be worn.
- Arc Welding and Cutting Personnel Protective Equipment.
  - Welders shall wear the required eye protection contingent on the type welding activity performed.
  - They shall wear appropriate welding helmets, long-sleeved shirts, leathers and welders' gloves.
  - If grinding or chipping is done, a face shield shall be worn in addition to safety glasses.
  - If respirators are required, they also shall be used according to the employer's written respiratory protection program.
- Arc-welding and cutting equipment shall be industrial rated, in good condition, and meet all governing authority requirements regarding application, installation, and operation. Trained and qualified personnel shall make a complete preventive maintenance inspection in accordance with manufacturer and/or other applicable regulatory criteria. The last inspection date shall be marked on the equipment.
- Before each use, the following items shall be inspected:
  - All leads for broken or cut insulation
  - Electrode holders for broken insulators or worn holders
  - Oil and fuels on gas or diesel-powered units
  - Covers are in place where leads attach to welding machines
  - All connections have no exposed current-carrying parts
- Inspect all leads, grounds, clamps, machines, hoses, gauges, torches, cylinders, etc. before each use.
- Do not run hoses and weld leads through doorways.
- All work must have a separate and adequate ground.
- Do not leave the rod in the electrode holder when not in use.
- Do not exceed 15 PSI on the torch side of the gauge when using acetylene.
- Do not use matches or cigarettes to light a torch.

- Anti-flashback arrestors shall be installed on all fuel gas cylinders or built into the regulators.
- Move all flammable/combustible materials at least 50 feet away from the welding/cutting area.
- Ventilation Requirements:
  - Any welding, cutting, and heating in enclosed/confined spaces should follow applicable confined space work protocol.
  - General mechanical or local exhaust ventilation shall be provided whenever welding, cutting, or heating is performed in areas with inadequate ventilation in enclosed spaces or a potential fire or explosion threat from flammable or combustible gasses is present. The ventilation shall be of sufficient capacity and so arranged as to produce the number of air changes necessary to keep welding fumes and smoke within safe limits. Levels below OSHA PELs and/or TLV's will be considered to be "safe limits" as described above. In some cases OSHA Action Levels, excursion limits and STELs may be substituted as "safe limits". The adequacy of the ventilation shall be determined by air monitoring and/ or ventilation measurements.
  - When sufficient ventilation, as described above, cannot be obtained, the employees shall be protected by appropriate respiratory protection as described in the employer's written respiratory protection program. Confined space procedures will apply.
  - When air monitoring is required, the Lower Explosive Limit must be non-detectable (0% LEL), prior to any type of burning, welding, or hot work being conducted by the Contractor. (For example, air monitoring will be required around or near any areas which may pose a potential fire or explosion threat from flammable or combustible vapors).
- The fire loss and employee's injury exposure potential pertinent to hot work activities inside "Existing Facilities" and/or "New Construction" buildings may require the use of welding curtains. Welding curtains screens, barriers, drop cloth, etc. shall be made of flame resistant (cloth, polyethylene, plastic, etc.) materials.

22. CLOTHING/PROFESSIONAL DEMEANOR

Contractors shall require each employee, agent, vendor, or Subcontractor to wear appropriate attire acceptable to *LAUSD* in accordance with the provisions in the *LAUSD Projects General Construction Specifications*.

22.1 CLOTHING

- Employee dress should be neat in appearance.
- Clothing contaminated by oily, flammable, toxic or caustic materials should not be worn until properly cleaned.
- Shirts and long pants must be worn at all times on the sites. Sleeveless shirts and tank tops are not permitted.

• Ripped, torn or frayed clothing • Clothing with non-work-related logos • Low-cut or revealing clothing • Sandals or open-toed shoes • Cropped shirts

- Certain tasks may require the wearing of fire-resistant materials, such as Nomex®. In such circumstances, extremely flammable clothing material such as nylon should be discouraged.

23. CELLULAR TELEPHONE USE ON Emergency

- Personal cellular telephone use is prohibited except during lunch and authorized breaks.
- Equipment operators are prohibited from operating their equipment while conducting any (personal or business) cellular telephone conversation. Business cellular telephone use is permitted in those scenarios where visible contact between equipment operations, spotters, flagmen, etc. is limited.

24. COMPRESSED GAS CYLINDERS/BOTTLES

- In order to provide support, protection and stability, gas cylinders shall always be maintained and/or transported in an upright/vertical position and chained or tied to supporting structures, carts, etc. to prevent falling and damage.
- Cylinders must never be taken inside tanks, vessels, or confined spaces.
- Regulator fittings must be kept free of oil or grease.
- Cylinders valves must be turned to the "off" position when left inactive for 30 minutes or longer.
- Cylinders, hoses, valves, fittings, and gauge connections shall be properly installed and inspected for leaks and damage before each use.
- Compressed gas cylinders must be secured in wheeled carts. Cylinders must not be stored in buildings.
- Cylinders must be maintained in good repair with appropriate pressure relief, hydrostatic testing, and valve assembly
- When in storage, oxygen and fuel gas cylinders must be separated at a minimum of 20 ft., or by a 5 ft. high barrier with a 1/2-hour fire rating and placed away from contact that may rupture the tanks.
- Valve protection caps maintained (at least hand tight) must be on cylinders when not in use, in storage or when being transported.
- Cylinders must be labeled as to the nature of their contents per NFPA standard rules and the OSHA Hazard Communication Standard.
- Cylinder storage areas shall have appropriate warning signage posted.
- At no time will cylinders be accessible to the public.
- Appropriate fire-fighting equipment must be provided for each cylinder storage area.
- Torches and hoses shall not be left connected to cylinders overnight.
- Torches and hoses shall not be stored in unventilated gang boxes or storage containers.
- Flashback arrestors and back flow check valves shall be installed in accordance with the manufacturer's instruction on all oxygen-fuel torch sets.

25. CONCRETE AND MASONRY

25.1 CONCRETE CONSTRUCTION

The creating Contractor must guard all protruding reinforcing steel, vertical conduit, anchor bolts, small diameter steel, etc. to eliminate impalement hazards in accordance with 8 CCR § 1712.

25.2 STRUCTURAL CONCRETE

The Contractor must not remove any forms or shoring until a determination has been made by the testing lab and structural engineer that the concrete has gained sufficient strength to support its own weight and superimposed loads.

The Contractor must not place loads on any concrete structure until concrete has reached a compressive strength predetermined by the structural engineer of record.

- The Contractor shall be the point of contact for information regarding load bearing reliability.

Where concrete shoring/reshoring is employed, a shoring/reshoring plan specific to the site shall be available for review at the site.

- Deviations from the shoring/reshoring plan will require the issuance of a new shoring/reshoring plan.
    - The addition of superimposed loads on the floor (such as equipment and/or materials) not considered in the reshoring plan shall be construed as a deviation from the plan and is prohibited.

25.3 POURING AND PUMPING OPERATIONS

- Permanent and temporary power lines shall be identified prior to the start of a concrete pour. Appropriate safeguards shall be implemented for the pumping, pouring and finishing operations.
- A site traffic control plan shall be established for concrete truck traffic. Trained spotters and flaggers shall be used as necessary for worker and public safety.
- Contractors involved in pouring and finishing activities shall have appropriate personal protection equipment, including gloves, mud boots, high visibility vests and eye protection.
- Concrete truck washout areas shall be in an area acceptable to LAUSD, located out of vehicular and pedestrian travel areas and comply with all applicable environmental laws, standards and regulations.
- Diapers or the equivalent shall be provided for the pump and concrete trucks when the truck to pump transfer occurs in a public street or other public area.

- A site logistics plan reviewed and approved during a job progress pre-planning meeting prior to commencing work shall be prepared for each pump location and shall include provisions for concrete truck traffic routing and control, and (if applicable) pedestrian traffic routing and control.

25.4 MASONRY CONSTRUCTION

- Masonry walls shall be braced at 8-feet and/or supported as required by OSHA and/or local requirements.
- A "Clear Zone" may be required. Unauthorized personnel shall be prohibited from entering the work area. Barricading may be required to limit unauthorized access.
- LAUSD enforces a 6-foot fall protection rule and does not recognize the block-wall side masonry construction exception as listed in the Cal/OSHA Standard. Contractor may use integrated rebar system or equivalent on block side of work to facilitate fall protection methods.

25.5 CUTTING, GRINDING AND PROFILING

- Dry cutting, grinding, and profiling of concrete or masonry shall be prohibited except in instances where it is determined in a manner consistent with applicable safety and health standards that the use of water in the cutting, grinding, or profiling is not feasible.
- If it is determined that the use of water is not feasible:
  - The Contractor shall perform the work off site or use engineering and work practice controls on site to control the dust, such as a vacuum with a high efficiency particulate air filter (HEPA), or other dust control system(s);
  - If possible, any dry cutting which occurs shall be done in a designated area away from other employees; and
  - The Contractor shall provide affected employees with appropriate respiratory protection in accordance with applicable Contractor, LAUSD and/or OSHA/NIOSH Standards which includes but not limited to:
    - A written respiratory protection program;
    - Physical Examinations for respirator use;
    - Written cartridge changes out schedules; and
    - Care, maintenance, and disposal process.

26. CONFINED SPACE ENTRY

- OSHA defines a confined space as a space that:
  - is large enough and so configured that an employee can physically enter and perform assigned work; and
  - has limited or restricted means for entry or exit (examples may include tanks, vessels, silos, storage bins, hoppers, vaults, pit, subfloor crawl spaces, manhole systems, etc.); and
  - Is not designed for continuous employee occupancy.
  - Has the potential to contain a hazardous atmosphere/ or other hazards.
- Any areas defined as confined space will require special precautions. Before any work begins in a confined space a pre-planning meeting will be held to review the exposures associated with work performed and the required controls/countermeasures necessary to prevent injury.
- Any violations of confined space protocol creating imminent life-threatening hazard exposure(s) shall result in immediate cessation of work until the required safety protocol has been implemented.
- The Contractor must abide by the OSHA Standard (8 CCR §5156, 5157 and 5158) for confined space entry and furnish all appropriate personnel, equipment, and support.
- Contractors conducting work in utility holes (manholes and vaults) shall comply with the provisions contained in 8 CCR §5156, 5157, and 5158) and the section of LAUSD Safety Standards titled **Utility Holes.**
- Contractor personnel must be trained in the hazards of confined space work, including operating and rescue procedures, the use of respiratory equipment, and instructions as to the hazards they may encounter. Documentation of all required training and/or certification will be maintained on site for review by authorized LAUSD representatives.
- Contractor employee(s) who by the required training, with the supporting documentation/certification, which complies with the criteria certifying them as a "Confined Space Competent Person" will be on site throughout any confined space work activities.
- The Contractor shall develop a written, understandable confined space operating and rescue procedure which must be made available to all affected employees.
- The Contractor is required to provide all necessary entry/rescue equipment required for all entries into confined spaces (tripod, full body harness and lifeline or equivalent, etc.). With approval from LAUSD Safety, wrist straps may be used in designated areas instead of a full body harness.

- Prior to entry into a confined space, the Contractor shall ensure all pipelines which may convey flammable, injurious, or incapacitating substances into the space are disconnected, blinded, or blocked off by other positive means in accordance with applicable Lockout/Tagout regulations.
- Prior to entry into confined space, the Contractor shall test the air with an appropriate device or method for: (1) Oxygen content, (2) Flammable gases and vapors, and (3) Potential toxic air contaminants. A written record shall be made and kept at the work site for the duration of the work.
- The Contractor shall conduct air testing with such frequency to ensure that the development of dangerous air contamination and/or oxygen deficiency does not occur during the performance of operations.
- The confined space shall be emptied, flushed, or otherwise purged of flammable or injurious substances to the extent feasible.
- The Contractor is required to provide proper ventilation equipment.
- Whenever an atmosphere free of dangerous air contamination and/or oxygen deficiency cannot be ensured, the Contractor shall provide approved respiratory equipment to affected employees, who have been properly trained and are involved in a comprehensive respiratory protection program in accordance with *8 CCR 5144*.
- The Contractor shall provide a trained standby employee on the outside of the confined space ready to give assistance in case of an emergency. The standby employee shall have appropriate, approved respiratory protective equipment, including an independent source of breathing air conforming with *8 CCR 5144*.
- The standby employee must have a valid certificate in first aid and CPR training from the American Red Cross, or equivalent training verified by documentary evidence.
- Visual contact or two-way radio communication must be available at all times. When required, the Contractor shall provide radios/two-way communication.
- In order to provide emergency assistance, the Contractor must establish a means of communication with the local emergency service entities.

26.1 PERMIT REQUIRED CONFINED SPACE

- A confined space that has one or more of the following characteristics will be considered a permit-required confined space and the applicable regulations/standards will apply:
    - Contains or has the potential to contain a hazardous atmosphere which includes dangerous air contamination, flammable materials/atmosphere and/or oxygen deficiency.
    - Contains a material that has the potential for engulfing an entrant.

- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward/upward and tapers to a smaller cross-section.
- Contains any other recognized serious safety or health hazards

- Confined spaces classified as "Permit Required Confined Space" shall be labeled as follows:

DANGER
PERMIT REQUIRED CONFINED SPACE
DO NOT ENTER

26.2 UTILITY HOLES (MANHOLES AND VAULTS)

- Work in utility holes may expose employees to potential injury due to a lack of oxygen, or the presence of toxic or flammable/combustible gas. Therefore all work activities conducted in utility holes will be considered as confined space work and confined space safety protocol will apply to include, but not limited to, the following:
- To remove the utility hole cover:
  - Use appropriate lifting hooks or bars.
  - Place feet clear of the cover.
  - To avoid back injuries, lift using bent knees and keep the back straight.
  - Place utility hole guard over the opening.
- Only trained and qualified employees can test, purge, and enter a utility hole. An employee who through training and experience is certified as a Confined Space Competent Person will be on site to supervise and enforce compliance with applicable confined space safety protocol.
- Test the utility holes internal atmosphere with a properly calibrated air testing instrument as follows:
  - Immediately after removing the utility hole cover, lower the air sampling hose to the point where a person will be when working in the utility hole.
  - After entering the hole, test duct entrances, corners and generally throughout the utility hole.
  - Test when duct plugs are removed.
  - A log must be kept on air monitoring results.
- If continuous air monitoring is not performed, monitoring must be performed:
  - A minimum of every two hours after taking initial tests.
  - A minimum of every hour if a utility hole tent is used, or if gas is detected during the initial atmosphere test.

- Every shift changes.

- Utility holes must be purged prior to entry to dissipate stagnant or contaminated air, ensure against oxygen deficiency, and provide a complete air change.
- Position ventilation blower intake away from exhaust or other emission sources.
- Only one 90-degree bend in a ventilation blow hose is permitted while purging.
- Continuously ventilate occupied utility holes. Only two 90-degree bends in blow duct are permitted during continuous ventilation.
- Employees must immediately exit a hole if the blower stops or has abnormal air flow.
- Rescue and emergency equipment must be available in accordance with 8 CCR 5156-58.
- Do not take propane or other compressed gases into a utility hole.
- Do not permit open flames in a utility hole.
- Implement traffic/vehicular control criteria as mandated by the applicable regulatory agency (DOT).
- If possible, park the gang truck or utility truck in such a manner to provide a barrier to vehicle traffic.
- Where applicable, use a ladder to exit/enter utility holes more than 4 feet deep. Secure and test the ladder for slippage.
- Conduct a visual inspection of the utilities for any deterioration that may pose a safety hazard.
- Do not move power conductors. Power conductors can only be moved by an authorized representative of the power company.
- Employees are not permitted to remain in a utility hole during cable placing or removal operations.
- Secure all equipment and replace utility hole cover upon completion of work.

26.3 CONNECTIONS TO UTILITIES

- Neither the Contractor nor any Subcontractors will be permitted to make any temporary service connections to electrical, water, air or steam utilities without the approval of the OAR, IOR or other authorized LAUSD representative.
- Temporary connections shall comply with all applicable Federal, State, and local regulations.
- Temporary connections shall be inspected on a regular basis. At the discretion of LAUSD documentation of inspection may be required and maintained on site.

27. CRANES/BOOM TRUCKS AND RIGGING

27.1 LAUSD SAFETY REQUIREMENTS

All crane operations conducted on LAUSD Facilities job sites will be considered critical lifts requiring a written lift plan utilizing the LAUSD "Lift Evaluation Form" which, prior to commencing work, will be provided to, reviewed by LAUSD Facilities Construction Safety. The "Instructions" tab on the "Lift Evaluation Form" lists the information required for a complete lift plan submission. Lift plans must be submitted a minimum of two weeks in advance of the lift.

27.2 GENERAL REQUIREMENTS

The term crane as used in this section shall include boom trucks and similar truck mounted cranes.

- Know the weight of the object to be handled.
- Know the capacity of the handling device (crane, forklift, and chain fall, come along) that is intended for use.
- Visually inspect hooks, wire, slings, other attachments etc. for irregularities, damage, weaknesses, etc., before use.
- Tag/restraint lines or guide ropes in good condition shall be used to control all loads except where their use presents a greater hazard.
- Never raise or swing a load over people.
- All hooks except shake out hooks must have a safety latch. Shake out hooks will not have a safety latch (mouse).
- Always place a load in the center of a hook and never on the point.
- Cranes, hoists, or derricks shall not be left unattended while a load is suspended.
- Swing radius protection (i.e. barricades) shall be provided where rotating crane superstructure is positioned to operate in areas where persons may be caught between rotating parts and fixed objects or non-rotating crane components.
- Crane outriggers must be leveled and fully extended when making a lift.
- When required for crane stability, plates, pads, or mats shall be used under the outriggers or crawlers. The plates, pads or mats shall be of suitable material and size to support the crane on the surface that it is set up on.
- No part of the crane, load, hoist, lines, boom, tagline, shall come within 15 feet of energized electrical lines.
- All slings, chains and rigging equipment must be inspected in accordance with manufacturers' criteria.

- When hand signaling is utilized for communication between the operator and the signalman, only approved hand signals for crane, derrick and boom equipment shall be used. A copy of these hand signals will be posted at the operating position of each piece of equipment.
- The manufacturer's specifications and limitations applicable to the operation of any and all cranes and derricks must be complied with. When manufacturer's specifications are not available, the limitations assigned to the equipment shall be based on the determinations of a qualified engineer competent in this field and such determinations, will be appropriately posted, documented, and recorded. Attachments used with cranes shall not exceed the capacity, rating, or scope recommended by the manufacturer.
- A competent person shall make a thorough annual inspection of the crane. A record of the dates and results of inspections for each crane must be maintained and available for review.
- Wire rope safety factors shall be in accordance with American National Standards Institute B30.5 series.
- Certification of a crane operator's ability to operate safely is required and records of such certifications must be available. The Contractor is responsible for determining the operator's skill, verifying the certification, and maintaining the records. Operator certification will be maintained on site available for review by LAUSD authorized representatives and/or any inspectors representing governing/regulatory entities.

27.3 DETAILED REQUIREMENTS

Cranes are a vital part of any construction operation. To ensure that they handle loads properly, safely and with greatest efficiency, the following guidelines are provided**.**

Mobile Cranes - Setup

The operator shall be responsible for:

- Performing a daily inspection of the crane. Written documentation of this inspection will be maintained on the crane.
- The proper placement of the crane in relationship to the load to be handled and the landing area so as to obtain the best rated lift capacity.
- Every time a crane is moved/repositioned the crane will be leveled to within 1 degree of level. Recheck the level, a minimum of three times, during an 8-hour work shift.
- The proper placement and use of outriggers for all lifts.

- The determination of stable or unstable ground and the need for additional floats, cribbing, timbers, and structural members as may be needed.
- The installation and maintenance of crane swing radius protection.

27.4 LOAD RATINGS

Determination

- The weight of all auxiliary handling devices such as hoist blocks, headache balls, hooks and rigging shall be considered as part of the total load.
- Additionally, the weight of all items added to the load at the site must be determined and added to the total weight.
- The operator shall be provided with a copy of the Bill of Lading with the item's weight clearly legible. This will be used to determine the total load weight.
- All lifts exceeding 75% of the rated capacity of the crane at the boom angle for which the lift is made, lifts involving two or more cranes/lifting devices or lifts involving high value loads will be considered "critical lifts" (see "Critical Lifts). Prior to any crane lifting a written lift plan, utilizing the LAUSD "Lift Evaluation Form submission package (see Appendix) will be submitted, reviewed, and accepted by LAUSD Construction Safety and/or their designated representative.

27.5 CRANE INSPECTION

Contractors shall ensure that a qualified person visually inspects the crane, derrick, or hoist's controls, rigging and operating mechanisms prior to the first operation of any work shift.

Cranes shall be inspected:

- After setup and prior to initial lift.
- Before each shift.
- After every malfunction.

Documented daily visual inspections by the operator or other qualified person shall include:

- A check of all functional mechanisms for maladjustment causing unsafe operations.
- Operation of all limit switches without a load on the hook.
- Inspection of lines, tanks, valves, pumps, and other parts of air or hydraulic systems for leaks.
- Inspection of hoist or load attachment chains and end connections for excessive wear, twist, and distorted or stretched links.
- A check for excessive wear, broken wires/strands, fraying, stretch, kinking, or twisting of ropes, chokers, rope slings and their connections.

- Inspection of hooks for deformation and cracks.
- All control mechanisms for excessive wear of components and contamination by lubricants or other foreign matter.
- All safety devices malfunction.
- Deterioration or leakage in air or hydraulic systems.
- Electrical apparatus for malfunctioning, signs of excessive wear, dirt, and moisture accumulation.
- Tires for proper inflation.

Daily inspection documentation shall be maintained by the operator and available for review by LAUSD authorized representatives and/or any inspectors representing governing/ regulatory entities.

Adjustments and repairs shall be made only by a qualified person. Adjustments shall be maintained to assure correct functioning of the following:

- All Functional Operating Equipment.
- Safety Devices
- Control Systems;
- Power Plants.
- Brakes

All adjustments and repairs shall be documented, and the documentation shall be maintained on the job site for review, upon request, by any authorized LAUSD representatives and/or inspectors representing governing/regulatory entities.

Periodic and annual third-party inspections shall be performed in accordance with the manufacturer's recommendations and governing regulatory entities and submitted to LAUSD upon request.

An approved certifying agent shall re-inspect any crane that is involved in any incident or is damaged during set-up or operation, and a new certificate of inspection issued prior to being returned to service.

Record Keeping:

- All records pertaining to crane inspections shall be kept on-site with the crane or in the Contractor's site field office.
- If during any safety inspection, the operator or supervisor cannot produce the required crane inspection records; the crane shall be shut down and inspected.

27.6 OPERATOR QUALIFICATIONS AND OPERATING PROCEDURES

Operator Qualifications

Cranes shall only be operated by the following personnel:

- Only Employees authorized by the contractor or crane leasing company who are trained, or known to be certified and qualified, in the safe operation of specific cranes or hoisting apparatus shall be permitted to operate such equipment.
- Where required, operators shall have valid evidence of current Licensing or Certification in accordance with State and Local requirements. Operators not having such evidence where required shall not be permitted to operate applicable machinery (except under terms and conditions prescribed for Trainees by applicable regulations).
- Inspectors certified for crane operation.
- When necessary qualified testing and maintenance personnel.

No one other than the above personnel shall be in or on the crane during operations.

Operating Procedures

The operator shall:

- Not engage in any practice which may divert his attention while engaged in crane operations;
- Not operate his crane if physically or mentally unfit, or taking prescription drugs which may affect judgment;
- Not respond to any signal that is unclear or is given by anyone other than appointed signalmen. Exception: The operator shall respond to a stop signal given by anyone.
- Have final responsibility and control over the crane operations. Whenever there is any doubt as to safety, the operator shall have the authority to stop and refuse to handle loads until safety has been assured.
- Be familiar with the crane and its care, the operators' manual and load charts. He shall be responsible for notifying his supervisor of any needed adjustments or repairs, and for logging his findings in the crane log.
- Upon request, demonstrate his ability to determine total load weight and its relationship to the crane load charts.
- When loads which are limited to structural competence rather than by stability are to be handled, the operator and supervisor shall concurrently determine that the weight of the load has been determined within plus or minus 5 percent before the load is lifted.

Attaching the load:

- The load shall be attached to the hook by means of slings or other approved devices.
- No open hooks shall be used for lifts. Hooks used for lifts shall have hook safety latches or be safety wired.

Moving the load:

- The operator shall determine that the crane is level to within one (1) degree and, where necessary, is properly cribbed and blocked.
- The operator shall be responsible for determining that the load is properly secured and balanced before making the hoist.
- The operator shall position the hook over the load in a manner to prevent load swing.
- The operator shall determine that the rope is properly seated on the drum and in the sheaves, the load line is not kinked, and multiple part lines are not twisted around each other.

29.7.1 Rigging Requirements

All loads shall be rigged by an authorized and qualified rigger. Qualified Riggers shall at a minimum meet the training requirements as recognized by the National Commission for the Certification of Crane Operations (NCCCO). Riggers shall have a certification that identifies the following:

- Date of Training;
- Name of training and printed name and signature of trainer;
- Number of hours of classroom training; and
- Hours of practical training.

The minimum requirements shall be followed:

- All rigging equipment shall be inspected prior to each shift and as necessary during the shift to ensure safety. Damaged or defective slings shall be immediately removed from service.
- All rigging devices including slings shall have permanently affixed identification stating size, grade, rated capacity, and manufacturer.
- Rigging not in use shall be removed from the immediate work area.
- Rigging, including slings, shall be hung on a rigging frame so that bends and kinks do not set in.

- Slings shall not be left lying on the ground or otherwise exposed to dirt and the elements.
- Wire rope slings shall be lubricated as necessary during use. When in storage, slings shall be lubricated no less than every 4 months.
- "Shop-made" grabs, hooks, clamps, or other lifting devices shall not be used unless proof-tested to 125 percent of their rated load by an approved-testing agency. Approved devices shall have the capacity permanently affixed.
- Eyes in wire rope bridles, slings, or bull wires shall not be formed by wire clips or knots.
- Protruding ends of strands in splices on slings bridles shall be covered or blunted.
- All rigging equipment in use shall have a safety factor of five.

29.7.1 Slings: Safe Operating Practices

- Slings shall not be shortened by knots, bolts, or other make-shift devices.
- All slings shall be padded with softeners to protect them from damage due to sharp corners.
- Slings used in a basket hitch shall have the loads balanced to prevent slippage.
- Loads handled by slings shall be landed on cribbing or dunnage so that slings need not be pulled from under or be crushed by the load.
- Slings subjected to shock loading shall be immediately removed from use and destroyed.
- Slings shall not be made from wire rope and cable clips.

29.7.3 Sling Inspection

A thorough inspection of slings in use shall be made daily or on a regular basis as determined by:

- Severity of service conditions.
- Frequency of sling use.
- Nature of lifts being made.
- Experience gained on the service life of slings used in similar use.
- Formal inspection periods shall not exceed once in twelve months.

29.7.4 RIGGING SLINGS AND HOOKS

Hoisting hooks shall be of the safety latch-type. Crane hooks with cracks or with deformation of throat opening more than 15 percent in excess of normal opening or more than 10 degree twist from plane of unbent hook shall be removed from service.

Ropes shall be inspected for proper lubrication, excessive wear, broken strands, and proper weaving.

In order to determine the proper time for replacement, a continuing inspection record shall be maintained for hoisting ropes. Conditions such as the following shall be reason for replacement:

- In running ropes, 6 randomly distributed broken wires in one rope lay, or 3 broken wires in one strand in one lay.
- Wear 1/3 the diameter of outside individual wires.
- Kinking, crushing, bird caging, or other damage resulting in distortion of the rope structure.
- In standing ropes, more than 2 broken wires in one lay in sections beyond end connections or more than one broken wire at an end connection.
- Reduction of rope diameter below nominal diameter due to loss of core support, internal or external corrosion, or wear of outside wires.
- Inspection documentation shall be available on site for review by authorized LAUSD representatives and/or authorized regulatory agents/inspectors.

Fixtures are usually attached to wire rope by wire rope clips. The clips must be attached with the inside curve of the U-bolt against the live, or long end, and flat clip against the dead, or short end of the wire rope.

Each day before being used, wire rope slings, alloy steel chain slings, metal mesh slings, and natural and synthetic fiber rope slings, and all fastenings and attachments shall be inspected for damage or defects by a qualified person.

Slings shall have permanently affixed durable identification stating the following:

- Manufacturer's name or trademark
- Rated capacity

Cranes and derricks exceeding 3 tons rated capacity shall not be used in lifting service until an approved/qualified certifying agent has certified the equipment. Annual and quadrennial inspection certificates shall be maintained on each crane. Cranes that do not have such verification of inspection will not be permitted to operate on LAUSD sites.

A durable load chart with clearly legible letters and figures, showing rated load capacity, recommended operating speeds, and special hazard warnings (hand signal diagram and instructions) must be clearly visible to the operator.

All mobile cranes having either a maximum rated boom length exceeding 200 feet or a maximum rated capacity exceeding 50 tons shall be equipped with a load indicating device or a load movement device. The indicator shall give a clear visual warning signal before high or low unsafe boom angles are reached.

Cranes having a boom exceeding 60 feet in length or a maximum rated capacity exceeding 15 tons shall be provided with an approved boom angle or radius indicator which clearly shows the boom angle in degrees to the operator at all times.

Each variable radius boom-type crane shall be equipped with a boom angle or a boom radius indicator and clearly legible load rating chart in clear view from the operator's position.

An effective, audible warning and operating signal device shall be provided on the outside of the crane. The controls shall be in easy reach of the operator.

Cranes of such design that the boom could fall over backward shall be equipped with boom stops whenever the main boom is rope supported. The boom-stop shall provide emergency protection against destructive damage and related hazards by opposing any unexpected upward and rearward boom movement beyond the working range.

Crane operators exposed to the hazard of falling material or objects shall be protected by a canopy-type guard or cab. All windows shall be safety glass, or equivalent, that introduces no visible distortion that will interfere with the safe operation of the crane.

When required by the manufacturer certified agent's instructions, outriggers shall be set so that wheels within the boundary of the outriggers shall be relieved of all weight by the outrigger jacks or blocking.

A fire extinguisher of not less than 10-B:C rating shall be kept in serviceable condition and readily accessible to the operator.

Operations shall be conducted, and the job controlled in a manner to prevent loads from being passed directly over workers, occupied workspaces, or occupied passageways.

A qualified signal person shall be provided when the entire radius of operation is not in full and direct view of the operator unless a signaling or control device is provided. Only one person shall be permitted to give signals to the operator.

There shall be conspicuously posted in the vicinity of the hoisting operation, a legible chart depicting and explaining the system of signals used.

No employee shall be permitted to ride on loads, hooks, or slings of any derrick, hoist, or crane.

Swing radius protection shall be provided where a rotating crane is positioned to operate in areas where persons may be caught between rotating parts.

For all power lines, regardless of load/power rating, the minimum clearance between the lines and any part of the crane or load shall be 15 feet.

A designated person shall monitor the clearance between crane booms and power lines and alert the operator when necessary.

If working within in close proximity to energized power lines taglines, restraint lines, or guide ropes shall be used on all loads and should be protected or insulated to prevent shock.

Cranes, hoists, or derricks shall not be left unattended while the load is suspended unless the load is in a barricaded area or is blocked up or otherwise supported.

Before leaving the crane unattended, the operator shall:

- Land or properly secure any attached load.
- Disengage the clutch.
- Set travel, swing, boom brakes, and other locking devices unless otherwise specified by the certifying agents.
- Put controls in the "off" position.
- Stop the engine or motor.
- Secure the crane against accidental travel.

The load or the boom shall not be lowered below the point where less than two full wraps of rope remain on grooved drums and three full wraps on un-grooved drums.

In all operations where the weight of the load being handled is unknown and may approach the rated capacity, a qualified person shall determine the magnitude of the load unless the crane is equipped with a load indicating device.

The Contractor shall provide a qualified person to direct the lift. The qualified person shall see that:

- The crane is properly leveled for the work being performed and blocked where necessary.
- The load is well secured and properly balanced in the sling or lifting device before it is lifted more than a few inches.

27.8 CRITICAL LIFTS (CRANES, BOOM TRUCKS, DERRICKS, ETC.)

All crane lifts on LAUSD construction sites shall be considered critical lifts requiring a written lift plan submission to and acceptance from LAUSD Facilities Construction Safety.

A qualified person shall prepare the Critical Lift Plan utilizing the LAUSD "Lift Evaluation Form" package. The qualified person preparing the lift plan may be the crane operator, lift supervisor, or rigger. The crane operator, lift supervisor, and rigger shall participate in the preparation of the plan. The plan shall be documented, and a copy provided to the Contractor and LAUSD Construction Safety. The lift plan shall be reviewed by LAUSD Construction Safety and will be "accepted" or "rejected" contingent on content. No lifts / picks will take place without prior written "acceptance" of the lift plan submission by a LAUSD Construction Safety representative.

- The Lift Plan shall specify the exact size and weight of the load to be lifted and all crane and rigging components that add to the weight. The manufacturer's maximum load limits for the entire range of the lift as listed in the load charts shall also be specified.
- Shall specify the lift geometry and procedures, including the crane position, height of the lift, the load radius, and the boom length and angle, for the entire range of the lift.
- Shall designate the crane operator, lift supervisor, and rigger, and state their qualifications.
- Will include a rigging plan that shows the lift points and describes rigging procedures and hardware requirements.
- Will describe the ground conditions, outrigger, or crawler track requirements, and, if necessary, the design of mats, necessary to achieve a level, stable foundation of sufficient bearing capacity for the lift.
- Will list environmental conditions under which lift operations are to be stopped. Prior to commencing crane operations in bad weather (primarily rain and/or high wind conditions) which could have a negative impact on site crane operations approval from the OAR and/or LAUSD Construction Safety and the General Contractor Site Manager/Superintendent will be required.
- Will specify coordination and communication requirements for the lift operation.
- For tandem or tailing crane lifts specify the make and model of the cranes, the line, boom and swing speeds, and requirements for an equalizer beam.
- Shall include any additional information determined by the LAUSD Construction Safety Department to be pertinent to the lift.

28. DEMOLITION

Demolition activities at both New and Existing LAUSD construction site sites shall be reviewed, and a demolition plan/schedule shall be developed and implemented prior to commencing demolition work.

The pre-planning of demolition activities shall take into consideration the liability exposure potential attributed to demolition work in and/or adjacent to LAUSD facilities when occupied by faculty, students, and the public.

Contractor shall ensure safe passage of persons around areas of demolition. Conduct operations to prevent damage to adjacent buildings, structures, other facilities, and people.

Utility companies shall be notified, and all utility service shut off, capped, or otherwise controlled, at the building or curb line before starting demolition. The Contractor is responsible for ensuring that these actions have been taken.

The Contractor shall develop an Emergency Call List for all known utility owners prior to the start of demolition activities.

A site plan shall be marked up to show the locations of known utilities, and the nearest identified shut-off valves/controls. This plan shall be available in the Contractor's Site Office. The site LAUSD representative (OAR) and LAUSD Safety shall be provided with a copy.

Contractors shall determine if any type of hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances have been used in any pipes, tanks, or other equipment on the property.

When the presence of hazardous substances is apparent or suspected, testing and purging shall be formed, and the hazard eliminated prior to demolition.

Adequate dust control measures shall be implemented during demolition stock piling and leading operations.

Pipe-covering insulation, steel beam and column fire protection, heating, ventilation, and air-conditioning duck work shall be surveyed for asbestos.

Painted surfaces shall be analyzed for lead content.

Lead and/or asbestos removal shall be in accordance with all applicable standards.

During demolition, continuing inspections shall be made as the work progresses to detect hazards resulting from weakened or deteriorated floors, walls, or loosened materials.

The Contractor shall ensure that floor load limits are not exceeded during demolition operations.

Disperse demolition equipment throughout structure and remove demolished materials to prevent excessive loads on supporting walls, floors, or framing.

Perimeter protection shall be utilized around all demolition sites in order to protect the public and reduce the probability of unauthorized site access.

Walking across exposed floor joists, steel beams, or girders is prohibited.

Provide interior and exterior shoring, bracing, or supports to prevent movement, settlement or collapse of structures to be demolished, and to adjacent facilities.

Demolish concrete and masonry in sections. Use bracing and shoring to prevent collapse.

29. ELECTRICAL

All electrical installation shall meet the current NFPA 70 and NFPA 70E and building code requirements.

All temporary power panels shall have covers installed at all times. All circuits shall be clearly labeled.

Treat all equipment and parts as if they are energized unless determined and verified by testing to be otherwise.

Only qualified and authorized electricians utilizing safe work procedures and personal protective equipment are allowed to work on or near exposed energized parts.

Safety signs, barricades, and attendants shall be required to prevent accidental contact with live electrical parts and equipment.

Cover or guard live parts operating at 50 volts or more.

All disconnects for motors, branch circuits, service feeders; etc. must be marked to include what it controls.

Extension cords must be a minimum of 12-gauge three (3) wire cords.

Do not alter electrical plugs (remove ground pins) and receptacles that prevent grounding.

Metal/conductive ladders will not be permitted/used on site.

Damaged or defective tools and cords shall be removed from service.

Electrical equipment used in hazardous locations must be rated and approved for the hazardous location.

Do not run extension cords through doors, windows, walls, and over metal objects such as conduit, pipes, and racks. To avoid damage and/or a trip hazard, cords will be hung at least 7 feet above the floor when crossing over passageways, isles/walkways.

Per the OSHA "Assured Equipment Grounding" program, all electrical tools and equipment must be inspected quarterly and provided with labels, tags, or color coding to indicate an inspection has been conducted.

The Contractor is to supply and utilize ground fault circuit interrupters (GFCI) for all temporary electrical wiring, extension cords, and electrical equipment.

Ground Fault Circuit Interrupters shall be tested in accordance with the manufacturer's requirements. Logs shall be maintained for all such testing.

Ground Fault Circuit Interrupters that have an automatic reset feature are not permitted on LAUSD site.

All panel schedules shall remain current identifying the proper disconnects and locations.

Do not block or obstruct electrical panels, breakers, switches, etc.

All electrical installations shall have adequate working space and panels labeled per NFPA70E for Arc-Flash protection. All new installations shall not be considered complete without proper labeling per NFPA 70E.

Absolutely no storage is allowed in electrical vaults.

Temporary lights shall not be suspended by their extension/power cords and must be equipped with guards to prevent contact with the bulb.

All power tools must be double insulated or grounded properly and inspected prior to use.

The Contractor shall use a foreign voltage detector (FVD) to test for the presence of foreign voltage. See the **Foreign Voltage Detectors** section in these Standards.

The Contractor must properly lockout/tagout any machinery/equipment in accordance with protocol summarized in the lockout/tagout section in these Standards.

The General/Prime Contractor shall coordinate instances that require multi-Contractor lockout/tagout activities.

30. ELEVATING WORK PLATFORMS AND AERIAL DEVICES

An elevating work platform is a device designed to elevate a platform in a substantially vertical axis. (Vertical Tower, Scissor-Lift)

An aerial device is any vehicle-mounted or self-propelled device with a telescoping extendable or articulating boom, or both, with personal basket which is primarily designed to position personnel.

Only authorized and trained personnel shall operate an aerial device or elevating work platform.

The manufacturer operating instructions shall be onboarding the lift at all times and the lift shall be operated per the manufacturer operating instructions.

Lifts may not be modified or altered without express written approval of the manufacturer.

Boom, basket, and platform load limits specified by the manufacturer shall not be exceeded.

Elevating work platforms and aerial devices are designed for use as personnel work platforms and will **not** be utilized to lift/elevate construction materials.

Employees shall not sit or climb on the edge of the basket or platform or use planks, ladders or other devices to gain greater height.

Employees shall not work off elevating work platforms or aerial devices when exposed to high winds.

"Belting/tying off" to an adjacent pole, structure, or equipment while working from an aerial device is not permitted.

Lift controls shall be tested in accordance with the manufacturer's recommendations or instructions prior to use to determine that such controls are in safe working condition.

While in an elevated position, aerial baskets or platforms shall not be supported by adjacent structures when workers are on the platform or in the baskets.

For fall protection any employees while in an elevated aerial device regardless of type, shall be secured to the boom basket manufacturer installed anchor points through the use of a full body harness and lanyard. LAUSD requires tie-off while using scissor lifts as positioning devices only to keep workers from overreaching from the lift creating a fall hazard.

Prior to use all elevating work platforms and aerial devices shall be inspected daily. Items/areas of inspection shall be per the manufacturer's recommendation/specifications.

Documentation verifying inspection will be available on site for review by authorized LAUSD representatives and/or any authorized regulatory agency inspection personnel.

The platform guardrails shall be 42 inches high with a mid-rail at the half-height point.

Powered elevating work platforms shall have both upper and lower control devices. Controls shall be plainly marked as to their function and guarded to prevent accidental operation.

An emergency stopping device shall be provided at the upper controls of elevating work platforms.

Ladders or other objects shall not be placed in buckets of units to gain greater height.

31. ENVIRONMENTAL CONTROLS

Only LAUSD approved chemicals/materials can be brought onto LAUSD construction sites.

All chemical spills (including cutting oil, fuel, solvents, antifreeze, etc.) must be reported immediately to the LAUSD OAR and OEHS

All chemical containers must be stored in or have secondary containment. This policy will include cutting equipment (drip pans, sandboxes, etc.).

Hazardous material storage facilities will be located away from the public and separated from each other in accordance with all applicable regulatory criteria/standards.

All chemical containers must be maintained in good condition and must be appropriate for the materials stored in them.

All chemical containers, including empty containers, must be accurately labeled with their contents and precautions for use.

Containers which contain or contained hazardous waste must be affixed with an appropriate hazardous waste label (see LAUSD Reference Guide 4149.0) in addition to a label listing their contents.

Schedule dusty, noisy, or odorous activities with School Administration and the OAR/IOR in order to avoid disrupting normal school activities and/or alarming the community.

Air Pollution: Open burning shall not be allowed unless approved by an authorized LAUSD representative. Control measures must be taken to minimize airborne/fugitive dust.

Weekly inspections of chemical containers must be performed in all Contractor controlled areas/laydown areas to assure compliance with this section. The inspection records shall be retained on site for a minimum of three (3) years.

Prior to transporting hazardous waste off site, the company/entity transporting the waste must complete the EPA Hazardous Waste Manifest and fax a copy to OEHS at (213) 241-6816 for review and approval.

Hazardous waste will be moved only to facilities that are licensed, certified to accept and process that kind of waste.

All Contractors are responsible for proper disposal of their wastes, both hazardous and non-hazardous. A copy of the completed *Uniform Hazardous Waste Manifest* must be provided to the LAUSD Environmental Compliance Manager.

Contractors may not dump any contaminants/chemicals into floor drains, sinks, clean-outs, sewer drains or sumps without the prior written approval from the LAUSD Environmental Compliance Manager.

Emergency response equipment including spill kits and fire extinguishers will be provided near storage areas.

Chemical storage areas must be kept neat, orderly, and clean. All stored chemicals/waste must be kept in labeled, sealed containers. Warning signs will be posted at storage areas.

Safety Data Sheets (SDS) must be available on site for review by LAUSD, representatives and all emergency response personnel and the public.

It is Contractor management's responsibility to inform all their employees (to include their Subcontractor employees) of these environmental requirements.

32. EQUIPMENT/TOOLS

Contractor equipment and tools must be in proper working condition and routinely (i.e. daily or prior to use) inspected for defects.

Any defective equipment or tool must be removed from service.

Equipment is not to be used with loads that exceed the recommended rated capacity.

The Contractor will use only their equipment and tools and not of those other Contractors.

Equipment and tools will be used for their designated purpose.

Equipment and tools are to be used only by trained and authorized employees.

Before use all equipment and power tools must be equipped with all required guards or shields. All guards must be manufactured by and/or approved by the manufacturer for that specific power tool or equipment.

The practice of "wedging or pegging" guards on skill saws or other equipment rendering them nonfunctional will not be permitted.

No internal combustion engine vehicles, equipment or machinery is to be operated inside buildings unless approved by authorized LAUSD representative(s) and/or proper engineering controls have been implemented to minimize carbon monoxide levels.

In such cases where LAUSD approved vehicles or machinery are operated inside structures, scrubbers shall be installed on the exhaust system and/or carbon monoxide levels shall be monitored as often as required to ensure a safe work environment.

All motorized material handling equipment must have an audible backup alarm and light(s).

Equipment and tools must be properly stored, secured, and located away from unauthorized access.

For pneumatic power tools, all air hoses exceeding ½ inch inside diameter shall have a safety device (commonly known as an "OSHA valve" or "safety check valve) at the source of air supply or branch line origin (such as a manifold) to reduce pressure in case of hose failure.

Pocket knives including Leatherman style tools are prohibited on LAUSD job sites.

Utility knives shall be of the automatic retractable style such as spring retractable.

33. EXCAVATIONS

When excavating and trenching activities are performed, Contractors must follow all regulations as outlined in the *LAUSD Safety Standards* and when required by Cal/OSHA/OSHA regulations and local requirements.

All Contractors performing excavation work shall obtain an activity permit, for excavations five (5) feet or more in depth, from Cal/OSHA in accordance with 8 CCR §341 and §1539.

The Contractor(s) will be responsible for identifying the location of any underground utilities (piping, communication cable, electrical lines, etc.). Before beginning any excavation/trench work, the Contractor will contact "Underground Service Alert California (Dig Alert)" to ensure that the owners of underground utilities are notified to mark their utility locations. Reference "**LOCATING UNDERGROUND UTILITIES BEFORE EXCAVATING"** in these Standards.

The Contractor materials utilized for protection of employees include bracing, shoring, shielding, and trench boxes must be in good condition and of proper dimensions.

All excavations/trenches deeper than 5 feet will be sloped, benched, braced, shored, shielded, trench boxed, etc. in accordance with all applicable standards.

All Contractors performing trenching/excavation work must have a designated and trained competent person to assure compliance with all applicable regulations and LAUSD requirements. The credentials of the competent person must be available on site for review, upon request, by LAUSD and/or authorized governmental representatives.

Excavations/trenches must be inspected each day by the Contractor's "competent person."

The Contractors "competent person" must determine the soil classification (Type A, B, C, or stable rock) to determine the appropriate type of protective system required for the excavation/trench.

Excavated soils, materials or equipment are to be kept at least two feet from the edge of the excavation.

The Contractor must provide barricades to protect people from falling into the excavation/trench. Lighted barricades must be provided at night.

Ladders extending 3 feet above an excavation 4 ft. or more in depth or other means of egress must be provided by the Contractor for access/egress. Access to a ladder shall not exceed 25 feet in any direction.

Excavation/trench work, whenever possible, will be backfilled while work progresses and/or at the end of each shift.

Walkways are to be provided over any excavation or trench point those employees and/or the public may need to cross. Walkways must have handrails, mid-rails, and toe boards, and be constructed with material capable of withstanding at least twice the maximum intended load.

- The edges of the walkway shall be tapered to minimize trip hazards. The approach to the walkway shall be tampered with a suitable and durable material or the walkway set into the surface to minimize trip hazards.

Any trench or excavation work which creates a potential confined space work environment will be subject to compliance with all applicable LAUSD (reference Confined Space Entry) and/or OSHA confined space safety standards.

Rescue equipment must be provided by the Contractor (full body harness and lifeline, breathing apparatus, basket stretcher, etc.) when hazardous atmospheric conditions are expected to exist.

34. FALL PROTECTION

Where a fall hazard exists, efforts must be made to eliminate the hazard; provide protection against the hazard; or establish alternative methods to control/monitor the hazard in accordance with the provisions contained in 8 CCR, *Subchapter 4, Construction Safety Orders*.

Fall protection plans, controlled access zones, safety monitoring systems and controlled decking zones require the approval of the Contractor, OAR and/or LAUSD Safety before their use.

39.1 TRAINING AND RETRAINING

Contractors are required to provide training for any employee who might be exposed to a fall hazard prior to the exposure.

Training must include an explanation of the Contractor's fall protection policies and safe work practices with general instructions and precautions; specific instruction where required; hazard identification and correction; selection and proper use of protective devices; and maintenance of equipment. Instruction should also include correct procedures for inspecting, erecting, disassembling, and maintaining fall protection systems used; and the employee's role in fall safety monitoring.

Personnel rescue shall be addressed in the Contractor's fall protection policy and fall protection training.

Documentation of fall protection training/instruction shall be maintained by the Contractor on site for review by LAUSD and/or any authorized governing regulatory representatives.

Methods of fall protection include but are not limited to:

- Guardrails and toe-boards *[8 CCR 1620 and 1621]*
- Covers for floor opening, pits, trapdoor, and temporary floor openings. *[8 CCR 1632]*
- Personal Fall Restraint/Arrest. *[8 CCR 1670]*
- Safety Nets. *[8 CCR 1671]*
- Scaffold Platforms. *[8 CCR 1724]*
- Roof Warning Lines. *[8 CCR 1730]*
- Any deviations/variances from controlled Access and Controlled Decking Zones and Safety Monitoring Systems will require prior written approval from the Contractor, OAR and/or LAUSD Safety. *[8 CCR 1671.2]*

39.2 PERSONNEL FALL PROTECTION TRIGGER HEIGHT

For all work activities exceeding **six (6) ft.** in height where methods of fall protection (guardrails, hole covers, etc.) are not provided exposed Contractor employees will wear and

use a personal fall arrest system (full body harness with a lifeline, lanyard or deceleration device) secured to approved anchor point(s).

All deviations/variance from this fall protection policy will require at a minimum 3 weeks advance written notification from the General Contractor to the OAR and LAUSD Safety for their written approval.

When fall protection may create a greater hazard or is otherwise not feasible using conventional fall protection methods, the provisions of Cal-OSHA Title 8, Section 1671.1 may be followed which requires a written plan that includes but not limited to:

- Why conventional fall protection is not feasible;
- Alternate methods to protect from falls;
- Training;
- Identifying personnel authorized to work at heights;
- Personal monitoring system; and
- Trained observers.

At the discretion of LAUSD Safety, the OAR and the site Contractor Safety Manager Personnel erecting or dismantling scaffolds under the supervision of the competent person may be excluded from this policy if no approved anchor point(s) are available/feasible

39.3 PERSONNEL FALL ARREST/RESTRAINT

In situations where it is either impractical or impossible to protect elevated work areas in excess of **6 feet** with standard fall protection, another means of employee fall protection must be utilized. The following are some general requirements concerning the use of safety harness, lanyard(s), lifelines, and safety nets.

- A safety harness and shock absorbing lanyard must be worn in elevated work areas, more than six (6) feet in height when other means of fall protection are not available or feasible.
- Anchorages used for attachment of personal fall arrest equipment:
    - shall be independent of any anchorage being used to support or suspend platforms, and
    - capable of supporting at least 5,000 pounds per employee, or
    - Part of a complete personal fall protection system, used under the supervision of a qualified person that maintains a safety factor of at least two (2).
- The only allowable type of body fall arrest system allowed will be a full body harness with a lifeline, lanyard, or deceleration device. Safety/body belts are not permitted on LAUSD sites for fall arrest or restraint.

- Lanyards shall be secured to an approved anchor point which includes a substantial member of the structure or to securely rigged lines, using a positive descent control device.
- Lifelines and anchorages shall be capable of supporting a minimum dead weight of 5,000 pounds.
- Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds.
- Where practical, the anchor end of the lanyard shall be secured at a level not lower than the employee's waist thereby limiting the fall distance.
- In areas where there is not an anchorage to secure a safety lanyard, lifelines must be used.
- All personal fall arrest systems shall be labeled as meeting the requirements contained in ANSI A10.14.
- Personal Fall Arrest Systems shall:
  - limit the fall distance to a maximum of 6 feet and
  - Prohibit/prevent the Employee from contacting a lower level or structural element.

- The use of non-locking snap-hooks is prohibited.
- The safety harness and lanyard(s) should be inspected before use each workday by the user. Items to look for when inspecting a safety harness and lanyard include:
  - Broken, cut or burnt fibers in the harness and lanyard.
  - Cracked or deformed hardware.
  - Loose or bent rivets.
  - Any sharp edges.
  - Loose thimbles at the splice.
  - Discoloration from exposure to chemicals.
  - Loss of elasticity in the harness.
- When a safety lanyard is subjected to the stress of a fall, it must be removed from service and discarded. The harness will also be inspected and discarded if any defects are identified.
- Safety harness and lanyards should not be used for lifting materials or any other purpose other than protection against falls.
- Safety harness with one D-ring should be worn with the D-ring in the back so that the stomach, not the back, will absorb the shock in the event of a fall.

- The safety harness and lanyard should not be stored in tool boxes or on the floor where they could be easily damaged.
- Debris nets may be required under certain circumstances and must comply with current applicable laws and regulations.

Additional requirements on fall protection can be found in the OSHA Federal Register, Parts 1926.104, 105.

35. FIRE PROTECTION AND PREVENTION – FIRE EXTINGUISHERS

All fire extinguishers must be provided by the Contractor.

Travel distance from any point of the protected area to the nearest fire extinguisher shall not exceed 75 feet. *[8 CCR 1922(a) (1)]*

In multi-story buildings, at least one fire extinguisher shall be provided on each floor and located adjacent to the stairway. *[8 CCR 1922(a) (1)]*

Portable fire extinguishers shall be fully charged, inspected monthly and serviced annually. *[8 CCR 1922(a) (4)]*.

A fire extinguisher rated not less than 10 B:C shall be:

- Provided for each 3,000 square feet of floor area and fraction thereof. Where the floor area is less than 3, 000 square feet at least one fire extinguisher is required. *[8 CCR 1922(a)(1)]*
- Provided within 50 feet of wherever more than 5 gallons of flammable or combustible liquids are stored. *[8 CCR 1922(a)(3)]*
- Kept near operations where bottled fuel gases are being used. *[8 CCR 1743(j)]*
- Adjacent to any "hot work" to include welding, cutting, and burning work activities.

A fire extinguisher, rated not less than 20-B, shall be located outside of, but not more than 10 feet from the door opening of storage rooms. *[8 CCR 1933(b)]*

All portable fire extinguishers shall be readily available for use where temporary heating devices are used. *[8 CCR 1693(g)]*

For roofing work at least two extinguishers must be provided if flammables are present.

36. FLAMMABLES AND COMBUSTIBLES USE AND STORAGE

All Contractors must develop a fire protection program to be followed throughout all phases of construction. *[8 CCR 1920(a)]*

The program will include the most stringent applicable NFPA and/or local Fire Department fire code requirements.

Firefighting equipment must be conspicuously located or conspicuously marked. *[8 CCR1920(c)]*

The Contractor is required to supply fire extinguishers, fire blankets, and other sufficient fire protection devices for the immediate work areas where flammable and combustible material is stored, used, and/or "hot work" is performed.

All Contractor supplied flammable/combustible liquids must be stored in approved safety containers/cans in accordance with *8 CCR 1930(a) (2)*. Plastic storage containers are not permitted. All safety containers/cans must have a self-closing lid and spout cover that is designed to relieve internal pressure. All containers must be properly labeled as to contents and stored in approved designated areas when not in use.

All flammable liquids such as fuels, paint thinner, solvents, etc. must be stored in an area approved by LAUSD.

Storage of flammable and combustible materials inside existing LAUSD buildings is prohibited unless approved by LAUSD.

All outside storage areas must be at least 35 feet (or if applicable in accordance with NFPA standards) from any building and 50 feet from adjacent properties. Approved flammable enclosures may be used in lieu of distance requirement form adjacent properties. Ensure all flammables/combustibles are a minimum of 35 ft. from "hot work" areas or are covered by a fire blanket.

For roofing work:

- At least two (2) fire extinguishers must be provided if flammables are present.
- No more than a one-day supply of flammables may be placed on the roof during working hours.
- All flammables must be removed from the roof at the end of each workday by the Contractor.

Do not smoke; use open flames, or use spark producing tools/equipment, heaters, or any other heat/ignition source around flammable or combustible materials.

"No Smoking" signs shall be posted as required by work operations or material storage exposures.

LAUSD reserves the right to designate "no smoking" and/or designated "smoking permitted" areas on the job site on a case-by-case basis.

Open fires are not permitted on the job site.

All flammable and combustible liquid containers shall be grounded and bonded when dispensing liquid from the containers.

Do not block or obstruct fire response equipment (extinguishers, hoses, manual pull alarms, sprinklers, control valves, etc.)

Flammable and combustible liquid storage areas must be provided with secondary containment.

Storage of more than 25 gallons of flammable liquids or 60 gallons of combustible liquids shall be in cabinets constructed to the requirements of NFPA 30. Not more than 120 gallons of Class I, II, or IIIA liquids may be stored in a storage cabinet. *[8 CCR 1930(a) (4) (A) and (a) (5)]*

The Contractor shall identify non-compatible (could create a chemical reaction if they come in contact) chemicals/materials in advance and, as required, provide for separate storage.

37. FIRST AID

Regardless of the extent of the injury all incidents including first aid & near misses shall be reported by Contractor management team to the LAUSD (OAR) and LAUSD Safety Specialist. The LAUSD (OAR) and LAUSD Safety Specialist shall request a written incident investigation report from the Contractor.

Every Contractor shall ensure the availability of a suitable number of appropriately trained persons to render First Aid and CPR. Contractor Supervision and safety representatives (CSM, CSR, SSR) must be trained in First Aid and CPR.

Evidence of training must be available on site for review upon request. First aid/CPR trained personnel shall also receive Blood Borne Pathogen training.

The list of first aid trained personnel must be dated and updated as required throughout the duration of the contract period. Each time the list is updated, a copy shall be provided to LAUSD.

Every Contractor working on or furnishing personnel on a LAUSD job site shall provide at least one first-aid kit in a weatherproof container.

The first-aid kit shall be inspected regularly to ensure that the expended items are promptly replaced.

Eye wash capabilities shall be provided by the exposing Contractor as required by the Material Safety Data Sheet (MSDS) for products/chemicals used on the job site.

38. FOREIGN VOLTAGE DETECTORS

The Contractor shall use a foreign voltage detector (FVD) to test for the presence of foreign voltage:

- Whenever there is reason to suspect damage to any utility (test closures before accessing).
- Un-insulated vertical grounds, electrical power guys, and conduits.
- Street light fixtures (ungrounded) within 20 inches of communication attachments.
- Metal sided buildings, mobile homes, and trailers.
- Buried metallic closures must always be tested before accessing.

Inspect the FVD and grounding cord before each use for cracks, holes, cuts, unauthorized decals, or markings.

Verify the conductive probe cap is in place.

Inspect the grounding cord for loose connections, broken wires, and defective clamps.

Do not use the FVD if the continuity test fails.

Do not use foreign voltage detectors that are out of date. Verify the calibration date is within twelve (12) months of the present date. If calibration is out of date utilize another FVD.

When not in use, store the FVD in the appropriate canvas bag or case to protect its dielectric strength.

39. FORKLIFTS (INDUSTRIAL TRUCKS AND TRACTORS)

Only employees trained and certified by the Contractor in the safe operation of industrial trucks (forklifts) shall be permitted to operate forklifts. Certification of an equipment operator's ability to operate safely is required. The Contractor is responsible for determining the operator's skill, verifying the certification, and maintaining the records.

Documentation of operator training and certification shall be in accordance with *8 CCR §3668* and must be available for review when requested by LAUSD and/or their authorized representatives.

All forklifts, industrial trucks and tractors shall be equipped with a back-up light and an audible backup alarm which can be clearly heard from a distance of 200 feet. In congested areas or areas with high noise levels which obscure the audible alarm, a signal person in clear view of the operator shall direct the backing operation.

Every forklift, industrial truck and tractor shall be equipped with brakes, a parking brake, and a horn.

The rated capacity of all forklifts, industrial trucks and tractors shall be displayed at all times on the vehicle in such a manner that it is readily visible to the operator.

Forklifts and industrial trucks shall not be loaded in excess of their rated capacity.

Seat belts shall be provided on forklifts, industrial trucks, and tractors where rollover protection is installed and shall be utilized by employees when operating the trucks/equipment.

No riders shall be permitted on forklifts, industrial tracks and tractors unless provided with approved riding seats.

Employees shall not ride on or be elevated on the forks of lift trucks.

When elevating employees using an industrial truck (forklift), the following safety protocol shall be implemented and adhered to:

- A platform shall be used of sufficient size, but not less than 24" x 24" with standard guardrails and toe boards.
- The platform shall be secured to the forks or mast.
- There shall be an operator in the control position on the forklift while employee(s) are elevated.
- Never travel with personnel on the work platform.
- Protect mast components.
- All other applicable standards and manufacturers' instructions pertaining to the use of personnel platforms will be implemented and enforced.

Employees shall not be allowed to stand, pass, or work under the elevated portion of an industrial truck, loaded or empty.

All equipment brought on-site will be inspected and tested by the Contractor at the beginning of each shift and certified on a scheduled basis in accordance with the manufacturer's criteria, to be in a safe operating condition.

Attention shall be given to tires, horn, lights, battery, seat belt(s), controller, brakes, steering mechanism, cooling system, and the lift system (forks, chains, cable, and limit switches). Any deficiencies shall be repaired, or defective parts replaced, before continued use.

Forklifts and industrial trucks shall not exceed the authorized or safe speed, always maintaining a safe distance from other vehicles, and personnel keeping the truck under positive control at all times.

The driver shall slow down and sound the horn at all locations where vision is obstructed. When required a spotter will be provided.

An accessible fire extinguisher of CO2 5 lb. rating or higher shall be available at all operator stations or cabs of equipment. (Updated this sentence)

Feet and arms are not to be outside the envelope of the vehicle.

Floor/ground grades shall be ascended or descended slowly.

The forks shall always be carried as low as possible, consistent with safe operation.

When leaving a forklift unattended, the power shall be shut off, brakes set, the mast brought to the vertical position, and forks left in the down position.

Cords and hoses must be secured seven feet overhead in all areas with industrial truck/forklift traffic. In areas absent of industrial truck/forklift traffic, cords and hoses may be secured at floor level but must be protected from possible damage and not create an employee trip/fall hazard.

Forklifts/industrial trucks shall be locked out and/or secured/garaged to reduce the probability of unauthorized access and/or use.

40. HEAVY EQUIPMENT-MATERIAL HANDLING/EARTHMOVING

Whenever visibility conditions warrant additional light, all heavy equipment in use shall be equipped with at least two headlights and two taillights in operable condition.

If possible, equipment shall not be driven on a roadway at night.

All heavy equipment shall have brake lights in operable condition.

All heavy equipment shall be equipped with an adequate audible warning device (horn) at the operator's station.

All heavy equipment must have a back-up alarm audible for a distance of 200 feet.

In congested areas or areas with high noise levels which obscure the audible alarm a signal person in clear view of the operator shall direct the backing operation.

All heavy equipment with cabs shall be equipped with windshields and powered wipers.

- Windshields and mirrors shall be kept clear such that vision is not obstructed.
- Equipment operating in areas or conditions that cause fogging or frosting of windshields shall be equipped with operable defogging or defrosting devices.
- Cracked or broken windshields shall be promptly replaced.

When mandated by regulatory criteria, heavy equipment shall be equipped with rollover protection.

Seat belts and anchorages shall be installed in all heavy equipment

The Contractor shall ensure employee use of seat belts on vehicles and equipment.

Trucks with dump bodies shall be equipped with positive means of support, permanently attached, to prevent accidental lowering of the body while maintenance or inspection work is being done.

Operating levers controlling hoisting or dumping devices on haulage bodies shall be equipped with a latch or other device which will prevent accidental starting or tripping of the mechanism.

Trip handles for tailgates of dump trucks shall be so arranged that, in dumping, the operator will be in the clear.

All equipment shall be maintained in good working order and shall be inspected at the beginning of each shift for defects. A competent person shall in accordance with the manufacturers criteria, inspect and/or perform all maintenance of heavy equipment to include:

- Bulldozer and scraper blades, end-loader buckets, dump bodies, and similar equipment shall be either fully lowered or blocked when not in use and/or maintenance, repair or inspection work is being performed. All controls shall be in a

neutral position, with the motors stopped and brakes set, unless work being performed requires otherwise.

- Service brakes, trailer brake connections, parking brake system, and emergency stopping system (brakes).
- Tires, horn, steering mechanism, seat belts, operating controls, and safety devices.
- Lights, reflectors, windshield wipers, defrosters, and fire extinguishers.
- All vital parts such as motors, chassis, blades and blade holders, tracks drives, hydraulic and pneumatic mechanisms, and transmissions must be inspected.
- All deficiencies shall be repaired, or defective parts replaced prior to continued use.
- Verification of inspection will be available for review by LAUSD authorized representatives.

Before starting a job, the operator shall be given instructions regarding the work to be done.

Before starting the motor, the operator shall check to make sure that all operating controls are in the neutral position.

Before moving, the operator shall walk entirely around the equipment to make sure no other personnel, equipment or material will be struck.

Spotters/flaggers must be used when equipment enters exits or uses public roads, during backing and/or the equipment operator's view is obstructed whether moving forward or backward.

Contractors when required shall ensure that operators of heavy equipment wear appropriate hearing protection devices.

Operators will wear hard hats in equipment not fully enclosed to include no overhead protection/rollover cages, doors, windows, etc.

At no time shall equipment be left unattended while the motor is running, especially if the machine is on an inclined surface or on loose material.

Machines shall be operated at safe speeds and in a manner consistent with conditions on the job.

No employee other than the operator shall ride on equipment.

During refueling operations equipment motors shall be turned off. Smoking is prohibited during refueling.

In order to reduce the probability of unauthorized use by students or the public, unattended equipment must be locked out at all times and parked in a secure area. Keys shall be removed from unattended equipment.

An accessible functional fire extinguisher of CO2, 5-lb. rating or higher shall be available at all operator stations or cabs of equipment.

41. HAZARD COMMUNICATION

In accordance with the provisions of 29CFR1926.59 and 8 CCR §5194 every Contractor must have a comprehensive written Hazard Communication Program which includes:

- A list of hazardous substances known to be on site.
- Methods the Contractor will use to inform employees of the hazards of non-routine tasks.
- On multi-Contractor job sites, the program shall include the methods Contractors will use to inform other Contractors of any precautionary measures to protect their employees.
- The methods used to provide other Contractor(s) with access to Safety Data Sheets (SDS).
- The methods the Contractor will use to inform the other Contractor (s) of the labeling system in use.

The Contractor must submit a copy of its Hazard Communication Program to the *LAUSD OAR or LAUSD Safety* for their review and comments.

The Hazard Communication Program will be in a binder maintained on the job site and contain the following information:

- A comprehensive written Hazard Communication Policy.
- Safety Data Sheets (SDS's) for all hazardous materials used on the site. General/Prime Contractors are responsible for maintaining on the job site in a central location Safety Data Sheets (SDS) on all chemicals/materials brought on site or used by the General/Prime Contractor and Subcontractors of all tiers.

The Contractor shall ensure that all employees have received training in the safe use of hazardous materials; and those employees are able to read and understand the information on Material Safety Data Sheets. At a minimum training shall include:

- Methods and observations that may be used to detect the presence or release of a hazardous chemical.
- The physical and health hazards of the chemicals used in the work area.
- Measures employees can take to protect themselves from the hazards.
- Details of the hazard communication program, including the labeling systems and use of SDS.

Documentation of training must be provided, upon request, to LAUSD Safety for their review and comments.

The Contractor shall ensure that all containers used on the construction site are properly labeled as to their contents, including gas and diesel fuel containers.

LAUSD Safety and/or their authorized representative(s), at their discretion, will determine/ approve the storage location(s), quantity and container volume of all chemicals/hazardous substances stored on site.

Note: M&O Department will follow the OEHS Hazard Communication Program employed by LAUSD -OEHS.

42. PORTABLE HEATERS

All portable heaters brought on-site must be Factory Mutual and/or Underwriters Laboratory approved.

Prior to use, the General/Prime Contractor will review and approve all liquid/gas fueled portable heaters brought onto the site.

The use of liquid/gas fueled portable heaters inside buildings requires the approval of the General/Prime Contractor, and/or LAUSD authorized representatives.

Tent Heater use requirements:

- Use only in tents made of fire-resistant material.
- Avoid contact with heating elements or other hot parts.
- Keep flammable materials and clothing away from hot equipment.
- Never use heaters in a utility hole or in a tent that covers a utility hole.
- Ensure adequate ventilation is provided when using a tent.
- Secure a fire extinguisher within the tent in an accessible location.

43. HORIZONTAL BORING/JACKING

(Reference "LOCATING UNDERGROUND UTILITIES BEFORE EXCAVATING" in these Safety Standards for additional safety protocol)

- The Contractor shall locate all buried utilities before commencing boring/jacking operations by contacting the "Underground Service Alert California (Dig Alert) to ensure all underground utilities owners in the area of are notified to mark their utility locations.
- Open a guide hole (bore slot) over any existing utility that is in line with the bore slot.
- Excavate bore slot, bell hole and guide holes as necessary.
- If resistance is encountered during the boring/jacking operation, cease the boring operation immediately and excavate at the point of resistance to determine necessary action.
- All operators must be qualified and trained in the use of the boring/jacking machinery.
- At least two crew members must operate the bore motor at all times.
- Stay clear of the rotating bore pipe and rotating head of boring machines. Loose clothing, long hair, or gloves can cause injury if caught in the rotating bore pipe.
- Do not hold rotating bore pipe with hands or feet.
- Only one crew member shall transmit signals to the operator.
- When using to connect or disconnect bore pipe, operate the boring machine only at slow RPM's.

44. HOUSEKEEPING

[Reference 6.39 page 43 of the General Conditions]

- All construction materials must be stored in an orderly manner.
- Work areas shall be inspected at the completion of each shift to ensure that the work area is maintained and clean as possible.
- All scrap, trash and debris shall be cleaned up as work progresses.
- Metal containers with covers must be provided for disposal of rags soaked with flammable/combustible liquids.
- All exits to include emergency exits and/or access ways must be kept unobstructed. Panic hardware, where present, must remain unobstructed.
- Walkways and sidewalks in or around school facilities must be kept free of construction materials, debris, dirt, tools, and extension cords.
- Keep all materials, tools, and equipment in a stable position (tied, stacked, or chocked) to prevent rolling or tolling.
- Puncture hazards (nails, staples, fasteners, etc.) created by stripped form work (scrap lumber, pallets, shipping materials, etc.) shall be eliminated or controlled by the creating Contractor.
- Immediately clean up all chemical or liquid spills.
- Where steel plates are used to bridge excavations or other similar type construction activities to provide pedestrian walkways or sidewalks, the leading edges of the steel plates must be feathered with temporary asphalt or other suitable materials to prevent trip hazards.

49.1 TRASH DISPOSAL

- Trash bins/dumpsters must be provided on site to dispose of construction debris.
- All Contractors are required to provide and maintain their own dumpsters for trash disposal. The Prime/General Contractor will be responsible for coordinating and ensuring that dumpsters are provided for trash disposal. Trash bins/dumpsters shall be replaced/rotated when full to prevent accumulation of trash/debris outside the dumpster or throughout the job site. In compliance with applicable regulatory criteria, trash bins/dumpsters shall be covered while in transport.

45. INCIDENT REPORTING

[Correlate this section with protocol in the General Conditions, Insurance Manual and OAR Manual]

- Contractors/Subcontractors shall report all injury/illness; incidents to include Contractor employee, student, faculty, public; near misses; environmental incidents vehicle; and fire/property damage accidents/incidents immediately to the LAUSD Owner Authorized Representative (OAR) and/or LAUSD Safety. The investigation of the incident will determine possible cause and identify corrective action required.
- A written accident investigation report signed by the Contractor senior site supervisor or their designee describing who, what, where, when, and how must be submitted within twenty-four (24) hours to the Authorized Representative (OAR). Corrective action(s) to prevent recurrence must also be documented in this report. When requested by LAUSD Safety, incident recovery meetings shall be organized by the Contractor's Safety Manager/Supervisor and shall include the responsible Contractor(s)' Safety Director, Safety Manager or Safety Representative, and the Contractor's management representative(s).
- At their discretion, LAUSD Safety will participate in the on-site accident/incident investigation process.
- **Immediate notification of major incidents will be made to the Authorized Representative (OAR). Affected areas will be secured until released by the Authorized Representative (OAR), LAUSD Safety or, if required, emergency response personnel. Major incidents include fatalities, injury and near miss incidents having the potential to cause a fatality, fires, explosions and environmental incidents such as spills of hazardous materials or release of toxin's into the air.**

46. LADDERS - EXTENSION AND STEPLADDERS

Type II (commercial) and Type III (household) ladders are prohibited.

Always face the ladder and use both hands when ascending/descending.

Employees must maintain a 3-point contact while ascending/descending ladders.

Do not carry tools, materials, equipment up or down a ladder, use a hand line to raise and lower tools, materials, equipment, etc.

Only one (1) individual shall be on the ladder at any time.

Job-Made ladders shall be constructed in accordance with Cal/OSHA provisions contained in 8 CCR §1676.

All types of ladders must be inspected at least daily for:

- Cracks, splits, splinters, and decay.
- Protruding nails and loose rivets.
- Loose, bent, or broken rungs, braces, tie rods, guide irons, locks, pulleys, and strand hooks.
- Broken, worn or defective spurs and pads.

When ladders are found to be lacking in any safety device, or are found to be defective in any way, such ladders shall be removed from use immediately, tagged out and supervision notified. Ladders found to be too defective for repairs are to be destroyed.

All straight and extension ladders will be equipped with nonskid safety feet/bases.

Portable ladder feet shall be placed on a substantial base.

The top of straight or extension ladders must extend three (3) feet (36 inches) beyond the supporting object when the ladder is used for access to an elevated work area.

To prevent displacement or movement, straight and extension ladders shall be tied off at the top when in use or when left unattended. If tie-off cannot be made, ladders must be held at the foot while in use and taken down when not in use.

Contractors shall provide documented employee training in the safe use of ladders. Training and/or retraining shall cover all applicable safe use protocol and hazards associated with ladder usage.

Defects in wooden ladders may be concealed by use of paint. For this reason, ladders of this type must not be painted, except for necessary identifying marks.

Metal ladders must not be used near or for electrical service.

Ladders are not to be used for skids, braces, workbenches, or any other purpose other than climbing.

Extension ladders shall have positive stops to ensure safe overlap of the sections. Overlap requirements are:

- Ladders up to 32 feet long use a three-foot overlap.
- Ladders from 32 to 36 feet use a four-foot overlap.
- Ladders from 36 to 48 feet use a five-foot overlap.
- Ladders over 48 feet use a six-foot overlap.

Extension ladders shall not be taken apart in order to use each section separately.

Ladders shall be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is about one-quarter of the working length of the ladder.

Stepladders must be fully open, set level and the spreader set to the open and locked position.

Do not work off the top two rungs. Standing or sitting on the top platform or straddling a stepladder is prohibited.

Do not lean a stepladder against a wall in an unopened position. Stepladders shall not be used as straight ladders.

Do not climb on or use the backside of a stepladder.

Do not exceed the ladders designated weight capacity. Ladders missing "capacity" labels will be removed from service or from the job site.

47. LEAD

Lead abatement, as defined, is to be performed by Contractors or Subcontractors whose workers are certified by the Department of Public Health (DPH). Lead related construction work may be performed by Contractors' or Subcontractors' workers who have been trained in Lead Awareness as described in the District's Standard Specification Section 13282 – Lead Abatement and Lead Related Construction Work. Evidence of certification and/or training is required to be provided to the District's Environmental Representative prior to the commencement of work.

It is the Contractor's responsibility to review the Assessment Report addressing the impact to Lead Based materials, Lead Containing materials or coatings, and materials assumed to contain Lead prior commencement of work and take the necessary steps to ensure the safety of students, faculty, Contractor employees, and the general public.

Contractor must identify any Lead Based Paint (LBP) or coatings and assumed lead containing coatings in or on the materials to be impacted within the proposed scope of work **PRIOR** to any construction, remodeling, maintenance, repair or demolition activities.

No lead abatement will proceed until the LAUSD's Environment Representative has given written approval of the Lead Abatement Contractor's written abatement work plan.

No work by Contractors other than the Lead Abatement Contractor will be permitted to work in regulated areas until clearance is provided by the LAUSD Environmental Representative.

The Lead Abatement Contractor or General Contractor performing monitoring of lead related construction work will be responsible for characterizing the waste stream (e.g., paint chips, components, etc.) and disposing of waste according to the characterization. Hazardous waste will be transported under a Uniform Hazardous Waste Manifest in accordance with District Standard Specification Section 13282.

48. FIRE/LIFE SAFETY

In operating/occupied LAUSD facilities or where applicable, all exits, and emergency exits must be maintained clear of any obstructions at all times and available for use by the public at all times.

LAUSD and the local Fire Department will be notified when any Impairments or work activities are conducted on, or that may affect any school fire alarm/protection system(s), must be approved by LAUSD prior to beginning work.

All impalements to or work activities conducted on LAUSD fire alarm/protection systems must be approved by the local Fire Department prior to beginning work.

Do not block, obstruct, or tamper with fire protection and/or alarm systems/equipment to include fire extinguishers/hoses, sprinklers, standpipe, pumps, control valves, manual pull box alarms, alarm panels, panic hardware, etc. without prior approval from LAUSD and/or the local Fire Department.

Electrical panel disconnects and other associated electrical equipment must remain unobstructed.

Walkways and sidewalks in operating/occupied LAUSD facilities must be kept free of construction materials, debris, dirt, tools, equipment, extension cords, barricades, etc.

In the event that any life safety protocol which includes any exit and/or path of travel to any exit in all occupied LAUSD buildings must be compromised for any reason(s) due to construction related activities, LAUSD and/or the local Fire Department will be notified prior to commencing work. Under no circumstances will construction activities take place until alternate life safety measures approved by LAUSD and/or the local Fire Department are implemented by the responsible Contractors.

49. LIQUIDS - CORROSIVE ACIDS AND CAUSTICS

Do not store, handle, apply or use acids or caustics until the proper safe procedure has been established and implemented.

Never add water to acid - if dilution is needed, add acid to water.

An emergency eyewash station or shower provided and maintained by the responsible Contractor must be immediately available to personnel working with acids or caustics.

Proper personal protection must include a face shield, apron, gloves, and sleeve lets as well as any other safety equipment, procedures, work processes, etc. deemed necessary in order to provide maximum protection to all exposed personnel. Contractors will be responsible for reviewing the Safety Data Sheets (SDS) for specific chemical handling and personnel protective equipment requirements.

50. LOCK-OUT/TAG-OUT/BLOCK-OUT

The Contractor must have a written Lock-out/Tag-out/Block-out program that meets or exceeds the OSHA standards contained in 8 CCR §1595, §2320.4, and §3314.

During servicing, cleaning, adjusting and maintenance activities all movable parts shall be mechanically blocked or locked out/tagged out as required to ensure equipment/machinery cannot be operated. Locks and tags must be used by all personnel working on or around all equipment/machinery. Basic lockout/tag out steps are as follows:

- Locate and identify all energy sources and isolating devices.
- Alert the people in the area of the lockout.
- Shut down equipment by the normal stopping procedures.
- De-energize all energy sources (electrical, hydraulic, pneumatic, steam, gravity, thermal, gravitational)
- Physically place locks and tags on energy isolating devices.
- Verify a zero-energy state. In no case shall work begin before circuits and equipment and/or machinery is tested to ensure that they are, in fact, de-energized.
- Perform the work.
- Clean area of tools, parts, and personnel.
- Remove locks and tags.
- Alert the necessary personnel that the equipment will be online.
- Restore energy and resume normal operations.

When locks and tags are required, the craft personnel working on that circuit shall notify their appropriate supervisor. The supervisor, or his designee, shall see that appropriate locks and tags are provided. When work is completed, the appropriate supervisor is also to be notified when the lock(s) and tag(s) are removed.

Lockout locks, and tags shall not be used for purposes other than lockout activities.

Each Contractor employee must affix their own lock(s)/tag(s).

The Contractor Safety Manager and OAR must be notified if a contractor lock and tag must be removed by someone other than the employee who placed the lock/tag.

When a lock has been left on a piece of equipment and the employee has left the site, the Contractor will then contact the Construction Manager, his designated representative or the Contractor Safety Manager and OAR. The area will be walked down by Contractor supervision to ensure the area is safe prior to removing the lock/tag.

Any employee who removes a tag or lock belonging to another employee or person, or overrides a tag or lock in any way, shall be removed from site.

51. LOCATING UNDERGROUND IES BEFORE EXCAVATING

The nearest shut off valve or control point for known utilities shall be identified on a site plan to be maintained on site by the responsible Contractor.

The performing Contractor will be responsible for locating buried utilities before digging/excavation.

No excavation work will take place before verification of the existence and location of or lack of underground utilities.

Within a minimum of two days (48 hours) prior to excavation all known owners of underground facilities in the area will be notified by calling the Underground Service Alert California (also known as Dig Alert) – phone number: (see below) All underground utility line location(s) identification and marking should be done by a third party via the "Underground Service Alert California (Dig Alert) or contracted third-party entity or the utility company. A third party must be contracted to locate lines on LAUSD private property as Dig Alert will only locate up to the property line. Typically a minimum of two (2) days notification is required prior to beginning planned excavation work. This reduces the Contractor's liability should damage occur due to improper marking of utility line location.

The Underground Service Alert California (Dig Alert) one call notification system will apply to underground utilities located on both public and private land. Contractor shall check the entire job site for visual signs of substructures. This includes such items as manhole covers, water meter boxes, ditch lines, pavement patches, previous location marks, pole risers, and the obvious absence of overhead utilities.

The contractor must expose substructure **by hand** after locations are determined.

Contractor shall be careful not to damage the utility substructure by scraping, hammering or other forms of excavation or locating efforts.

Contractors shall be aware of the possibility of joint use by other Contractors of an excavation/trench for power, telephone, gas, fiber optics, cable, etc.

UNDERGROUND SERVICE ALERT CALIFORNIA

Phone Number: 811.

Web Address: http://www.digalert.org/index.asp

52. MOTOR VEHICLES

Contractors will be responsible for claims arising from the operation of Company owned motor vehicles on the construction site.

Only vehicles meeting or exceeding LAUSD automobile insurance specifications/coverage limits (refer to the LAUSD Insurance Manual) will be permitted on LAUSD property/construction sites.

Every Contractor will be responsible for ensuring their drivers and vehicles meet or exceed any regulatory criteria whether Federal, State, or local pertaining to the operation of a motor vehicle.

All Contractor employees operating motor vehicles shall have a valid driver's license for the class vehicle driven.

Drivers of vehicles over 26,000 pounds GVW or hauling EPA regulated materials are required by Federal and State Departments of Transportation regulations to possess a Commercial Driver's License (CDL).

Drivers of motor vehicles on the site shall obey all street and highway speed, traffic laws and traffic signs.

All drivers of Contractor vehicles shall check the mechanical condition of their vehicles at least daily.

Drivers are required to observe the "right of way" rule. Yield to other drivers whose driving actions demand the right-of-way.

Drive defensively. Anticipate what other driver(s) may do.

The job site speed limit is 5 mph.

Employees driving and riding in Contractor vehicles must wear seat belts.

All passengers on motor vehicles must be seated and within the confines of the vehicle.

Contractor's employees are not allowed to ride in the open bed of a pickup truck.

Pedestrians will always have the right of way.

Parking shall be in specified and authorized areas only. Do not block entrances and do not park in reserved spaces.

Block, chock, or angle vehicle wheels when parking on inclines.

All vehicles must be shut off when unoccupied.

The Contractor is responsible for the stability of any material being hauled.

53. OVERHEAD UTILITIES

The Contractor will identify all overhead utilities prior to the start of any work.

The Contractor shall identify the voltage carried by each power line and identify the minimum required clearances prior to commencing work in the vicinity of the line.

- Identifications of all power lines and minimum clearances shall be documented on a site plan that is made available to all Employees, Subcontractors, vendors, and suppliers.
- This site plan shall include identification of all power lines that are within 45 feet of the perimeter of the site.
- Temporary utilities shall be added to the site plan as required.

Proper distances must be maintained from all overhead power lines, such as by the use of a signal person.

- A minimum clearance distance of 15 feet shall be maintained by apparatus or equipment from power lines of 50Kva or less.

If ongoing work around energized overhead power lines will take place thereby increasing the probability of accidental contact, the Power Company should be requested to temporarily insulate the lines.

54. PERMITS

Unless otherwise relieved via contract provisions, each Contractor shall obtain relevant permits pertinent to the safety of employees, the public and operations.

Permits shall be available at the job site for review by LAUSD representatives.

Contractors must obtain and post Cal/OSHA Activity Permits for the following construction activities:

- Construction of trenches or excavations which are 5 feet or deeper and into which a person is required to descend.
- Construction of any building, structure, scaffolding or falsework more than 3 stories high, or the equivalent height (36 feet).
- Demolition of any building structure or dismantling of scaffolding or falsework more than 3 stories high, or the equivalent height (36 feet).
- Erection or dismantling of vertical shoring systems more than 3 stories high, or the equivalent height (36 feet).
- Use of fixed or mobile tower cranes.

55. PERSONAL PROTECTIVE EQUIPMENT

Contractors are required to assess the workplace to determine if hazards that require the use of personal protective equipment (PPE) are present or are likely to be present.

Contractors will be responsible for supplying all necessary personnel protective equipment (PPE) to all relevant employees.

Contractors shall ensure that employees are trained in the proper use, sanitation, maintenance/care, inspection, and limitations of each type of personal protective equipment prior to actual use.

Contractors must select and have affected employees use/wear properly fitted personal protective equipment (PPE) suitable for protection from existing hazards.

Contractors are responsible for enforcing employee compliance with all personal protective equipment (PPE) criteria.

Use of Personal Protective Equipment (PPE) will be in accordance with 8 CCR 1514, 1520-22, 3381-82, 5096 and 5144 (Hazard assessment for Personal Protective Equipment).

55.1 HARD HATS

It is required that all employees on the job site should be protected by NON-METALLIC protective helmets. In order to protect employees against impact and penetration of falling and flying objects, hard hats will be worn 100% of the time while on the job site. The General Contractor, at their discretion, may designate areas on site (break areas, office trailer areas) where hard hat usage is not required. Hard hats shall meet the specifications contained in American National Standards Institute, Z89.1-Safety Requirements for Industrial Head Protection.

56.2 EYE AND FACE PROTECTION

It is required that all employees on the job site shall be protected by proper eye protection. In order to protect employees against impact and flying objects, eye protection will be worn 100% of the time while on the job site (the only exclusion is while inside the jobsite trailer or designated areas outside of the construction zones) The General Contractor, at their discretion, may designate areas on site (break areas, office trailer areas) where eye protection usage is not required. Eye protection shall meet the specifications contained in the American National Standards Institute, ANSI Z87.1 "Practice for Occupational and Educational Eye and Face Protection."

- Employees will be required to wear the proper eye and face protection for all tasks which expose them to recognized eye and face hazards.
- Safety glasses with permanently affixed side shields will be considered the minimum type of eye protection worn.

- Employees involved in welding operations will be furnished with filter lenses of the proper shade number.
- Employees will not wear shaded lens while working indoors unless they are performing task specific work that requires filtered lenses.
- Employees exposed to laser beams shall be furnished with suitable laser safety goggles which will protect for the specific wavelength of the laser and be of optical density (O.D.) adequate for the energy involved.
- The eye protection required for various operations is as shown in the OSHA Federal Register, Part 1926.102.

56.3 HAND PROTECTION

56.3.1 GLOVES

In order to ensure that all contractor employees working on LAUSD construction sites have suitable hand protection available in the event they are assigned job tasks that create an exposure to hand injuries, all personnel will, at all times, have/carry gloves appropriate for their work activities.

When the scope of work performed creates a potential risk of hand injuries, Contractor employees will wear the appropriate hand protection.

- Hand protection will also be worn when handling or working with chemical substances such as paint, solvents, acids, etc.
- Gloves will not be worn for close work around saws, lathes, drill presses, and similar machinery in which they are likely to become entangled.

56.4 HIGH VISIBILITY SHIRT, VEST, OR JACKET

It is required that all employees on the job site when working outside of buildings, in trenches/excavations, and around mobile equipment and vehicles, wear high visibility shirts, vests, jackets or equivalent. Protection means high visibility materials which are intended to make the user clearly visible by day through the use of high visibility material and in the dark by vehicle or equipment lights through the use of retro-reflective (fluorescent) material.

The high visibility clothing should not be worn in a manner that interferes with the safe use of other PPE items (i.e.; fall arrest systems, leather or other fire-retardant garments, etc.).

For daytime work, flagmen shall be provided with and shall wear the flagger's vest, shirt, or jacket which shall be orange, yellow, yellow-green, or a fluorescent version of these colors. For nighttime work, similar outside garments shall be retro-reflective. The retro-reflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. The retro-reflective clothing shall be designed to clearly identify the wearer as a person.

55.5 RESPIRATORY PROTECTION

Approved respiratory protection will be provided to and worn by all employees subject to hazardous dust, gases, fumes, mists, or vapors. When respirators are indicated, the employer shall implement a written respiratory protection program which includes:

- A written respiratory protection program and training;
- Physical Examinations for respirator use;
- Written cartridges change out schedules; and
- Care, maintenance, and disposal process.

Lack of air monitoring data does not permit/allow the assumption that hazardous air contamination thresholds are not being exceeded therefore respirators are not required. Only Industrial Hygiene air monitoring data will counteract an order given by LAUSD for the use of respiratory protection.

Contractor employees who are required to wear respiratory protection must receive a medical assessment of their physical ability to wear the equipment, be properly fit tested, and be trained in the use, care, maintenance, and limitations of the respiratory device.

The proper respirator must be selected for the particular type of air contaminant involved.

Respiratory protective devices should be approved by the Department of Health and Human Services (DHHS) or National Institute of Occupational Safety and Health (NIOSH).

56.6 HEARING PROTECTION

Hearing protection must be worn by employees who are exposed to excessive noise levels in situations where administrative or engineering controls cannot be utilized to establish acceptable noise levels.

Lack of noise monitoring data does not permit/allow the assumption that permissible noise levels are not being exceeded therefore hearing protection is not required. Only approved noise monitoring data will counteract an order given by LAUSD for the use of hearing protection.

Hearing protection used to obtain acceptable noise levels will consist of either approved ear plugs, earmuffs, or a combination of both. Plain cotton is not considered an acceptable protective devise and should not be used for hearing protection.

The following Table 2 "Permissible Noise Exposures" should be used to determine the duration of exposure permitted for various sound levels. Additional requirements concerning hearing protection can be found in the OSHA Federal Register, Part 1926.101 or Cal OSHA, Title 8, Section 5095.

When hearing protection is recommended, employees shall be trained on the proper use of the hearing protection. If the Action Level (AL) of 85 dba, 8 hour-Time Weighted Average is reached **based on personal dosimeter monitoring**, a written hearing conservation program shall be implemented for effected employees and shall include but not limited to:

- Baseline audiograms;
- Annual audiograms;
- Posting of the written program;
- Warning signs in high noise areas; and
- Training of employees.

Table 2. CAL-OSHA Permissible Exposure Levels

A-weighted sound level, L (decibel)	Reference Duration T (hour)	A-weighted sound level, L (decibel)	Reference Duration T (hour)
80	32	106	0.87
81	27.9	107	0.76
82	24.3	108	0.66
83	21.1	109	0.57
84	18.4	110	0.5
85	16	111	0.44
86	13.9	112	0.38
87	12.1	113	0.33
88	10.6	114	0.29
89	9.2	115	0.25
90	8	116	0.22
91	7.0	117	0.19
92	6.1	118	0.16
93	5.3	119	0.14
94	4.6	120	0.125
95	4	121	0.11
96	3.5	122	0.095
97	3.0	123	0.082
98	2.6	124	0.072
99	2.3	125	0.063
100	2	126	0.054
101	1.7	127	0.047
102	1.5	128	0.041
103	1.3	129	0.036
104	1.1	130	0.031
105	1		

56.7 FOOT PROTECTION

Contractors will be responsible for insuring that their employees are wearing adequate, sturdy footwear. Footwear worn on the job site should have soles which guard against punctures and slipping and uppers should be such as to protect against expected scraping and scratching from rough building materials. Where there is a frequent possibility of hard objects being

dropped on the foot, proper protection should be provided in the form of safety toed (steel-toed or composite-toed) footwear.

The footwear soles should be made of slip resistant materials and not worn to the point where slip resistance is compromised.

Employees operating paving breakers/jack hammers, jumping jacks, compaction equipment and sand tamps, etc., shall wear metatarsal guards or steel toed safety shoes.

Tennis, running, casual street shoes, sandals or shoes made with thin materials are not permitted on the job site.

56.8 PERSONNEL FALL ARREST/PROTECTION

Reference FALL PROTECTION in these Safety Standards

CONTRACTORS WILL BE RESPONSIBLE FOR PROVIDING ANY OTHER TYPES OF PERSONAL PROTECTIVE EQUIPMENT WHICH MAY BE REQUIRED FOR SPECIFIC JOBS. THE PERSONAL PROTECTIVE EQUIPMENT REQUIRED AND UTILIZED/WORN WILL BE CONTINGENT ON THE EXPOSURE POTENTIAL ASSOCIATED WITH JOB TASK(S) PERFORMED.

56. POSTING REQUIREMENTS

The Contractor shall be required to construct a weatherproof job site bulletin board. Federal and State regulations require Contractors to conspicuously display all required posters at locations where employees report each day.

At a minimum, the following items shall be posted:

- Industrial Welfare Commission's Order Regulating Wages, Hours, and Working Conditions.
- OSHA "Job Safety and Health Protection".
- Contractor's "Code of Safe Practices". (?)
- Discrimination in Employment is prohibited by Law.
- Sexual Harassment Poster (if required).
- Americans with Disabilities Act (ADA).
- Notice of Worker Compensation Carrier.
- Notice to Employees of Unemployment Insurance and Disability Insurance.
- OSHA Operating Rules for Industrial Trucks.
- Emergency Telephone Numbers (yellow/black card).

57. POWDER-ACTUATED TOOLS

Powder-actuated tools must meet or exceed ANSI A10-3 standards.

Only trained workers holding a valid operator's card can use a powder-actuated tool.

Containers for powder-actuated tools must be lockable and bear the label, POWDER-ACTUATED TOOL, on the outside. The container must be kept under lock and key storage.

To prevent/protect against accidental activation all power activated tools shall be equipped with a barrel end to surface contact safety device.

The following must be provided with each tool:

- Operating and service manuals.
- Power load chart.
- Inspection-Service record.
- Repair and servicing tools.

Eye or face protection is required for operators and assistants.

Tools must be inspected prior to use. Defective tools must not be used.

Powder-actuated tools must not be left unattended.

Powder-actuated tools must be unloaded if work is interrupted. Tools must not be loaded until ready for use.

Unfired cartridges must be under the control of the operator at all times.

On misfire, the tool must be held in place for 30 seconds.

Misfires shall be placed in a can of water.

Different power loads must be kept in separate compartments.

Warning signs must be clearly posted within 50 feet of the point of use bearing the words "POWDER-ACTUATED TOOLS IN USE."

58. ROOFING HAZARDS

During roofing operations unless otherwise specified in the LAUSD Safety Standards the Contractor shall comply with the provisions contained in 8 CCR §1730.

Employees shall be protected from falls from roofs by use of one or a combination of the following methods:

- Parapets will be a minimum 39 inches high otherwise other means of fall protection will be required.
- Personnel fall arrest systems.
- Catch platforms.
- Scaffold platforms.
- Eave barriers a minimum of six (6) feet from the roof eave (i.e. Controlled Access Zone).
- Standard railings and toe boards
- Each rooftop hatch shall be equipped with railing, chains and/or swing gates and a grab bar. New construction will not be considered complete unless these requirements are met.

Also reference Fall Protection in these standards.

59. SANITATION

The Contractor must provide in a clean and sanitary condition:

- potable water for drinking,
- adequate toilet facilities (see below),
- hand wash facilities as required by the applicable Federal or State standards
- appropriate containers for disposal of garbage,
- Any necessary insect and rodent control.

A minimum of one separate toilet facility for each sex shall be provided for each 20 employees or fraction thereof.

Toilet facilities shall be kept clean, free of graffiti, maintained in good working order, designed, and maintained in a manner which will assure privacy and provided with an adequate supply of toilet paper.

BREAK AREAS SHALL BE DESIGNATED FOR EATING AND DRINKING PURPOSES.

There have been several incidents of workers stepping on plastic bottles and rolling their ankles sustaining injury; therefore LAUSD has implemented the following policy:

PLASTIC BOTTLES INCLUDING WATER BOTTLES, SODA OR OTHER SOFT DRINK BOTTLES MUST BE PLASTIC AND HAVE THE LIDS REMOVED AND DISCARDED IN PROPER RECEPTACLES UPON OPENING. ABSOLUTELY NO GLASS CONTAINERS MAY BE USED ON SITE.

60. SCAFFOLDS - ERECTION, INSPECTION AND MAINTENANCE

Scaffolds utilized by Contractors, unless otherwise specified in the LAUSD Safety Standards and/or the Contractor/Suppliers Safety Standards, shall at a minimum comply with OSHA 29 CFR 1926.451 and Title 8, Subchapter 4, Article 22, Section 1644.

The following procedures shall govern the erection, dismantling, maintenance, inspection, and use of scaffolds.

Note: LAUSD requires a minimum of one stair tower for structures greater than 24 feet. Straight ladders require the use of fall protection devices at heights over 24 feet such as the use of scaffold davits and self-retracting lifelines.

Note: Folding A-frame scaffolding is strictly prohibited for use on LAUSD project sites.

Pedestrian Canopy Scaffolds & Scaffold Structures

- Pedestrian Canopy Scaffolds shall be designed and stamped by a licensed civil or structural engineer registered with the State of California; and constructed, erected, and loaded in accordance with such design.
- Anchoring Base plates shall be anchored into concrete sideways using a minimum of two anchors for each base plate. Anchor bolts shall be used only if the City of Los Angeles requires them. (Anchor bolts shall be validated by either a licensed civil or structural engineer registered with the State of California).
- Privacy Screens made of wooden plywood shall not be attached to scaffold frames; rather, they shall be attached to metal fence posts.
- When the Scaffold Structures reaches the height of the third frame working level, the scaffold shall be designed and stamped by a licensed civil or structural engineer registered with the State of California; and constructed, erected, and loaded in accordance with such design.
- Requests for Approval of Scaffolding submittals shall be submitted to the designated Safety Specialist through or in conjunction with the project OAR.
- Compliance with Fed/OSHA & Cal/OSHA Requirements: all scaffolds shall be designed, constructed, erected, loaded, dismantled, maintained, inspected, and used in accordance with federal guidelines set forth in 29 CFR 1926.451 (Scaffolds General Requirements) Cal/OSHA-Title 8, Subchapter 4, Article 22, Section 1644 ((Metal Scaffolds) and LAUSD Safety Standards (Section 61 – Scaffolds – Erection, Inspection and Maintenance)

Erection and Dismantling:

- Scaffolding shall be erected, moved, dismantled, or altered only under the supervision and direction of a Competent Person specifically trained and qualified to perform these tasks for the type scaffolding utilized. The Contractor will assure that a Competent Person provides employees assigned to erect, dismantle, move, repair, maintain and inspect the scaffold with the required training and/or supervision to ensure they recognize any hazards associated with the work performed.
- All scaffolding must be provided with identification that it has been erected and dismantled by or under the supervision of a Competent Person.
- Documentation of Competent Person's certification shall be available on site for review by authorized LAUSD representatives.
- The training shall include the following topics, as applicable:
    - the nature of scaffold hazards
    - the correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in question
    - the design criteria, maximum intended load-carrying capacity, and intended use of the scaffold
    - any other pertinent procedures or safety requirements
- When the Contractor has reason to believe that an employee(s) lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, the Contractor shall re-train each such employee so that the required proficiency is regained.
- The Contractor shall have a Competent Person determine the feasibility and safety of providing fall protection for employees erecting or dismantling supported scaffolds. Fall protection is required for employees erecting or dismantling supported scaffolds over six (6) feet in height where the installation and use of such protection is feasible and does not create a greater hazard.
- The Contractor shall have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training shall include the following topics, as applicable:
    - the nature of any electrical hazards, fall hazards, and falling object hazards in the work area,
    - the correct procedures for dealing with electrical hazards

- the correct procedures for erecting, maintaining, and dismantling the fall protection and falling object protection systems being used
- the proper use of the scaffold, including the proper handling of materials on the scaffold
- Scaffold User Cards are required to be submitted to the designated Safety Specialist and Contractor Safety Manager.
- the maximum intended load and the load-carrying capacities of the scaffold
- any other pertinent procedures or safety requirements

- The working platform height of a rolling scaffold must not exceed three times the smallest base dimension unless guyed or otherwise stabilized.
- All connections, including casters, on rolling scaffolds shall be pinned.
- The casters used with rolling scaffolding shall have an ultimate/maximum rolling load capacity/pound rating. When casters are used with scaffolding, this capacity shall be the load limiting factor.
- No rolling scaffold is to be moved with anyone on the platform regardless of the height. Care must be exercised in moving these scaffolds to prevent their upsetting. Wheels shall be locked at all times except when scaffolds are being moved.
- Scaffolds must be erected level and placed on a firm base. The scaffold platform shall be horizontal as close as the eye can detect. When the scaffold is resting on the ground, bearing plates shall be placed beneath each leaf to prevent the scaffold from settling into the earth. The bearing plate must be a minimum of two inches (2") by ten inches (10") timber.
- Adjusting screws utilized to level scaffold frame members are to be used with a base plate only. Adjusting screws will not be extended more than 12 inches. Adjusting screws are not to be used in conjunction with casters or on rolling scaffolds.
- All scaffolds shall be designed to carry without failure four (4) times the maximum intended load and at no time will any scaffold be overloaded.
- Complete top rail, mid-rail, and toe boards shall be provided on all sides of the working platform of scaffolds six (6) feet or higher. If utilized, wood guardrails shall be two inches by four inches (2" x 4") or the equivalent, between 39 inches to 45 inches high with a mid-rail. Support shall be at intervals not to exceed eight (8) feet. Toe-boards shall be a minimum of four inches (4") in height.
- If the guardrail system is missing or incomplete personnel fall protection is required.
- Detachable "X" braces must be fastened securely. Where obstructions prevent the use of "X" braces, other means to secure bracing shall be used.

- Vertical tie: The initial tie for scaffolding should be at 9 feet for 3-foot-wide scaffold. Horizonal tie: The initial tie for scaffolding should be 20 feet for 3-foot-wide scaffold.
- Ties should be installed at each end of the scaffold, and at horizontal intervals of no more than 30 feet.
- Do not use scaffold rails or braces for climbing. Use the provided ladder access. Ladders, if not an integral part of the scaffold, shall be attached securely to the scaffold so as to provide safe access to the working platform.
- A stair tower or built-in stair/ladder system shall be provided for access to all scaffolds four frames or more in height.
- Scaffolds will not be placed in front of doors unless the doors are blocked, locked, or guarded.
- Scaffold planks must extend over their end support not less than six inches (6″) or more than twelve inches (12″).
- Scaffold planks, unless they are cleated, are to be wired down securely so they will not shift or tip when under a load.
- Scaffolds are not to be bridged between with scaffold plank or stages unless the scaffolds are secured to each other by adequate bracing or tied off to an independent structure.

Inspection and Maintenance:

- Handrail, mid-rail, and cross bracing shall be inspected for nicks, especially near the center of the span and for indications where a welding arc has been struck. Such pieces shall be removed from use immediately.
- No scaffolding member will be altered by welding, burning, cutting, drilling, or bending.
- Manufactured Frames
    - Checks shall be made around the frame weld zone for crack indications and the tubing checked for splitting or cracking at leg ends.
    - The three main areas of inspection are for rust, straightness of members and welds. When rust appears, wall thickness of the tubing shall be checked for thinning. All members or parts of all steel scaffold components shall be straight and free from bends, kinks, or dents. Any pieces of scaffold found having any of these defects shall be removed from service immediately.
- All scaffolds must undergo a daily visual inspection conducted by the designated Competent Person. Upon completion of the inspection, the Competent Person is required to sign the scaffold green tag to certify that the scaffold is safe for use. This

process ensures compliance with safety standards and helps prevent workplace hazards

61.1 SUSPENDED SCAFFOLDS

Suspended scaffolds must have adequate anchorage points. Prior to stepping out onto any suspended scaffold, the occupants must be provided with a full body harness, lifeline and deceleration device that must be attached to a separate anchorage point.

The setup, maintenance, inspection, and use of suspended scaffold will be under the supervision of a Competent Person and will follow all applicable Federal and State regulatory standards.

61. STEEL ERECTION

Steel erection activities shall comply with all facets of 29CFR1926 Subpart R, except where superseded below:

- Steel erection Contractors shall implement a Site-Specific Steel Erection Plan in accordance with the OSHA Steel Erection Standards "Guidelines for Establishing the Components of a Site-Specific Erection Plan.
- All site preparation shall comply with Subpart R. LAUSD has extended the site preparation requirement to treat rebar the same as structural steel regarding site preparation, loading and off-loading.
- When connecting beams at the periphery or interior of a building or structure where the fall distance is greater than six (6) feet, the Connector shall be provided with and use appropriate personal fall protection equipment in accordance with OSHA requirements and these Standards.
- Connector means an employee who, working with hoisting equipment, is placing and connecting beams or other structural members.
- When performing work other than connecting, Employees shall be provided and use personal fall protection equipment in accordance with these Standards and Federal OSHA requirements where the fall distance is greater than six (6) feet.
- Where applicable erection Contractor employees working in excess of six (6) feet in height shall utilize personnel fall protection equipment tied off to beam clamps, approved anchorage, or other approved anchoring device(s) or work in Mobile Elevated Work Platforms (MEWPs) (i.e., man lifts).
- Any deviations from this steel erection fall protection policy will require a minimum of three weeks advance written approval from authorized LAUSD Safety representatives prior to commencing work.
- Before the commencement of steel erection, the steel erection Contractor must receive written notification that the concrete in the footings, piers, and walls, as well as the mortar in the masonry piers and walls has attained, on the basis of an appropriate ASTM standard test method of field-cured samples, either 75 percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.
- No building, structure, or part thereof, or any temporary support shall be loaded in excess of its designed capacity.
- The Contractor shall provide an erection plan and procedure prepared by a registered civil engineer for the erection of trusses and beams over 25 feet long.
- Trusses and beams shall be braced laterally and progressively during construction to prevent buckling or overturning.

- Open web steel joists shall not be placed on any structural steel framework unless such framework is safely bolted or welded.
- Permanent Flooring
    - Permanent floors shall be installed as soon as practical following the erection of structural members.
    - At no time shall there be more than four floors or 48 feet of unfinished bolting or welding above the foundation or upper most secured floor.
- Temporary Flooring
    - Where skeleton steel is being erected, a tightly planked and substantial floor shall be maintained with two stories or 30 feet, whichever is less, below, and directly under that portion of each tier of beams on which any work is being performed.
    - The erection floor shall be solidly planked over its entire surface except for access openings. Planking shall not be less than 2 inches thick, full size undressed, and shall be laid tight and secured against movement.
    - On structures not adaptable to temporary floors or static lines, safety nets shall be installed and maintained whenever the potential fall distance exceeds two stories or 25 feet.
    - Employees working above grade or any surface and exposed to protruding reinforcing steel or other similar situations shall be protected against the hazard of impalement by the use of guardrails, or approved fall protection systems, and protective cover SHALL BE PLACED ON ALL IMPALEMENT HAZARDS as specified in 8 CCR §1712.
    - Exposed edges of all temporary planked or temporary metal decked floors at the periphery of the building, or at interior openings, such as stairways and elevator shafts shall be protected by a single 3/8-inch minimum diameter wire rope located between 39 and 45 inches above design finish floor height. The erection Contractor shall install turnbuckles no less that every 100 feet to allow for re-tightening of cables. A mid-rail and toe board shall be installed at the completion of the installation of decking.
    - Covers for roof or floor openings shall be capable of supporting, without failure, twice the weight of employees, equipment and materials that may be imposed on the cover at any one time.
    - All covers shall be secured when installed to prevent accidental displacement by wind, equipment, or employees.
    - All covers shall be painted with high visibility paint or shall be marked with the word “HOLE” or “COVER” to provide warning of the hazard.

- Decking gaps around columns shall be protected with wire mesh, exterior plywood, or equivalent to provide protection from objects falling through.
- Metal decking shall be laid tightly and immediately secured upon placement to prevent accidental movement or displacement.
- Bundles of decking shall be placed on a minimum of three steel joists.
- Bundle packaging and strapping shall not be used for hoisting unless designed for that purpose.
- Loose items such as dunnage, flashing, or other materials, which are placed on the top of metal decking bundles to be hoisted, shall be secured to the bundles.
- Containers shall be provided for storing or carrying rivets, bolts, and drift pins, and secured against accidental displacement when aloft.
- When bolts or drift pins are being knocked out, means shall be provided to keep them from falling.
- Impact wrenches shall be provided with a locking device for retaining the socket.
- Connections of equipment used in plumbing-up shall be properly secured.
- Turnbuckles shall be secured to prevent unwinding while under stress.
- Plumbing-up guys shall be removed only under the supervision of a Competent Person.
- Openings in metal decking shall not be cut until equipment installation is ready to commence.

62.1 GENERAL REQUIREMENTS

The crane headache ball, hook, or load shall not be used to transport personnel.

During placing of structural members, the load shall not be released from the hoisting line until the members are secured with not less than two bolts drawn up wrench tight.

All columns shall be anchored by a minimum of 4 anchor rods (anchor bolts).

- Anchor rods (anchor bolts) shall not be repaired, replaced or field modified without the approval of the site Structural Engineer of record and/or in accordance with CDR 1926.755(b).
- Prior to the erection of a column, the Prime Contractor or steel fabricators shall provide written notification to the steel erector if there has been any repair, replacement, or modification of the anchor rods (anchor bolts) of that column.

When loads are being hoisted, avoid walking under the load or permitting an employee to be exposed to the swing of the lift/load. Where applicable, tag line(s) shall be used to control all loads.

Secure loose items aloft. All materials, equipment, and tools, which are not in use while aloft, shall be secured against accidental displacement.

The steel erecting Contractor shall pre-plan all overhead hoisting operations to ensure that no individual is required to work directly below a suspended load.

For protection from falling objects the steel erection Contractor shall bar other construction activities below steel erection unless overhead protection for the employees below is provided.

For additional protection of other crafts on the site, barricades shall be installed around overhead work and signs shall be posted in the erection area, "Danger Men Working Overhead".

Material should not be hoisted to a structure unless it is ready to be put into place and secured.

62. TAR AND MELTING POTS

Any melting chamber must be vented and must have a working thermometer.

No melting pots or tar kettles may be located on roof surfaces. All melting pots must be on the ground, and a minimum of 25 feet from any building.

Barricades must be provided when hot liquids are present overhead on a roof or upper floor.

Buckets containing hot asphalt or pitch shall not be carried on ladders. Whenever possible, pumps shall be utilized to pump asphalt to the roof.

A fire extinguisher shall be kept near each kettle in use. Extinguisher capacity shall be at least:

- Less than 150-gallon kettle – 8:B.C.
- 150-to-350-gallon kettle – 16:B.C.
- Larger than 350-gallon kettle – 20:B.C.

For emergency purposes, kettle and tanker pumps shall be provided with a means of stopping the flow of hot asphalt or pitch manually from the rooftop.

Pumper pipelines shall be securely fastened at roof top and shall not be supported by ladders used for access.

Pipelines shall be adequately braced or supported to prevent collapse.

63. UTILITY HOLES - PUMPING WATER

Contractors shall ensure employee awareness of potential contaminants in utility holes, and water and remediation procedures.

Contaminants can enter a utility hole from numerous sources:

- Leaking underground storage tanks and pipelines.
- Storm water run-off.
- Spills, dumping, or migration from the water table.

All utility holes must be tested for the presence of gases prior to pumping.

Prior to entry, contaminated water or sewage must be removed by an authorized environmental consultant for proper disposal.

All utility hole or access points' work will be subject to compliance with applicable Confined Space safety protocol.

All confined spaces shall have permanent marking identifying them as confined spaces. New construction will not be considered complete if confined spaces do not contain appropriate signage or marking,

64. WARNING SIGNS

Signage/traffic control devices shall be maintained in legible condition and cleared, repaired, or replaced as necessary to maintain legibility.

In accordance with applicable codes and regulations, Contractor(s) shall post site access and warning signage including emergency contact information.

Contractor employees will obey all warning signs.

In order to protect Contractor employees and the public, traffic warning signs, barricades, cones, lights, etc. will be utilized in accordance with all applicable Federal and State standards and criteria outlined in the "Work Zone Traffic Control" section in these Safety Standards.

All Contractor employees will wear high visibility traffic vests when work activities are located adjacent to or on roads.

If necessary and/or required, a flagman will be utilized to direct vehicle traffic.

All Contractors installed warning signs, signals and barricades must be removed when the hazard no longer exists. The responsible Contractor shall monitor conditions to ensure timely removal of these devices.

65. WORK ZONE TRAFFIC CONTROL

Contractors shall establish work area protection zones necessary to protect employees and the public when work is performed in areas where pedestrians or vehicles have access.

Traffic control shall be established in compliance with the U.S. Department of Transportation, Part VI, Manual on Uniform Traffic Control Devices (MUTCD), State and local traffic control regulations, the WATCH Handbook (where referenced by contract) and/or other contract referenced documents/standards.

The responsible Contractor shall establish Work Area Protection in consideration of the location of the worksite, pedestrian and traffic conditions, and the time of day (daylight or dark).

All Contractor employees working in areas subject to being struck by vehicular traffic and/or heavy equipment will wear a high visibility reflective garment/vest in accordance with the requirement of the MUTCD and those Safety Standards.

When placing or removing Work Area Protection the Contractor shall:

- Be consistently alert to traffic conditions.
- Face oncoming traffic.
- Wear the required personal protection (e.g. traffic warning vest, hard hat, eye protection).

Place the initial warning sign (e.g., Construction Ahead) first and remove last.

Work sites must be made safe for pedestrians by using:

- Rope or vinyl warning tape.
- Fencing or other barricades.
- Cones and signs.
- Pedestrian crossing (designated and painted).
- Other appropriate means, methods, and devices.

All night work requires adequate illumination to light the work area and warn public vehicular traffic.

For night work the illumination used to light the work zone shall be aimed such that it does not create glare, or blind, the public driving through the work zone.

Flagging operations shall be conducted in accordance with the following unless a more specific standard applies.

- The responsible Contractor shall ensure adequate protection to passing vehicles on a roadway by providing a flagger(s) when barricades, signs and signals may be insufficient.
- The flagger shall be trained in the proper fundamentals of flagging (signaling) traffic before being assigned as flagger.
- The flagger must be protected, and the motorist forewarned by use of advance warning signs and cones.
- Use cones before the flaggers position to mark the traffic lane.
- All flaggers shall be required to wear a high visibility orange/yellow traffic vest.
- During the hours of darkness the flaggers shall be outfitted with a reflective garment, and the flagger's position shall be illuminated.
- To Stop Traffic - The flagger shall face traffic and hold the "Stop" paddle in a vertical position at arm's length.
- When It Is Safe For Traffic To Proceed - The flagger shall stand parallel to the traffic movement, and with the "Slow" paddle held in a vertical position at arm's length.
- Flags shall be a minimum of 18" x 18" in size, and orange in color.

66. PLATE BRIDGING

Trenches, excavations, or other surface openings or significant depressions must be covered with a bridge plate to permit safe and unobstructed flow of traffic.

Bridging plates must be secured from movement by a holding device(s) such as cleats, angles, bolts, tack welding, etc.

Bridging plates should be installed to produce a minimum amount of noise.

Bridging plates must extend a minimum of one foot beyond the edges, with pavement materials feathering the edges for a reasonably smooth transition.

Advance warning signs shall be posted when steel plates are used on a travel path.

- Refer to the WATCH Manual (where applicable) for specific requirements.

67. JOB SITE ORIENTATION FOR CONTRACTOR EMPLOYEES

Contractors/Subcontractors shall ensure employees new to the site receive a safety orientation that will address the exposure potential associated with all job tasks(s) performed and the safety procedures required to eliminate or at a minimum reduce the accident/loss potential.

The orientation will, at a minimum, review the LAUSD Safety Standards and all other safety standards applicable to their scope of work.

All orientations shall be documented. Records shall be maintained on the job site available for review upon request by LAUSD representatives and/or any regulatory entities.

Topics may include, but are not limited to:

- Explanation of LAUSD's Safety Philosophy
- Contractors' Safety Rules, Policies and Procedures
- LAUSD Safety Standards and any site-specific safety rules, policies and procedures.
- Site map, including entrances, exits, and parking areas
- Emergency procedures
- Evacuation procedures
- Fire protection and prevention procedures and practices – initial site-specific training
- Accident/incident reporting procedures
- Near-miss Incident reporting procedures
- Procedures to report unsafe acts and/or conditions
- Location of First-Aid kits, medical treatment clinic(s) and hospital
- Drug and alcohol policy
- Location of site Bulletin Board
- Day, time, and location of Safety Meetings
- Personal Protective Equipment requirements, including how, when, and where to obtain/replace PPE
- Site dress code, site access identification, code of conduct
- Hazard Communication training (site-specific)
- Fall Protection – initial site-specific training
- Confined Spaces – initial site-specific training
- Electrical Safety – initial site-specific training

- Ladder safety – initial site-specific training
- Scaffold safety – initial site-specific training
- Hot work safety – initial site-specific training
- Control of hazardous energy (including Lockout-Tagout) – initial site-specific training
- Site vehicle safety requirements
- Housekeeping requirements
- Site-Specific Public Safety requirements
- MPN Form B Letter

68. PUBLIC PROTECTION PLAN

The protection of students, LAUSD employees, visitors and the public from potential hazards created by construction activities on or adjacent to all LAUSD construction sites is a critical component of the LAUSD Safety Standards. Minimum Public protection shall comply with ANSI/ASSE A10-34-2001 (R2005).

The Contractor shall develop a Public Protection Plan prior to the commencement of work. The Public Protection Plan shall be reviewed and revised as necessary throughout the site.

- The Plan shall be in writing and available at the job site for review upon request.
- For the purposes of this section, "Public" refers to parties not involved in the execution of work related to the construction site.

69.1 CONSIDERATIONS

The Public Protection Plan shall consider and include at a minimum the following items as they apply to the site: (NOTE: this is neither intended nor represented to be a complete list.)

- Noise
- Dust, Fumes, Mists, Smoke, Vapors
- Traffic hazards
- Pedestrian hazards
- Radiation (including lasers, x-rays, and welding rays)
- Machinery and vehicles
- Falling objects
- Wind-borne objects
- Security
- Utilities
- Hazardous Materials and Hazardous Substances (including use and storage)
- Response to accidents/incidents involving the public
- Accident/Incident reporting and investigation protocol
- Public demonstrations or protests
- Job site perimeter protection (fencing, barricades, etc.)

69.2 COMPONENTS

The Public Protection Plan shall at minimum include the following components:

- Policy statement

- Assignment of responsibilities
- All LAUSD public safety standards/criteria outlined in these Safety Standards and other LAUSD contract documents.
- Identification of existing and predictable public concerns
- Provisions to monitor and inspect the implementation of the provisions of the Public Protection Plan
- Provisions for incident investigation
- Hazard abatement procedures

69. APPENDIX

70.1 LAUSD FSD Construction Safety Project Site Safety Assessment Form

70.1.1 Safety Assessment/Audit Score Sheet

LAUSD FSD Construction Safety
Project Site Safety Assessment

Date: **Time:** **Score: Not Scored**

Project Name:		LAUSD Sr_PM / Phone #:		Email:	
School Address:		LAUSD OAR / Phone #:		Email:	
General Contractor:		GC Safety Officer / Phone #:		Email:	
Colin No.:		GC Superintendent / Phone #:		Email:	
Contract No.:		GC Project Manager / Phone #:		Email:	

☐ *Observed no workers on-site at the time of audit.*

Questions	Total Points 265	Applicable Points 0	Awarded Points 0	Comments	Yes	No	N/A
Site Control: Is the site secure from public and children?	15						x
Are fences properly erected and secure? Are dumpsters properly secured?	3						x
Are gates monitored or kept locked? Proper signs and barricades?	3						x
Are all tools, equipment and machinery properly stowed ?	3						x
Documentation: Are IIPP, EHSMS, JHAs, MSDSs, Incident Investigations, and Regulatory Postings available? HazCom Program? Other?	10						x
Are Self Audits available for review? Do audits cover all activities?	10						x
Fall Protection: Work performed at heights over 6 feet protected?	10						x
Has Fall Protection Plan been employed? Rails, Toeboards where required?	5						x
Are Anchorages 5000lbs or greater for each tie-off person?	5						x
Are Horizontal lifelines used with engineered anchorages?	5						x
Are Scaffolds and Ladders properly setup and used?	5						x
Excavation: Are depths over 5 feet properly benched sloped, or shored? Barriers?	10						x
Is competent person on-site? Documented Soils classifications and methods?	10						x
Is benching or shoring properly employed, when required?	5						x
Access/Egress/Air Monitoring adequate, rescue plan when required?	5						x
Electrical Safety: Is temporary electrical service adequately installed?	10						x
Are extension cords, spider boxes, lighting adequate and properly used?	5						x
Is GFCI employed near wet locations? Assured Grounding Program?	5						x
Are power tools grounded or double insulated & used per manufacturer specs?	5						x
Is LOTO properly employed? Arc-Flash Labeling where needed?	10						x
Machine Guarding: Are all guards properly installed and maintained?	5						x
Confined Spaces: Are confined spaces identified and labeled?	10						x
Is there a written PRCS program?	5						x
Are documented permits available for review and accurate?	5						x
Is rescue team trained and available for entry?	5						x
Is ventilation properly setup and employed?	5						x
PPE: Have hazard assessments been performed and TASK JSA's prepared?	3						x
Is PPE worn per JSA and IIPP/SSHP requirements?	3						x
Are welding activities shielded and respirators employed, when required?	3						x
Is a written respiratory protection plan available, when needed?	3						x
Is hearing protection used based on noise surveys or manufacture requirements?	5						x
General Housekeeping: Is housekeeping adequate? Open holes covered?	3						x
Is all rebar protected from personnel impalement or slips, trips and falls?	3						x
Are all walking surfaces and emergency access and egress ways adequate?	5						x
Is all refuse and construction debris disposed of properly?	3						x
Fire Safety: Are fire extinguishers adequate in number and maintained properly?	5						x
Are flammables and combustibles properly stored, dispensed?	3						x
Are fire lanes properly maintained? Smoking prohibited on site?	6						x
Hot Work: Is a hot work permit program **adequate and enforced?**	3						x
Heavy Equipment & Machinery: Daily equipment inspections? Are operators qualified?	3						x
Spotters used? Approved by the AHJ Traffic Control Plan in place?	5						x
Are certified flag personnel used at site control gates to public roads?	3						x
Industrial Hygiene: Are all dusts fumes and mists controlled?	5						x
Are Heat Stress Program, Drinking Water, & Sanitation in place?	6						x
Are all spaces adequately ventilated, lighted, and noise controlled?	5						x
Cranes, Hoists, and Lifts? Operator certifications available for review?	3						x
Have crane lift plans been prepared and reviewed?	5						x
Are tag lines employed, where appropriate?	3						x
Compressed Gases: Are cylinders properly stored? Flash Arrestors?	5						x

Contractor Site Rep: _____ **Auditor:** **Name, Safety Specialist, LAUSD FSD Construction Safety**

Revision_2_9/27/2019 firstname.lastname@lausd.net / Phone Number

70.1.2 Audit Findings

LAUSD FSD Construction Safety
Project Site Safety Assessment & Corrective Action Plan

Project Name: **Date of Audit:** _____
LAUSD Contact:
General Contractor: **Safety Officer:**
Audit Conducted by: Name, Safety Specialist, LAUSD FSD Construction Safety **Superintendent:**

SAFETY ASSESSMENT FINDINGS				
Item #	Description of Deficiency	Responsible Contractor(s)	Location on Site	Priority
#1				
#2				
#3				
#4				
#5				
#6				
#7				
#8				
#9				
#10				
#11				
#12				
#13				
#14				
#15				
#16				

Positive Observations:
1
2
3
4
5
6
7
8

LAUSD Safety Requests & Recommendations:
1
2
3
4
5

PLEASE SUBMIT CORRECTIVE ACTION PLANS WITHIN 72 HOURS (3 BUSINESS DAYS) TO:
Name, Safety Specialist, LAUSD FSD Construction Safety
firstname.lastname@lausd.net / 999-999-9999

70.1.3 Deficiency Photos

LAUSD FSD Construction Safety
Safety Audit Photos (Deficiencies)
Project: **Page 1**

#1

#2

#3

#4

70.1.4 Positive Photos

LAUSD FSD Construction Safety
Safety Audit Photos (Positive)
Project: ***Page 1***

#1	#2
#3	#4

70.1.5 Corrective Action Plan

LAUSD FSD Construction Safety
Project Site Safety Assessment & Corrective Action Plan

Project Name: _____ ***Date of Audit:***
General Contractor: _____ ***Date Audit Received:*** _____
CAP Prepared by: _____ ***Date of CAP Report:*** _____

CORRECTIVE ACTION PLAN

Item #	Corrective Action(s) Planned/Taken	Projected Date of Completion	Approving Supervisor's Signature	Were Employee's Trained on Item and Actions Planned/ Taken (Y/ N)

70.1.6 Corrective Action Photos

LAUSD FSD Construction Safety
Corrective Action Photos (if included)

Project: ***Page 1***

#1	**#2**
#3	**#4**

70.2 LAUSD Crane Lift Evaluation Form

70.2.1 Instructions

INSTRUCTIONS

Please provide the following information **at least two (2) weeks before the anticipated lift**.
Use this checklist to make sure that all required documents are submitted. Incomplete submitta
will not be accepted for review.

Required Documentation:

1. ☐ The Lift Evaluation Form (Page 2) must be completed in its entirety.
   Note: The **Lift Evaluation Form** must be submitted in **Microsoft Excel Format.**
   Please attach only the applicable load chart and range diagram used for this lift
   and indicate data used.

2. ☐ Current **Annual Crane Inspection** must be attached.

3. ☐ Current **Quadrennial Crane Inspection** must be attached.

4. ☐ **Operator Certifications** must be attached.

5. ☐ A **Plan View Drawing** showing location of crane in relationship to buildings,
   utility poles, overhead lines, etc. must be attached. (Click here for sample`

6. ☐ A **Side View Drawing** showing location of crane in relationship to buildings,
   utility poles, overhead lines, etc. must be attached. (Click here for sample`

7. ☐ **Drawing** showing rigging configuration and rigging calculations must be attached.

8. ☐ **Insurance Certifications** naming **LAUSD** as Additional Insureds must be attached.
   (Click here for sample)
9. ☐ The **Job Hazard Analysis** for the Lift must be attached. Be sure the JHA includes
   Emergency Contact Name(s) & Number(s). Use link below for your reference.
   (LAUSD Safety Standards -- CRANES/BOOM TRUCKS AND RIGGING)

10. ☐ Multiple picks require additional forms

70.2.2 Lift Evaluation Form

Lift Evaluation Form

Submitted by: **Date:**

Company	
Address	
Phone	
Fax	
E-mail	

Submit to: construction_safety@laschools.org

School Name		Address	
Project Name		Date of Lift	
Lift Location		Contractor	
Description of Load, Dimensions, and Weight			

1	**CRANE**		
A	Type of Crane		
B	Manufacturer		
C	Model No.		
D	Serial No.		
E	Crane Capacity		tons
F	Is crane equipped with a Load Moment Indicator?	☐ Yes ☐ No	
G	Is crane equipped with an Anti-Two Block device?	☐ Yes ☐ No	
H	Is the Load Chart in the crane?	☐ Yes ☐ No	
I	Is the Operator's Handbook in the crane?	☐ Yes ☐ No	
J	**Lifting Arrangement (Check One)** ☑ ON BOOM ☐ ON JIB		
	On Boom (From Load Chart)		
1	Maximum Distance (Operating Radius)* On Boom		ft.
2	Loaded Boom Length (Feet)		ft.
3	Loaded Boom Angle at Pick-Up (Degrees)		deg.
4	Loaded Boom Angle at Set (Degrees)		deg.
5	Rated Capacity of Crane under most severe lifting conditions **(From Load Chart)**		
a	Over Rear (On Boom)		lbs.
b	Over Front (On Boom)		lbs.
c	Over side (On Boom)		lbs.
d	Crane's Rated Capacity for this lift (On Boom)		lbs.
e	Jib Length (Not Applicable for this lift)		ft.
f	Jib Angle (Not Applicable for this lift)		deg.
g	Percentage of Crane's Rated Capacity (On Boom)		

*** (Operating Radius) Center of Load to Center Pin of Crane in Feet**

2	**RIGGING COMPONENTS**		
	A. Sling Selection		
1	Type of Rigging		
2	Size of Rigging		in.
3	Length of Rigging		ft.
4	Number of Legs of Rigging		
5	Weight of Rigging per foot		lbs.
6	Weight of Rigging		lbs.
7	Angle of Rigging		deg.
8	Capacity of Rigging		lbs.
9	Are Qualified Riggers be used to attach Rigging?	☐ Yes ☐ No	
10	How is Rigging attached to the Load?		
	B. Shackle Selection		
1	Pin Diameter		in.
2	Capacity		tons
3	Number of Shackles		
4	Weight per Shackle		lbs.
5	Weight of Shackles		lbs.
6	Shackle attached to load by (factory eye, field welded eye, etc.)		

3	**LOAD LINE**		
A	Size of Cable		in.
B	Weight per foot of Cable		lbs.
C	Number of Parts for Load Line		
D	Distance from boom or jib head to attachment point of load		ft.
E	Weight of Cable (Load Fall)		lbs.
4	**WEIGHT**		
A	Weight of Headache Ball		lbs.
B	Weight of Block		lbs.
C	Weight of Lifting Bar/Spreader Bar		lbs.
D	Jib Weight if attached or wt. deduction from load chart if stowed		lbs.
E	Allowance for Other Weight		lbs.
F	Weight of Load to be Lifted		lbs.
G	Total Weight		lbs.
H	Source of Load Weight Information (Name Plate, Drawings, Scaled, Calculated)		
I	Weights Verified by: (Name)		
	(Qualifications)		
5	**CRANE PLACEMENT**		
A	If outriggers will be used, are they going to be fully extend	☐ N/A ☐ Yes ☐ No	
	Please check one above.		
B	Surface crane is to be placed on (e.g. Pavement, Concrete, Soil)		
C	Will surface bearing capacity support crane and load?	☐ Yes ☐ No	
D	How was bearing capacity determined?		
E	Are trench plates, mats, or cribbing required and will be used?	☐ Yes ☐ No	
	Please check one above.		
F	Are there any obstructions to lift or swing?	☐ Yes ☐ No	
G	Swing direction		
H	Degree of swing		deg.
I	Distance of swing		ft.
J	Will the entire Counterweight Swing Radius of crane be barricaded?	☐ Yes ☐ No	
K	**Please check one above.**		
6	**LIFT PLANNING**		
A	Will Qualified Signalman be used?	☐ Yes ☐ No	
B	Who is the responsible person for the Lift?		
C	Are there occupied school facilities within the crane's swing radius?	☐ Yes ☐ No	
	Please check one above.		
D	Are tag lines going to be used during the lift?	☐ Yes ☐ No	
	Please check one above.		
E	What time will the lift take place?		
F	When & where will the Lift Tailgate meeting be held?		
G	Wind speed at which crane work is stopped		mph
H	Are radios necessary to maintain communication?	☐ Yes ☐ No	
I	Have Emergency Procedures been developed and be implemented?	☐ Yes ☐ No	
J	Has a Traffic Control Plan been developed and be implemented?	☐ Yes ☐ No	
K	Will Qualified Traffic Flaggers be used?	☐ Yes ☐ No	
L	List any known hazards (electrical, overhead, underground, etc.). Include crane path of travel for underground utilities if tracking crane.		

70.3 LAUSD OCIP Environmental Health and Safety Incident Investigation Report (SAF-3)

LAUSD OCIP ENVIRONMENTAL HEALTH AND SAFETY INCIDENT INVESTIGATION REPORT

Identifying Information

Contractor			Owner Authorized Representative (OAR)	
School / Location of Incident			Date of Incident	Time AM PM / Date of Report
☐ Injury or Illness		☐ Property Damage		☐ Environmental Incident
Injured's Name		Property Damaged		Type of Incident ☐ Haz Mat Spill ☐ Transportation ☐ Water Quality ☐ Tank Leak ☐ Waste Handling Disposal ☐ IAQ ☐ Fire/Smoke ☐ Other
Job Title	Time in Position	Nature of Damage/Loss		
Nature of Injury/Illness	Part of Body	Cost Estimated Actual		Cost Estimated Actual
Activity Being Performed		Object, Equipment, Substance Inflicting Damage		Nature of Damage/Loss
Object, Equipment, Substance Inflicting Harm		Person In Control of Activity at Time of Occurrence		Task/Activity Being Performed at Time of Occurrence
Severity of the Injury (check all that apply) ☐ Fatality ☐ Lost Workdays ☐ Restricted Duty ☐ Other ☐ Medical Treatment ☐ First Aid ☐ In-house First Aid				

Description

Describe How the Incident Occurred

Cause Analysis

Describe the Events and Conditions That Contributed to the Accident

Action Plan

What Corrective Actions Have Been or Will be Taken to Prevent Similar Occurrences? (include estimated time lines for completion)

Regulatory

Has There Been Contact With a Government Agency Regarding This Incident? (if yes, describe)

Documentation Attached (list):	Prepared By: Date:
	Title:
	Department:
	Phone Number: ( )

SAF-3 REV 9/5/19 JM/RS

70.4 LAUSD Near-Miss Injury Accident/Incident Report (SAF-4)

LAUSD NEAR-MISS INJURY ACCIDENT/INCIDENT REPORT

Please use this form to report near-miss accidents/incidents which could have, but did not, cause injuries or property loss on the jobsite. It may also be used to track potentially hazardous conditions which could cause an accident. Please submit a copy to the Owner Authorized Representative and the LAUSD Construction Safety Specialist.

Date of Near-Miss Accident/Incident:				
Date of Near-Miss Accident/Incident:		**AM**		**PM**
Location of the near-miss accident/incident (Include address of the facility and location within the facility):				
Description of near-miss accident or condition that exists:				
Recommendation for eliminating or reducing the potential hazard:				
Actions taken to correct the potential problem:				
Reported by:				
Contractor's Name and Job Number:				
Telephone Number:				

SAF-4 REV 1/09

70.5 LAUSD Facilities Division Construction Site Accident / Incident Statement (SAF-5)

LAUSD Facilities Division
Construction Site Accident / Incident Statement

NAME of person making this statement:	
PHONE #:	**DATE:**
COMPANY:	**LOCATION:**
POSITION:	**TASK at time of incident:**
SUPERVISOR:	**TIME:**

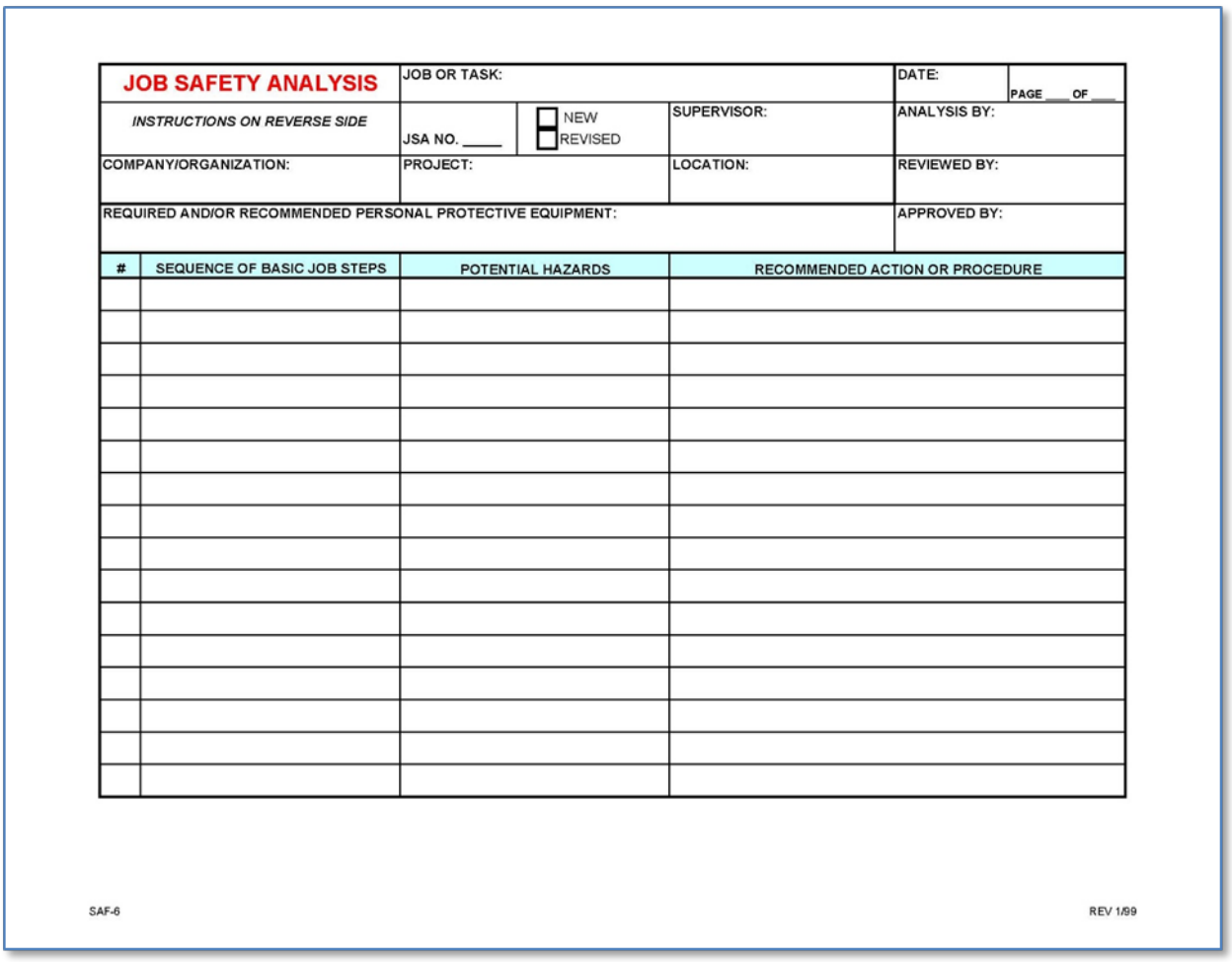
Your statement is important to the successful resolution of the Accident/Incident under investigation. It should be limited to the facts of the issue and should not set forth your opinions. Your opinions may be provided to the investigating official. Your statement will be used within LAUSD to support corrective actions, further safety and security investigations/reviews, sharing of lessons learned, and other administrative reasons. Your statement may be provided to LAUSD & the LAUSD OCIP Insurance Broker & Carrier in the furtherance of contractual obligations.

SIGNATURE of person making this statement:

STATEMENT by witness OR person involved in the accident/incident (gather several statements at accident/incident scene) – what happened; where exactly did it happen – N,S,E,W of (draw a diagram on the back of what happened if it helps describe the incident); what did you see and hear; what did you do immediately after the accident; what did people say and who said it;
If this statement is taken by another person, print name, title & phone # here:
PAGE OF PAGES

This document contains business and technical information and data, trade secrets, and know-how that are highly confidential and proprietary to LAUSD Facilities Division. Any unauthorized publication or disclosure of such information to any person, or any unauthorized use of such information, without the express written consent of LAUSD Facilities Division is strictly prohibited.

70.6 Job Safety Analysis/Job Hazard Analysis Form



JOB SAFETY ANALYSIS	JOB OR TASK:		DATE:	PAGE ___ OF ___
INSTRUCTIONS ON REVERSE SIDE	JSA NO. ____	☐ NEW ☐ REVISED	SUPERVISOR:	ANALYSIS BY:
COMPANY/ORGANIZATION:	PROJECT:		LOCATION:	REVIEWED BY:
REQUIRED AND/OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT:				APPROVED BY:

#	SEQUENCE OF BASIC JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE

SAF-6 REV 1/99

70. LINKS

The following links include, but are not limited to, a Summary of Federal, State, Local and National Consensus Standards. National Consensus Standards subscriptions or documents are available for purchase through several sources.

Federal OSHA Standards

General Industry:

http://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=1&p_keyvalue=1910

Construction:

http://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=1&p_keyvalue=Construction

Environmental:

http://www.epa.gov/regulations/

State Standards

Cal-OSHA

http://www.dir.ca.gov/samples/search/query.htm

Cal-EPA

http://www.calepa.ca.gov/LawsRegs/

Local Standards

LA County: http://portal.lacounty.gov/wps/portal/lac/directory

National Consensus Standards

Includes but not limited to those found at the following links:

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10125

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10919

The following national Consensus Standards sites maybe useful for obtaining standards:

Techstreet: http://www.techstreet.com/

IHS: http://aec.ihs.com/products/standards/safety-standards-collection.htm

ANSI/ASSE:
http://www.webstore.ansi.org/RecordDetail.aspx?sku=ANSI%2FASSE+A10+Construction+Package

SECTION 00 7339

SMALL BUSINESS ENTERPRISES

1.01 REQUIREMENTS

A. In accordance with the Board of Education of the City of Los Angeles (Board) adoption of a participation goal of twenty-five percent (25%) for Small Business Enterprises (SBE) and five percent (5%) for all Veteran Business Enterprises (VBE), per contract, of the overall dollar amount of funds allocated to the school construction and modernization program, the OWNER requires bidders to submit SBE and VBE information as set forth in this section. The twenty-five percent SBE participation goal and five percent VBE participation goal will be included in each construction contract entered into related to school construction or modernization.

B. Prior to award, listing of SBE and VBE contractors/suppliers that will be used as part of the project shall be submitted within five (5) days from the date of OWNER request. SBE and VBE certifications must be submitted for all listed contractors/suppliers used as part of the project. If the aforementioned participation goals are not attained, bidder must provide documentation of good faith efforts of outreach to SBE and VBE firms.

The SBE/VBE listing form will be provided by the OWNER after bid opening. Failure to submit the form and certifications within five (5) days from OWNER request may render the bid non-responsive.

It is the responsibility of the Prime contractor to ensure that its subcontractors/suppliers register to become LAUSD certified prior to award. Please have all subcontractors/suppliers utilize the following link to access the online registration: http://www.laschools.org/new-site/small-business/sbe-certification.

C. To identify or become a certified participant, you may consult the Office of Small Business and Disabled Veteran Business Enterprise Services (OSDS) website at https://caleprocure.ca.gov/pages/sbdvbe-index.aspx or by visiting the Los Angeles Unified School District Small Business Outreach Program website at http://www.laschools.org/new-site/small-business/sbe-certification.

D. Owner advises bidders that the SBE and VBE participation percentages submitted by the bidder become the goal of record. The SBE and VBE participation submitted by the bidder is an enforceable goal and OWNER reserves the right to terminate a contract for failure to adhere to the Board-mandated SBE and VBE requirements or failure to demonstrate good faith efforts to comply with such requirements.

E. Pursuant to Public Contract Code Section 2002, the SBE policy of the Board includes a bid preference provision for certified SBE contractors and Micro-businesses on low bid construction contracts valued up to one million dollars ($1,000,000.00) based on the OWNER's pre-bid estimate. The preference for certified SBE contractors is three percent (3%) of the lowest responsible bidder meeting specifications. The preference for certified Micro-businesses is five percent (5%) of the lowest responsible bidder meeting specifications. These preferences are used only to determine the winning bid and do not change the actual bid or contract award amounts. Eligible bidders seeking one of these preferences must include a copy of their current and valid SBE or Micro-business certificate with each bid submittal. Only one preference type can be utilized per bid.

Only certification from LAUSD or as indicated for the agencies below will be accepted at the time of bid. However, if bidder's certification from one of the agencies below is provided, bidder must also submit an LAUSD certificate prior to issuance of the Notice of Intent to Award.

- State of California – Department of General Services (SBE, Micro-business, DVBE)
- Metropolitan Water District of Southern California (SBE)
- City of Los Angeles (SBE)
- Los Angeles Metro (SBE)
- Los Angeles County (SBE)

END OF SECTION

SECTION 00 7349

PROJECT STABILIZATION AGREEMENT (PSA)

VERDUGO HILLS HIGH SCHOOL
NEW SCOREBOARDS FOR SOFTBALL & BASEBALL

1.01 RELATED DOCUMENTS:

A. Project Stabilization Agreement (Effective Date: January 1, 2024)

END OF SECTION

DocuSign Envelope ID: 20F9E2EA-1992-4705-9B0D-DF017FA16E45

LOS ANGELES UNIFIED SCHOOL DISTRICT
PROJECT STABILIZATION AGREEMENT --
NEW CONSTRUCTION, MAJOR MODERNIZATION AND SCHOOL UPGRADE
FUNDED BY MEASURES K, R, Y, Q AND RR

Effective Date: January 1, 2024

DocuSign Envelope ID: 20F9E2EA-1992-4705-9B0D-DF017FA16E45

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LOS ANGELES UNIFIED SCHOOL DISTRICT
PROJECT STABILIZATION AGREEMENT -
NEW CONSTRUCTION, MAJOR MODERNIZATION AND SCHOOL UPGRADE
FUNDED BY MEASURES K, R, Y, Q AND RR

This Project Stabilization Agreement (hereinafter, "Agreement") is entered into this ___ day of _____, 2023, by and between the Board of Education of the Los Angeles Unified School District, its successors or assigns, (hereinafter, "District") and The Los Angeles/Orange Counties Building and Construction Trades Council (hereinafter, "Council"), and the signatory Craft Unions (hereinafter, together with the Council, collectively, the "Union" or "Unions"). This Agreement, understood by the Parties to be a modification of the prior Project Stabilization Agreement, establishes the labor relations Policies and Procedures for the District and for the craft employees represented by the Unions engaged in the District's new construction, major modernization, and school upgrade program funded, in whole or in part, by Measures K, R, Y, Q and RR as well as any future construction bond measures (hereinafter, "Project" or "Project Work", and more specifically defined in Article II, Section 2.2).

It is understood by the Parties to this Agreement that if this Agreement is acceptable to the District, it will become the policy of the District for the Project Work to be contracted exclusively to contractors who agree to execute and be bound by the terms of this Agreement, directly or through the Letter of Assent (Attachment A), and to require each of its subcontractors, of whatever tier, to become bound. The District shall include, directly or by incorporation by reference, the requirements of this Agreement in the advertisement of and/or specifications for each and every contract for Project Work to be awarded by the District.

It is further understood that the District shall actively administer and enforce the obligations of this Agreement to ensure that the benefits envisioned from it flow to all signatory parties, the contractors and craftspersons working under it, and the ratepayers, residents and students of the District. The District shall, therefore, designate a "Project Labor Coordinator," either from its own staff or an independent contractor acting on behalf of the District, to monitor compliance with this Agreement; assist, as the authorized representative of the District, in developing and implementing the programs referenced herein, all of which or critical to fulfilling

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the intent and purposes of the Parties and this Agreement; and to otherwise implement and administer the Agreement. For such purposes, each contractor recognizes and appoints the Project Labor Coordinator, its successors or assigns, as its agent; and together with District and the Unions, the Project Labor Coordinator shall be considered a "negotiating party" of this Agreement.

The term "Apprentice" means those individuals indentured and participating in a Joint Labor/Management Apprenticeship Program approved by the State of California, Department of Industrial Relations, Division of Apprenticeship Standards.

The term "Contractor" as used in this Agreement includes any contractor to whom the District awards a construction contract through its public bidding process for Project Work, and also to subcontractors of whatever tier utilized by such contractors for Project Work. The term "Contractor" includes any individual, firm, partnership, or corporation, or combination thereof, including joint ventures, which as an independent contractor has entered into a contract with the District with respect to the Project Work, or with another contractor as a subcontractor for Project Work.

The term "Labor/Management Apprenticeship Program" as used in this Agreement shall be defined as a jointly administered apprenticeship program approved by the State of California, Department of Industrial Relations, Division of Apprenticeship Standards.

The term "Master Labor Agreements" or "MLA" as used in this Agreement means the local collective bargaining agreements of the signatory Unions having jurisdiction over the Project Work and which have signed this Agreement.

The Union and all Contractors agree to abide by the terms and conditions of this Agreement and that this Agreement represents the complete understanding of the Parties. No contractor is or will be required to sign or otherwise become a party to any other collective bargaining agreement with a signatory union as a condition of performing work within the scope of this Agreement. No practice, understanding or agreement between a contractor and a Union party which is not specifically set forth in this Agreement shall be binding on any third party contractor or union on Project Work unless endorsed in writing by the Project Labor Coordinator.

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The Parties agree that this Agreement will be made available to, and will fully apply to, any successful bidder for Project Work, without regard to whether that successful bidder performs work at other sites on either a union or non-union basis. This Agreement shall not apply to any work of any contractor other than that on Project Work specifically covered by this Agreement.

The use of masculine or feminine gender or titles in this Agreement should be construed as including both genders and not as gender limitations unless the Agreement clearly requires a different construction. Further, the use of Article titles and/or Section headings are for information only, and carry no legal significance.

ARTICLE 1

INTENT AND PURPOSE

Section 1.1 Background. The District's new construction, major modernization, and school upgrade projects funded by Measures K, R, Y, Q and RR will affect over a thousand school buildings and offices that are owned, leased or controlled by the District. The Project is the largest overall educational construction program developed and undertaken by a school district in the history of the State of California. The goal of this Project is to provide new construction, major modernization, and upgrades of the District's facilities so as to provide sufficient facilities and technologies to improve the health, safety, and quality of education for the children within the District's boundaries. The District, therefore, wishing to utilize the most modern, efficient and effective procedures for construction, including assurances of a sufficient supply of skilled craftpersons, and the elimination of disruptions or interference with Project Work, adopts this Agreement in the best interests of the students, parents, District staff, and the tax payers of the District to meet the District's goal that the Project work be completed on time and within budget.

Section 1.2 Identification and Retention of Skilled Labor and Employment District Residents. The vast amount of new construction, major modernization, and school upgrade scheduled to be performed pursuant to Measures K, R, Y, Q and RR and any future bond measures will require large numbers of craft personnel and other supporting workers. It is therefore the explicit understanding and intention of the Parties to this Agreement to use the

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opportunities provided by the extensive amount of work to be covered by this Agreement to identify and promote, through cooperative efforts, programs and procedures (which may include, for example, programs to prepare persons for entrance into formal apprenticeship programs, or outreach programs to the community describing opportunities available as a result of the Project), the interest and involvement of District residents in the construction industry; assist them in entering the construction trades, and through utilization of the joint labor/management sponsored apprenticeship programs, provide training opportunities for those residents and other individuals wishing to pursue a career in construction. Further, with assistance of the Project Labor Coordinator, the District, the Contractors, the Unions and their affiliated regional and national organizations, will work jointly to promptly develop and implement procedures for the identification of craft needs, the scheduling of work to facilitate the utilization of available craft workers, and the securing of services of craft workers in sufficient numbers to meet the high demands of the Project Work to be undertaken.

Section 1.3 Encouragement of Small Local Business. The Project will provide many opportunities for local small business enterprises to participate as contractors or suppliers, and the Parties therefore agree that they will cooperate with all efforts of the District, the Project Labor Coordinator, and other organizations retained by the District for the purpose, to encourage and assist the participation of local small businesses in Project Work. Specifically, all Parties understand that the District has established and quantified goals which place a strong emphasis on the utilization of small, local business on the Project. Each party agrees that it shall employ demonstrable efforts to encourage utilization in an effort to achieve such goals. This may include, for example, participation in outreach programs, education and assistance to businesses not familiar with working on a project of this scope, and the encouragement of local residents to participate in Project Work through programs and procedures jointly developed to prepare and encourage such local residents for apprenticeship programs and formal employment on the Project through the referral programs sponsored and/or supported by the Parties to this Agreement. Further, the Parties shall ensure that the provisions of this Agreement do not inadvertently establish impediments to participation of such small local businesses and residents of the District.

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Section 1.4 Project Cooperation. The Parties recognize that the construction to take place under this Agreement involves unique and special circumstances which dictate the need for the Parties to develop specific procedures to promote high quality, rapid and uninterrupted construction methods and practices. The smooth operation and successful and timely completion of the work is vitally important to the people of Los Angeles and the students of the District. The Parties therefore agree that maximum cooperation among all parties involved is required; and that with construction work of this magnitude, with multiple contractors and crafts performing work on multiple sites of over an extended period of time, it is essential that all parties work in a spirit of harmony and cooperation, and with an overriding commitment to maintain the continuity of Project Work.

Further, the Parties recognize that an Act of God or an Act of War could require the District to partially or fully suspend Project Work. The Parties shall fully cooperate with any request by the District to redirect their equipment, skills and expertise to support the District's efforts necessitated by such events.

Section 1.5 Workers' Compensation Carve-out. Further, the Parties recognize the potential which the Project may provide for the implementation of a cost effective workers' compensation system as permitted by revised California Labor Code Section 3201.5, and it is understood that the District is in an ongoing review of the value of such a program. Should the District request, the Union parties agree to meet and negotiate in good faith with representatives of the District for the development, and subsequent implementation, of an effective program involving improved and revised dispute resolution and medical care procedures for the delivery of workers compensation benefits and medical coverage as permitted by the Code.

Section 1.6 Peaceful Resolution of All Disputes. In recognition of the special needs of the Project and to maintain a spirit of harmony, labor-management peace and stability during the term of this Agreement, the Parties agree to establish effective and binding methods for the settlement of all misunderstandings, disputes and grievances; and in recognition of such methods and procedures, the unions agree not to engage in any strike, slowdowns or interruptions or disruption of Project Work, and the Contractors agree not to engage in any lock-out.

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Section 1.7 Binding Agreement on Parties and Inclusion of District Residents and Business. By executing this Agreement, the District, Council, Unions and Contractors agree to be bound by each and all of the provisions of this Agreement, and pledge that they will work together to adopt, develop and implement processes and procedures which are inclusive of the residents and businesses of the District.

ARTICLE 2

SCOPE OF THE AGREEMENT

Section 2.1 General. This Agreement shall apply and is limited to all new construction, rehabilitation and capital improvement work as described in Section 2.2 of this Article, performed by those contractor(s) of whatever tier that have contracts awarded for such work, for the development of the District's facilities which, jointly, constitute the Project, and have been designated by the District for new construction or major rehabilitation, where such work is funded in whole or in part by Measures K, R ,Y, Q and RR or future bond measures, the prime contract for which is awarded on or after the effective date of this Agreement, all of which are hereinafter referred to as the "Project" or "Project Work". Contracts awarded prior to the effective date of this agreement will be subject and bound to the previous Project Stabilization Agreement.

Section 2.2 Specific. The Project is defined and limited to:

(a) All construction and major rehabilitation work pursuant to prime multi-trade construction contracts that exceed $375,000.00, and are funded in whole or in part by monies from Measures K, R, Y, Q and RR, as described above, and all subcontracts flowing from these prime contracts; and

(b) All prime specialty contracts that exceed $45,000.00, and are funded in whole or in part by monies from Measures K, R, Y, Q and RR, as described above, and all subcontracts flowing from these prime contracts; and

(c) All contracts for similar work, subject to the same threshold limitations, funded by future propositions or measures and awarded prior to the expiration date of this Agreement; and

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(d) Notwithstanding Section 2.1, all construction work pursuant to prime multi-trade construction contracts in which the Districts funding from non-bond measure sources exceeds $25,000,000, and all subcontracts flowing from these prime contracts.

(e) It is understood by the Parties that the District may at any time, and at its sole discretion, determine to build segments of the Project under this Agreement which were not currently proposed, or to modify or not to build any one or more particular segments proposed to be covered.

Section 2.3 Bundling of Contracts. The Parties understand that, to the maximum extent feasible, and consistent with goals of the District to (i) utilize this Agreement as the labor relations Policy for its new construction and major rehabilitation program and (ii) fully utilize the services of local small business enterprises for such construction and rehabilitation work,

(a) the District, in its sole discretion, with the advice of the Project Labor Coordinator, will seek to group (or "bundle") for bidding, contracts not meeting the thresholds of Section 2.2(a) or (b) above. (Small contracts for like types of work, scheduled to be undertaken at the same school, in the same district or on the same Project site, and within the same timeframe, will be considered for such bundling, consistent with economies of scale, and the purposes of this Agreement); and

(b) project work will not be split, divided or otherwise separated for contract award purposes to avoid application of this Agreement.

Section 2.4 Exclusions. Items specifically excluded from the Scope of this Agreement include the following:

(a) Work of non-manual employees, including but not limited to: superintendents; supervisors; staff engineers; quality control and quality assurance personnel not covered by an MLA; time keepers, mail carriers, clerks, office workers, messengers; guards, safety personnel, emergency medical and first aid technicians; and other professional, engineering, administrative, supervisory and management employees;

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(b) Equipment and machinery owned or controlled and operated by the District;

(c) All off-site manufacture and handling of materials, equipment or machinery; provided, however, that lay down or storage areas for equipment or material and manufacturing (prefabrication) sites, dedicated solely to the Project or Project Work, and the movement of materials or goods between locations on a Project site are within the scope of this Agreement;

(d) All employees of the District, Project Labor Coordinator, design teams (including, but not limited to architects, engineers and master planners), or any other consultants for the District (including, but not limited to, project managers and construction managers and their employees where not engaged in Project Work) and their sub-consultants, and other employees of professional service organizations, not performing manual labor within the scope of this Agreement, provided, however, that it is understood and agreed that Surveyors and Building/Construction Inspector and Field Soils and Materials Testers ("Inspectors") are a covered craft under the Agreement. (This inclusion applies to the scope of work defined in the State of California Wage Determination for said Craft. Every Inspector performing under the Wage classification of Building/Construction Inspector and Field Soils and Material Testers under a professional services agreement of a construction contract shall be bound to all applicable requirements of the Agreement.) Notwithstanding the foregoing, on-site surveying, inspection services, and quality control/assurance for such work shall be within the scope of this Agreement if they are within the State of California's general prevailing wage determination for Surveyor or Building/Construction Inspector and Field Soils and Material Tester, when such work is performed on a Project by either employees of a Contractor, pursuant to a construction contract, or by consultants working under a professional services agreement with the District. Nothing in this section will be construed to include the Department of State Architects-certified inspector [Inspector of Record (IOR)] who is required by state law as included under the scope of this Agreement;

(e) Any work performed on or near or leading to or into a site of work covered by this Agreement and undertaken by state, county, city or other governmental bodies,

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or their contractors; or by public utilities, or their contractors; and/or by the District or its contractors (for work for which is not within the scope of this Agreement);

(f) Off-site maintenance of leased equipment and on-site supervision of such maintenance work;

(g) Work by employees of a manufacturer or vendor necessary to maintain such manufacturer's or vendor's warranties or guaranty as set forth in Section 9.4;

(h) Non-construction support services contracted by the District, Project Labor Coordinator, or contractor in connection with this Project;

(i) Laboratory work for testing.

Section 2.5 Awarding of Contracts. (a) The District and/or the Contractors, as appropriate, have the absolute right to award contracts or subcontracts on this Project to any contractor notwithstanding the existence or non-existence of any agreements between such contractor and any union parties, provided only that such contractor is willing, ready and able to execute and comply with this Agreement should such contractor be awarded work covered by this Agreement.

(b) It is agreed that all contractors and subcontractors of whatever tier, who have been awarded contracts for work covered by this Agreement, shall be required to accept and be bound the terms and conditions of this Agreement, and shall evidence their acceptance by the execution of the Agreement or of the Letter of Assent as set forth in Attachment A hereto, prior to the commencement of work. No Contractor or subcontractor shall commence Project Work without having first provided a copy of the Agreement or Letter of Assent as executed by it to the Project Labor Coordinator and to the Council 48 hours before the commencement of project Work, or within 48 hours after the award of Project Work to that Contractor (or subcontractor), whichever occurs later.

(c) The District agrees that to the extent permitted by law and consistent with the economy and efficiency of construction and operation, it will use its best efforts to purchase materials, equipment and supplies which will not create labor strife. Under all circumstances,

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however, the District shall retain the absolute right to select the lowest reliable and responsible bidder for the award of contracts on all Measures K, R, Y, Q and RR -funded projects or other Project Work.

Section 2.6 Coverage Exception. The Parties agree and understand that this Agreement shall not apply to any work that would otherwise be covered Project Work except when a governmental agency or granting authority partially or fully funding such Project Work determines that it will not fund if such Project Work is covered by this Agreement; or a law regulation, proposition or measure prohibits such coverage or the use by the District, or for its benefit, of particular funds if such coverage exists. The District agrees that it will make every effort to establish the enforcement of this Agreement with any governmental agency or granting authority.

Section 2.7 Master Labor Agreements. (a) The provisions of this Agreement, including the Master Labor Agreements, (which are the local collective bargaining agreements of the signatory unions having jurisdiction over the work on the Project, as such may be changed from time-to-time consistent with Article XX, Section 20.3, and which are incorporated herein by reference) shall apply to the work covered by this Agreement, notwithstanding the provisions of any other local, area and/or national agreement which may conflict with or differ from the terms of this Agreement. Where a subject covered by the provisions of this Agreement is also covered by an MLA, the provisions of this Agreement shall apply. Where a subject is covered by a provision of an MLA and not covered by this Agreement, the provisions of the MLA shall prevail. Any dispute as to the applicable source between this Agreement and any MLA for determining the wages, hours of working conditions of employees on this Project shall be resolved under the procedures established in Article X.

(b) Only Articles VII, VIII, and X of this Agreement (dealing with Work Stoppages and Lock-Outs, Work Assignments and Jurisdictional Disputes, and Settlement of Grievances and Disputes) are applicable to work performed under the National Cooling Tower Agreement, the National Stack Agreement, the National Transit Division Agreement (NTD), or within the jurisdiction of the International Union of Elevator Constructors, or all instrument calibration and loop checking work performed under the terms of the UA/IBEW Joint National Agreement for Instrument and Control Systems Technician.

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(c) It is understood that this Agreement, together with the referenced MLAs, constitutes a self-contained, stand-alone agreement and by virtue of having become bound to this Agreement, the Contractor will not be obligated to sign any other local, area or national collective bargaining agreement as a condition of performing work within the scope of this Agreement (provided, however, that the Contractor may be required to sign an uniformly applied, non-discriminatory Participation Agreement at the request of the trustees or administrator of a trust fund established pursuant to Section 302 of the Labor Management Relations Act, and to which such Contractor is bound to make contributions under this Agreement, provided that such Participation Agreement does not purport to bind the Contractor beyond the terms and conditions of this Agreement and/or expand its obligation to make contributions pursuant thereto). It shall be the responsibility of the prime Contractor to have each of its subcontractors sign the Participation Agreement with the appropriate Craft Union prior to the subcontractor beginning Project Work. The Participation Agreement may be provided electronically by the appropriate Craft Union to each applicable Contractor, or upon request with advance notice at the job site.

Section 2.8 Binding Signatories Only. This Agreement shall only be binding on the signatory parties hereto, and shall not apply to the parents, affiliates, subsidiaries, or other ventures of any such party.

Section 2.9 Other District Work. This Agreement shall be limited to the construction work within the Scope of this Agreement including, specifically, site preparation and related demolition work, and new construction and major rehabilitation work for new or existing facilities referenced in Section 2.2 above. Nothing contained herein shall be interpreted to prohibit, restrict, or interfere with the performance of any other operation, work or function not covered by this Agreement, which may be performed by district Employees or contracted for by the District for its own account, on its property or in and around a Project site.

Section 2.10 Separate Liability. It is understood that the liability of the Contractor(s) and the liability of the separate unions under this Agreement shall be several and not joint. The Unions agree that this Agreement does not have the effect of creating any joint employment status between or among the District or Project Labor Coordinator and/or any contractor.

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Section 2.11 Completed Project Work. As areas of covered work are accepted by the District, this Agreement shall have no further force or effect on such items or areas except where the Contractor is directed by the District or its representatives to engage in repairs, modification, check-out and/or warranties functions required by its contract(s) with the District.

ARTICLE 3

UNION RECOGNITION AND EMPLOYMENT

Section 3.1 Recognition. The Contractor recognizes the Council and the signatory local Unions as the exclusive bargaining representative for the employees engaged in Project Work. Such recognition does not extend beyond the period when the employee is engaged in Project Work.

Section 3.2 Contractor Selection of Employees. The Contractor shall have the right to determine the competency of all employees, the number of employees required, the duties of such employees within their craft jurisdiction, and shall have the sole responsibility for selecting employees to be laid off, consistent with Section 3.10 and with Article IV, Section 4.3, below. The Contractor shall also have the right to reject any applicant referred by a Union for any reason, subject to any reporting pay required by Article VI, Section 6.6; provided, however, that such right is exercised in good faith and not for the purpose of avoiding the Contractor's commitment to employ qualified workers through the procedures endorsed in this Agreement.

Section 3.3 Referral Procedures. (a) For signatory unions now having a job referral system contained in an MLA, the Contractor agrees to comply with such system and it shall be used exclusively by such Contractor, except as modified by this Agreement. Such job referral system will be operated in a nondiscriminatory manner and in full compliance with federal, state, and local laws and regulations which require equal employment opportunities and non-discrimination. All of the foregoing hiring procedures, including related practices affecting apprenticeship, shall be operated so as to consider the goals of the District to encourage employment of District residents and utilization of small local businesses on the Project, and to facilitate the ability of all contractors to meet their employment needs.

(b) The local unions will exert their best efforts to recruit and refer sufficient numbers of skilled craft workers to fulfill the labor requirements of the Contractor, including

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specific employment obligations to which the Contractor may be legally and/or contractually obligated; and to refer Apprentices as requested to develop a larger, skilled workforce. The local Unions will work with their affiliated regional and national unions, and jointly with the Project Labor Coordinator and others designated by the District, to identify and refer competent craftpersons as needed for Project Work, and to identify individuals, particularly residents of the District, for entrance into Joint Labor/Management Apprenticeship Programs, or participation in other identified programs and procedures to assist individuals in qualifying and becoming eligible for such apprenticeship programs, all maintained to increase the available supply of skilled craft personnel for Project Work and future construction of maintenance work to be undertaken by the District.

(c) The Union shall not knowingly refer an employee currently employed by a Contractor on Project Work to any other contractor.

(d) The Parties are aware of the District's policy that contractors and other employers shall not employ, on Project Work when minors may be present on or around the site of such Project Work during working hours, a person who would not be eligible for employment by the District under California Educational Code Sec. 45123. The Parties shall endeavor to employ persons under this Article in compliance with this policy, and the Contractors agree to remove such an individual in their employ from the particular Project site at the request of the District or the Project Labor Coordinator.

Section 3.4 Non-Discrimination in Referral, Employment, and Contracting. The Unions and Contractors agree that they will not discriminate against any employee or applicant for employment on the basis of race, color, religion, gender, national origin, age, union status, sexual orientation, marital status or disability. Further, it is recognized that the District has certain policies, programs, and goals for the utilization of local small business enterprises. The Parties shall jointly endeavor to assure that these commitments are fully met, and that any provisions of this Agreement which may appear to interfere within a local small business enterprises successfully bidding for work within the scope of this Agreement shall be carefully reviewed, and adjustments made as may be appropriate and agreed upon among the Parties, to ensure full compliance with the spirit and letter of the District's policies and commitment to its

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goals for the significant utilization of local small businesses as direct contractors or suppliers on Measures K, R, Y, Q and RR financed work.

Section 3.5 Employment of District Residents. (a) In recognition of the District's mission to serve the District and its residents, the Unions and Contractors agree that, to the extent allowed by law, and as long as they possess the requisite skills and qualifications, Local Residents shall be first referred for Project Work, including journeyperson, apprentice, or other positions which may be established under an MLA and covered by the applicable prevailing wage for utilization on Project Work, in a manner to ensure that at least 50 percent of the total construction labor hours worked on the Project Work be performed by "Local Residents". For the purpose of this Section, "Local Residents" are:

(i) Individuals currently residing in those zip codes which overlap the area covered by the District as reflected on the U.S. Postal Service zip codes; and

(ii) Regardless of where they reside, (1) graduates of the Los Angeles Unified School District, (2) Eligible Veterans, or (3) individuals who have successfully completed the Building Trades Multi-Craft Core Curriculum Apprenticeship Readiness("MC3") Program.

(b) To facilitate the dispatch of Local Residents, all Contractors will be required to utilize the Craft Employee Request Form in effect at the time whenever they request the referral of any employee from a Union referral list for any Project, a sample of which is attached as Attachment B. When Local Residents are requested by the Contractors, the Unions shall refer them regardless of their place in the Unions' hiring halls' list and normal referral procedures.

(c) The Project Labor Coordinator shall work with the Unions and Contractors in the administration of this Local Resident preference; and the Contractors and Unions shall cooperate by maintaining adequate records to demonstrate to the Project Labor Coordinator that such preferences have been pursued. As part of this process, and in order to facilitate the contract administration procedures, as well as appropriate benefit fund coverage, all Contractors shall require their "core work force" and any other persons employed other than through the referral process, to register with the appropriate hiring hall, if any.

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Section 3.6 Core Employees. Except as otherwise provided in separate collective bargaining agreement(s) to which the Contractor is signatory,

(a) Contractors that are not independently signatory to an MLA may employ, as needed, first, a core employee, then an employee through a referral from the appropriate union hiring hall, then a second core employee, then a second employee through the referral system, and so on until a maximum of five core employees are employed per craft, and thereafter all additional employees in the affected craft shall be requested from the appropriate union hiring hall in accordance with Section 3.3. In laying off, an employer with 10 or less employees, the number of core employees shall not exceed one-half plus one of the workforce per craft, assuming the remaining employees are qualified to undertake the work available. The ratio of core employees to hiring hall-referred employees is applicable on a per-job site basis.

(b) The core employee work force is comprised of those employees:

(i) whose names appeared on the Contractor's active payroll for fifty (50) of the one hundred (100) working days before the Contractor's start of Project Work to the Contractor;

(ii) who possess any license required by state or federal law for the Project Work to be performed;

(iii) who have the ability to safely perform the basic functions of the applicable trade; and

(iv) who have worked at least two thousand (2,000) hours in the construction craft in which they are employed, during the prior two (2) years.

(c) Prior to each Contractor performing any work on the Project, each Contractor shall provide a list of its core employees to the Council. Failure to do so will prohibit the Contractor from using any core employees for forty-five (45) calendar days after the list is provided. If there are any questions with regarding a core employee's eligibility under this provision, the Project Labor Coordinator, at the Council's request, shall obtain appropriate proof of such from the Contractor. For proof of employment eligibility, quarterly tax records or

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payroll records normally maintained by the Contractor (or officially recognized substitutes) shall be utilized.

(d) In addition to the core employee provisions set forth herein, all Contractors may avail themselves of any opportunity provided in the applicable MLA to call for specific employees by name.

Section 3.7 Time for Referral. If any Union's registration and referral system does not fulfill the requirements for specific classifications of covered employees (including residency standards) requested by any Contractor within forty-eight (48) hours (excluding Saturdays, Sundays and holidays), that Contractor may use employment sources other than the union registration and referral services, and may employ applicants meeting such standards from any other available source. The Contractor should promptly inform the Union of any applicants hired from other sources, and such applicants shall register with the appropriate hiring hall, if any.

Section 3.8 Lack of Referral Procedure. If a signatory local Union does not have a job referral system as set forth in Section 3.3 above, the Contractors shall give the union equal opportunity to refer applicants. The Contractors shall notify the union of employees so hired, as set forth in Section 3.5.

Section 3.9 Union Membership. Employees are not required to become or remain union members or pay dues or fees as a condition of performing Project Work under this Agreement. Contractors shall make and transmit all deductions for union dues, fees, and assessments that have been authorized by employees in writing in accordance with the applicable MLAs. Nothing in this Section 3.9 is intended to supersede the requirements of the applicable MLAs as to those Contractors otherwise signatory to such MLAs and as to the employees of those Contractors who are performing Project Work.

Section 3.10 Individual Seniority. Except as provided in Article IV, Section 4.3, individual seniority shall not be recognized or applied to employees working on the Project; provided, however, that group and/or classification seniority in a Union's MLA as of the effective date of this Agreement shall be recognized for purposes of layoffs.

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Section 3.11 Foremen. The selection and number of craft foreman and/or general foreman shall be the responsibility of the Contractor. All foremen shall take orders exclusively from the designated Contractor representatives. Craft foreman shall be designated as working foreman at the request of the Contractors.

Section 3.12 Helmets to Hardhats The Contractors and the Unions recognize a desire to facilitate the entry into the building and construction trades of veterans who are interested in careers in the building and construction industry. The Contractors and Unions agree to utilize the services of the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the Parties. For purposes of this Agreement the term "Eligible Veteran" shall have the same meaning as the term "veteran" as defined under Title 5, Section 2108(1) of the United States Code as the same may be amended or re-codified from time to time. It shall be the responsibility of each interested individual to provide the Unions and Project Labor Coordinator with proof of his/her status as an Eligible Veteran. The Unions and Contractors agree to coordinate with the Center to create and maintain an integrated database of Eligible Veterans interested in working on this Project and of apprenticeship and employment opportunities for this Project. To the extent permitted by law, the Unions will give credit to such Eligible Veterans for bona fide, provable past experience.

ARTICLE 4

UNION ACCESS AND STEWARDS

Section 4.1 Access to Project Sites. Authorized representatives of the Union shall have access to Project Work, provided that they do not interfere with the work of employees and further provided that such representatives fully comply with posted visitor, security and safety rules.

Section 4.2 Stewards. (a) Each signatory local Union shall have the right to dispatch a working journeyperson as a steward for each shift and shall notify the Contractor in the writing of the identity of the designated steward or stewards prior to the assumption of such person's

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duties as steward. Such designated steward or stewards shall not exercise any supervisory functions. There will be no non-working stewards. Stewards will receive the regular rate of pay for their respective crafts.

(b) In addition to his/her work as an employee, the steward should have the right to receive, but not to solicit, complaints or grievances and to discuss and assist in the adjustment of the same with the employee's appropriate supervisor. Each steward should be concerned only with the employees of the steward's Contractor and, if applicable, subcontractor(s), and not with the employees of any other contractor. The Contractor will not discriminate against the steward in the proper performance of his/her union duties.

(c) When a Contractor has multiple, non-contiguous work locations at one site, the Contractor may request, and the union shall appoint such additional working stewards as the Contractor requests to provide independent coverage of one or more such locations. In such cases, a steward may not service more than one work location without the approval of the Contractor.

(d) The stewards shall not have the right to determine when overtime shall be worked or who shall work overtime.

Section 4.3 Steward Layoff/Discharge. The relevant Contractor agrees to notify the appropriate Union twenty-four (24) hours before the layoff of a steward, except in the case of disciplinary discharge for just cause. If the steward is protected against such layoff by the provisions of the applicable MLA, such provisions shall be recognized when the steward possesses the necessary qualifications to perform the remaining work. In any case in which the steward is discharged or disciplined for just cause, the appropriate Union will be notified immediately by the Contractor, and such discharge or discipline shall not become final (subject to any later filed grievance) until twenty-four (24) hours after such notice have been given.

Section 4.4 Employees on Non-Project Work. On work where the personnel of the District may be working in close proximity to the construction activities covered by this Agreement, the Union agrees that the Union representatives, stewards, and individual workers will not interfere with the District personnel, or with personnel employed by the any other employer not a party to this Agreement.

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ARTICLE 5

WAGES AND BENEFITS

Section 5.1 Wages. All employees covered by this Agreement shall be classified in accordance with work performed and paid the hourly wage rates for those classifications in compliance with the applicable prevailing wage rate determination established pursuant to the California Labor Code by the Department of Industrial Relations. If a prevailing rate increases under state law, the Contractor shall pay that rate as of its effective date under the law. If the prevailing wage laws are repealed during the term of this Agreement, the Contractor shall pay the wage rates established under the MLAs, except as otherwise provided in this Agreement. Notwithstanding any other provision in this Agreement, Contractors directly signatory to one or more of the MLAs are required to pay all of the wages set forth in those MLAs without reference to the foregoing.

Section 5.2 Benefits. (a) Contractors shall pay contributions to the established employee benefit funds in the amounts designated in the appropriate MLA and make all employee – authorized deductions in the amounts designated in the appropriate MLA; provided, however, that such contributions shall not exceed the contribution amounts set forth in the applicable prevailing wage determination. Contractors directly signatory to one or more of the MLAs are required to make all contributions set forth in those MLAs without reference to the foregoing. Bona fide jointly-trusteed benefit plans or authorized employee deduction programs established or negotiated under the applicable MLA or by the Parties to this Agreement during the life of this Agreement may be added, subject to the limitations upon such negotiated changes contained in Article XX, Section 20.3, and provided that the contributions do not exceed the amounts set forth in the applicable prevailing wage determination.

(b) The Contractor adopts and agrees to be bound by the written terms of the applicable, legally established, trust agreement(s) specifying the detailed basis on which payments are to be made into, and benefits paid out of, such trust funds for its employees. The Contractor authorizes the parties to such trust funds to appoint trustees and successors trustees to administer the trust funds and hereby ratifies and accepts the trustees so appointed as if made by the Contractor.

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(c) Each Contractor and subcontractor is required to certify to the Project Labor Coordinator that it has paid all benefit contributions due and owing to the appropriate Trust(s) prior to the receipt of its final payment and/or retention. Further, upon timely notification by a Union to the Project Labor Coordinator, the Project Labor Coordinator shall work with any prime Contractor or subcontractor who is delinquent in payments to assure that proper benefit contributions are made, to the extent of requesting the District or the prime Contractor to withhold payments otherwise due such Contractor, until such contributions have been made or otherwise guaranteed.

Section 5.3 Wage Premiums. Wage premiums, including but not limited to pay based on height of work, hazard pay, scaffold pay and special skills shall not be applicable to work under this Agreement, except to the extent provided for in any applicable prevailing wage determination.

Section 5.4 Compliance with Prevailing Wage Laws. The Parties agree that the Project Labor Coordinator shall monitor the compliance by all contractors and subcontractors with all applicable federal and state prevailing wage laws and regulations, and that such monitoring shall include Contractors engaged in what would otherwise be Project Work but for the exceptions to Agreement coverage in Article II, Section 2.2. All complaints regarding possible prevailing wage violations shall be referred to the Project Labor Coordinator for processing, investigation and resolution, and if not resolved within thirty calendar days, may be referred by any party to the state labor commissioner.

ARTICLE 6

HOURS OF WORK, OVERTIME, SHIFTS, HOLIDAYS AND WORKING CONDITIONS

Section 6.1 Hours of Work. Eight (8) hours per day between the hours of 6:00 a.m. and 5:30 p.m., plus one-half (1/2) hour unpaid lunch approximately mid-way through the shift, shall constitute the standard workday. Forty (40) hours per week shall constitute a regular week's work. The work week will start on Sunday and conclude on Saturday. The foregoing provisions of this Article are applicable unless otherwise provided in the applicable prevailing wage determination, or unless changes are permitted by law and such are agreed upon by the

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Parties. Nothing herein shall be construed as guaranteeing any employee eight (8) hours per day or forty (40) hours per week, or a Monday through Friday standard work schedule.

Section 6.2 Place of Work. Employees shall be at their place of work (as designated by the Contractor), at the starting time and shall remain at their place of work, performing their assigned functions, until quitting time. The place of work is defined as the gang or toolbox or equipment at the employee's assigned work location or the place where the foreman gives instructions. The Parties reaffirm their policy of a fair day's work for a fair day's wage. There shall be no pay for time not worked unless the employee is otherwise engaged at the direction of the Contractor, except as provided for in Section 6.6(a).

Section 6.3 Overtime. Overtime shall be paid in accordance with the requirements of the applicable prevailing wage determination. There shall be no restriction on the Contractor's scheduling of overtime or the nondiscriminatory designation of employees who will work overtime. There shall be no pyramiding of overtime (payment of more than one form of overtime compensation for the same hour) under any circumstances.

Section 6.4 Shifts and Alternate Work Schedules. (a) Alternate starting and quitting time and/or shift work may be performed at the option of the Contractor upon three (3) days' prior notice to the affected union(s), unless a shorter notice period is provided for in the applicable MLA and shall continue for a period of not less than five (5) working days. Saturdays and Sundays, if worked, may be used for establishing the five (5) day minimum work shift. If two shifts are worked, each shall consist of eight (8) hours of continuous work exclusive of a one-half (1/2) hour non-paid lunch period, for 8 hours pay. The last shift shall start on or before 6:00 p.m. The first shift starting at or after 6:00 a.m. is designated as the first shift, with the second shift following.

(b) The Contractors, the Council and the Union recognize the economic impact upon the District and District rate payers of the massive project being undertaken by the District and agree that all parties to this Agreement desire and intend Project Work to be undertaken in a cost efficient and effective manner to the highest standard of quality and craftsmanship. Recognizing the economic conditions, the Parties agree that, to the extent permitted by law, employees performing Project Work shall not be entitled to any differentials or

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additional pay based upon the shift or work schedule of the employees. Instead, all employees working on Project Work shall be paid at the same base rate regardless of shift or work schedule worked.

(c) To the extent permitted by state and federal law, the Contractor may, upon five (5) days' notice to appropriate union(s), establish a work week of four (4) consecutive ten (10) work hour days (exclusive of the one half hour unpaid lunch approximately halfway through the shift). Such work week should consist of the same four days each week, with the fifth day available as a make-up day if needed. Pay compensation for such shift shall be at the applicable rates established for first shift worked in this Agreement.

(d) Because of operational necessities, the second shift may, at the District's direction, be scheduled without the preceding shift having been worked. It is recognized that the District's operations and/or mitigation obligations may require restructuring of normal work schedules. Except in an emergency or when specified in the District's bid specification, the Contractor shall give affected Union(s) at least three (3) days' notice of such schedule changes.

Section 6.5 Holidays. Recognized holidays on this Project shall be those set forth and governed by the prevailing wage determination(s) applicable to this Project.

Section 6.6 Show-up Pay. (a) Employees reporting for work and for whom no work is provided, except when given prior notification not to report to work, shall receive two (2) hours pay at the regular straight time hourly rate. Employees who are directed to start work shall receive four (4) hours of pay at the regular straight time hourly rate. Employees who work beyond four (4) hours shall be paid for actual hours worked. Whenever reporting pay is provided for employees, they will be required to remain at the Project Site and available for work for such time as they receive pay, unless released earlier by the principal supervisor of the Contractor(s) or his/her designated representative. Each employee shall furnish his/her Contractor with his/her current address and telephone number, and shall promptly report any changes to the Contractor.

(b) An employee called out to work outside of his/her shift shall receive a minimum of two (2) hours pay at the appropriate rate. This does not apply to time worked as an extension of (before or after) the employee's normal shift.

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(c) When an employee leaves the job or work location of his/her own volition, or is discharged for cause or is not working as a result of the Contractor's invocation of Article XII, Section 12.3, the employee shall only be paid for actual time worked.

Section 6.7 "Brassing". The Contractor may utilize "brassing" (or similar system) to check employees in and out. Each employee must check himself/herself in and out. The Contractor will provide adequate facilities for checking in and out in an expeditious manner.

Section 6.8 Meal Periods. The Contractor will schedule a meal period of no more than one – half hour duration at the work location at approximately mid-point of the schedule shift; provided, however, that the Contractor may, for efficiency of the operation, establish a schedule which coordinates the meal periods of two or more crafts. An employee may be required to work through his/her meal period because of an emergency or a threat to life or property, or for such other reasons as are in the applicable MLA, and if he/she is so required, he/she shall be compensated in the manner established in the applicable MLA.

Section 6.9 Make-up Days. To the extent permitted by the applicable general wage determination, when an employee has been prevented from working for reasons beyond the control of the employer, including, but not limited to inclement weather or other natural causes, during the regularly scheduled work week, a make-up day may be worked on a non-regularly scheduled work day for which an employee shall receive eight (8) hours pay at the straight time rate of pay or any premium rate required for such hours under the prevailing wage law.

Section 6.10 Rest Periods. Rest periods as provided in IWC Order No. 16 (currently ten (10) minutes in each four hours worked) shall apply to all Project Work, consistent with its terms as then in effect.

Section 6.11 Work Rules. The District, the Project Labor Coordinator, and/or relevant Contractor shall establish such reasonable work rules as they deem appropriate and not inconsistent with this Agreement. These rules will be posted at the work sites by the Contractor and may be amended thereafter as necessary. Failure to observe these rules and regulations by employees may be grounds for discipline up to and including discharge.

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Section 6.12 Emergency Use of Tools and Equipment. There should be no restrictions on the emergency use of any tools by any qualified employee or supervisor, or on the use of any tools or equipment for the performance of work within the jurisdiction, provided the employee can safely use the tools and/or equipment involved and is compliant with applicable governmental rules and regulations.

Section 6.13 Access Restrictions for Cars and Parking. Recognizing the nature of the work being conducted on the site, employee access by a private automobile may be limited to certain roads and/or parking areas.

ARTICLE 7

WORK STOPPAGES AND LOCK-OUTS

Section 7.1 No Work Stoppages or Disruptive Activity. The Council and the Unions signatory hereto agree that neither they, and each of them, nor their respective officers or agents or representatives, shall incite or encourage, condone or participate in any strike, walk-out, slow-down, picketing, observing picket lines or other activity of any nature or kind whatsoever, for any cause or dispute whatsoever with respect to or any way related to Project Work, or which interferes with or otherwise disrupts, Project Work, or with respect to or related to the District or contractors or subcontractors, including, but not limited to, economic strikes, unfair labor practice strikes, safety strikes, sympathy strikes and jurisdictional strikes whether or not the underlying dispute is arbitrable. The Council and the Unions also agree that there will be no strikes, work stoppages, sympathy strikes, picketing, slowdowns or any other disruptive activity affecting the Project by any Union involved in the negotiation or renegotiations of the Local Collective Bargaining Agreement and the resulting MLA's, nor shall it be any lock-out on this Project of the involved Union(s) during the course of such negotiations. Any such actions by the Council, or Unions, or their members, agents, representatives or the employees they represent shall constitute a violation of this Agreement. The Council and the Union(s) shall take all steps necessary to obtain compliance with this Article and neither should be held liable for conduct for which it is not responsible.

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Section 7.2 Employee Violations. The Contractor may discharge any employee violating Section 7.1 above and any such employee will not be eligible for rehire under this Agreement.

Section 7.3 Standing to Enforce. The District, the Contractor Administrator, or any contractor affected by an alleged violation of Section 7.1 shall have standing and the right to enforce the obligations established therein.

Section 7.4 Expiration of Master Labor Agreements. All employees shall continue to work and to perform all their obligations with respect to Project Work despite the expiration of any MLA. Should a contractor engaged in Project Work enter into an interim agreement with the Union for work being performed elsewhere after the expiration, and before the renewal, of a local collective bargaining agreement forming the basis for MLA, such interim agreement shall be utilized by that contractor for Project Work (subject to the provisions of Article XX, Section 20.3).

Section 7.5 No Lockouts. Contractors shall not cause, incite, encourage, condone or participate in any lock-out of employees with respect to Project Work during the term of this Agreement. The term "lock-out" refers only to a contractor's exclusion of employees in order to secure collective bargaining advantage, and does not refer to the discharge, termination or layoff of employees by the Contractor for any reason in the exercise of rights pursuant to any provision of this Agreement, or any other agreement, nor does "lock-out" include the District's decision to stop, suspend or discontinue any Project Work or any portion thereof for any reason.

Section 7.6 Best Efforts To End Violations. (a) If a Contractor contends that there is any violation of this Article, Section 8.3 of Article VIII, or the provisions of Article XX, Section 20.4, it shall notify, in writing, the Executive Secretary of the Council, the Senior Executive of the involved Union(s) and the Project Labor Coordinator. The Executive Secretary and the leadership of the involved Union(s) will immediately instruct, order and use their best efforts to cause the cessation of any violation of the relevant Article.

(b) If the Union contends that any Contractor has violated this Article, it will notify that the Contractor and the Project Labor Coordinator, setting forth the facts which the Union contends violate the Agreement, at least twenty-four (24) hours prior to invoking the

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procedures of Section 7.7. The Project Labor Coordinator shall promptly order the involved contractor(s) to cease any violation of the Article.

Section 7.7 Expedited Enforcement Procedure. Any party, including the District, which the Parties agree is a party to the Agreement for purposes of this Article and an intended beneficiary of this Article, or the Project Labor Coordinator, may institute the following procedures, in lieu of or in addition to any other action at law or equity, when a breach of Section 7.1 or 7.5, above, or Section 8.3 of Article VIII, or Section 20.4 of Article XX, is alleged.

(a) The party invoking this procedure shall notify Chris Cameron, who has been selected by the negotiating parties, and whom the Parties agree shall be the permanent arbitrator under this procedure. If the permanent arbitrator is unavailable or unwilling to serve, the party invoking this procedure shall notify one of the alternate arbitrators selected by the negotiating parties, Sara Adler or Mark Burstein, in that order on an alternating basis. Notice to the arbitrator shall be by the most expeditious means available, with notices to the parties alleged to be in violation, and to the Council if it is a union alleged to be in violation. For purposes of this Article, written notice may be given by email, facsimile, hand delivery or overnight mail and will be deemed effective upon receipt. The District and the Council (by and through the Project Labor Coordinator and a Council-designated representative, respectively) may add, modify or delete the permanent arbitrator and/or either or both of the alternate arbitrators upon mutual agreement during the term of this Agreement.

(b) Upon receipt of said notice, the arbitrator named above or his/her alternate shall sit and hold a hearing within twenty-four (24) hours if it is contended that the violation still exists, but not sooner than twenty-four (24) hours after notice has been dispatched to the Executive Secretary and the Senior Official(s) as required by Section 7.6, as above.

(c) The arbitrator shall notify the parties of the place and time chosen for this hearing. Said hearing shall be completed in one session, which, with appropriate recesses at the arbitrator's discretion, shall not exceed 24 hours unless otherwise agreed upon by all parties. A failure of any party or parties to attend said hearings shall not delay the hearing of evidence or the issuance of any award by the arbitrator.

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(d) The sole issue at the hearing shall be whether or not a violation of Sections 7.1 or 7.5, above, of Section 8.3 of Article VIII, or Section 20.4 of Article XX, has in fact occurred. The arbitrator shall have no authority to consider any matter in justification, explanation or mitigation of such violation or to award damages, (except for damages as set forth in Section 7.8 below) which issue is reserved for court proceedings, if any. The award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without an opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the Award. The arbitrator may order cessation of the violation of the Article and other appropriate relief, and such Award shall be served on all parties by hand or registered mail upon issuance.

(e) Such award shall be final and binding on all parties and may be enforced by any court of competent jurisdiction upon the filing of this Agreement and all other relevant documents referred to herein above in the following manner. Written notice of the filing of such enforcement proceedings shall be given to the other party. In any judicial proceeding to obtain a temporary order enforcing the arbitrator's Award as issued under Section 7.7(d) of this Article, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The court's order or orders enforcing the arbitrator's award shall be served on all parties by hand or by delivery to their address as shown on this Agreement (for a Union), as shown on their business contract for work under this Agreement (for a contractor) and to the representing Union (for an employee), by certified mail by the party or parties first alleging the violation.

(f) Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance hereto are hereby waived by the parties to whom they accrue.

(g) The fees and expenses of the arbitrator shall be equally divided between the party or parties initiating this procedure and the respondent party or parties.

Section 7.8 Liquidated Damages. (a) If the Arbitrator determines in accordance with Section 7.7 above that a work stoppage has occurred, the respondent Union(s) shall, within

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eight (8) hours of receipt of the award, direct all the employees they represent on the Project to immediately return to work. If the craft(s) involved do not return the work by the beginning of the next regularly scheduled shift following such eight (8) hour period after receipt of the arbitrator's award, and the respondent Union(s) have not complied with their obligations to immediately instruct, order and use their best efforts to cause a cessation of the violation and return the employees they represent to work, then the non-complying respondent Union(s) shall each pay a sum as liquidated damages to the District, and each will pay an additional sum per shift, as set forth in (c), below, for each shift thereafter on which the craft(s) has not returned to work.

(b) If the arbitrator determines in accordance with Section 7.7 above that a lock-out has occurred, the respondent contractor(s) shall, within eight (8) hours after receipt of the award, return all the affected employees to work on the Project, or otherwise correct the violations found by the arbitrator. If the respondent contractor(s) do not take such action by the beginning of the next regular scheduled shift following the eight (8) hour period, each non-complying respondent contractor shall pay or give as liquidated damages, to the affected Union(s) (to be apportioned among the affected employees and the benefit funds to which contributions are made on their behalf, as designated by the arbitrator) and each shall pay an additional sum per shift, as set forth in (c), below, for each shift thereafter in which compliance by the respondent contractor(s) has not been completed.

(c) The arbitrator shall retain jurisdiction to determine compliance with this Section and to establish the appropriate sum of liquidated damages, which shall not be less than $1,000 (one thousand dollars) and no more than $15,000.00 (fifteen thousand dollars) per shift for each non-complying entity.

ARTICLE 8

WORK ASSIGNMENTS AND JURISDICTIONAL DISPUTES

Section 8.1 Assignment of Work. The assignment of work will be solely the responsibility of the Contractor performing the work involved; and such work assignments will

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be in accordance with the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry (the "Plan") currently in effect, or any successor plan.

Section 8.2 The Plan. All jurisdictional disputes between or among Building and Construction Trades Unions party to this Agreement, shall be settled and adjusted according to the Plan, or any other plan or method of procedures that may be adopted in the future by the Building and Construction Trades Department. Decisions rendered shall be final, binding and conclusive on the Contractors and Union parties to this Agreement.

(a) Notwithstanding the above, if a jurisdictional dispute arising under this Article involves the Southwest Mountain States Regional Council of Carpenters or any of its subordinate bodies, an arbitrator shall be chosen by the procedures specified in Article V, Section 5, of the Plan from a list composed of John Kagel, Robert Hirsch, and Thomas Pagan, and the arbitrator's hearing on the dispute shall be held at the offices of the Council within 14 calendar days of the selection of the Arbitrator. All other procedures shall be as specified in the Plan. The District and the Council (by and through the Project Labor Coordinator and a Council-designated representative, respectively) may add, modify or delete the list of arbitrators upon mutual agreement during the term of this Agreement.

Section 8.3 No Work Disruption Over Jurisdiction. All jurisdictional disputes shall be resolved without the occurrence of any strike, work stoppage, disruption, or slow down of any nature, and the Contractor's assignments shall be adhered to until the dispute is resolved. Individuals violating this section shall be subject to immediate discharge.

Section 8.4 Pre-Job Conferences. As provided in Article XV, each Contractor will conduct a pre-job conference with the appropriate affected Union(s) prior to commencing work. The Council and the Project Labor Coordinator shall be advised in advance of all such conferences and may participate if they wish.

Section 8.5 Resolution of Jurisdictional Disputes. If any actual or threatened strike, sympathy strike, work stoppage, slow down, picketing, hand-billing or otherwise advising the public that a labor dispute exists, or interference with the progress of Project Work by reason of a jurisdictional dispute or disputes occurs, the Parties shall exhaust the expedited procedures set

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forth in the Plan, if such procedures are in the plan then currently in affect, or otherwise as in Article VII above.

ARTICLE 9

MANAGEMENT RIGHTS

Section 9.1 Contractor and District Rights. Notwithstanding any other provision in this Article, the Contractors and the District have the sole and exclusive right and authority to oversee and manage construction operations on Project Work without any limitations unless expressly limited or required by a specific provision of this Agreement or a specific safety provision of the applicable MLA. In addition to the following and other rights of the Contractors enumerated in this Agreement, the Contractors expressly reserve their management rights and all the rights conferred upon them by law. The Contractor's rights include, but are not limited to, the right to:

(a) Plan, direct and control operations of all work;

(b) Hire, promote, transfer and layoff their own employees, respectively, as deemed appropriate to satisfy work and/or skill requirements;

(c) Promulgate and require all employees to observe reasonable job rules and security and safety regulations;

(d) Discharge, suspend or discipline their own employees for just cause;

(e) Utilize, in accordance with District approval, any work methods, procedures or techniques, and select, use and install any types or kinds of materials, apparatus or equipment, regardless of source of manufacture or construction; assign and schedule work at their discretion; and

(f) assign overtime, determine when it will be worked and the number and identity of employees engaged in such work, subject to such provisions in the applicable MLAs requiring such assignments be equalized or otherwise made in a non-discriminatory manner.

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Section 9.2 Specific District Rights. In addition to the following and other rights of the District enumerated in this Agreement, the District expressly reserves its management rights and all the rights conferred on it by law. The District's rights (and those of the Contractor Administrator on its behalf) include but are not limited to the right to:

(a) Inspect any construction site or facility to ensure that the contractor follows the applicable safety and other work requirements;

(b) Require contractors to establish a different work week or shift schedule for particular employees as required to meet the operational needs of the Project Work at a particular locations or in order to accommodate the instructional programs and pupil control problems at various project sites where school may be in session during periods of construction activity;

(c) At its sole option, terminate, delay and/or suspend any and all portions of the covered work at any time; prohibit some or all work on certain days or during certain hours of the day to accommodate the ongoing operations of the District's educational facilities and/or to mitigate the effect of ongoing Project Work on businesses and residents in the neighborhood of the Project site; and/or require such other operational or schedule changes it deems necessary, in its sole judgment, to effectively maintain its primary mission and remain a good neighbor to those in the area of its facilities. (In order to permit the contractors and unions to make appropriate scheduling plans, the District will provide the Project Labor Coordinator, and the affected contractor(s) and union(s) with reasonable notice of any changes it requires pursuant to this section; provided, however, that if notice is not provided in time to advise employees not to report for work, show-up pay shall be due pursuant to the provision of Article VI, Section 6.6);

(d) Approve any work methods, procedures and techniques used by contractors whether or not these methods, procedures or techniques are part of industry practices or customs; and

(e) Investigate and process complaints, through its Project Labor Coordinator, in the matter set forth in Articles VII and X.

Section 9.3 Use of Materials. There should be no limitations or restriction by Union upon a contractor's choice of materials or design, nor, regardless of source or location, upon the

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full use and utilization, of equipment, machinery, packaging, precast, prefabricated, prefinished, or preassembled materials, tools or other labor saving devices, subject to the application of the State Public Contracts and Labor Codes as required by law in reference to offsite construction. Generally, the onsite installation or application of such items shall be performed by the craft having jurisdiction over such work. The District and its Project Labor Coordinator shall advise all contractors of, and enforce as appropriate, the off-site application of the prevailing wage law as it affects Project Work.

Section 9.4 Special Equipment, Warranties and Guaranties. (a) It is recognized that certain equipment of a highly technical and specialized nature may be installed at Project Work sites. The nature of the equipment and systems, together with requirements of the manufacturer's warranty, may dictate that it be installed under the supervision and direction of the manufacturer's personnel. The Unions agree to allow such installation to be performed by the manufacturer's employees or the employees of a contractor certified by the manufacturer, when the Unions are unable to perform such work or the warranty requires the work to be performed by the manufacturer's employees or the employees a contractor certified by the manufacturer. If a warranty on the manufacturer's specialty or technical equipment or systems purchased by the District requires that the installation of such specialty or technical equipment or system be performed by the manufacturer's employees or the employees of a contractor certified by the manufacturer, then such installation may be performed by the manufacturer's own employee or the employees of a contractor certified by the manufacturer, and it shall be excluded from this Agreement. To qualify under this exclusion, the warranty must be the standard warranty for the equipment or product, as opposed to an ad hoc change, and contain a provision that the warranty will be void unless the work is performed by the manufacturer's or a certified contractor's own employees. Any work to be excluded pursuant to this subsection shall be identified and discussed at the relevant pre-job conference. Upon request from a Union to the Project Labor Coordinator, copies of the applicable written warranty and any related contract language shall be provided and reviewed by a Review Panel consisting of a District-designated and Council-designated representative to verify that the work meets all conditions under this exclusion. This subsection (a) does not apply to materials, supplies, catalogue components, parts, and equipment which are installed and maintained by contractors and their craft employees regularly engaged in the building and construction industry. When the warranty does not require

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installation by the manufacturer's own personnel or a contractor certified by the manufacturer, the Unions agree to perform and install such work under the supervision and direction of the manufacturer's representative without incident.

(b) The Parties recognized that the Contractor will initiate from time to time the use of new technology, equipment, machinery, tools, and other labor-savings devices and methods of performing Project Work. The Union agrees that they will not restrict the implementation of such devices or work methods. The Unions will accept and will not refuse to handle, install or work with any standardized and/or catalogue parts, assemblies, accessories, prefabricated items, preassembled items, partially assembled items, or materials whatever their source of manufacture or construction.

(c) If any disagreement between the Contractor and the Unions concerning the methods of implementation or installation of any equipment, or device or item, or method of work, arises, or whether a particular part or pre-assembled item is a standardized or catalog part or item, the work will proceed as directed by the Contractor and the parties shall immediately consult over the matter. If the disagreement is not resolved, the affected Union(s) shall have the right to proceed through the procedures set forth in Article X.

ARTICLE 10

SETTLEMENT OF GRIEVANCES AND DISPUTES

Section 10.1 Cooperation and Harmony on Site. (a) This Agreement is intended to establish and foster continued close cooperation between management and labor. The Council shall assign a representative to this Project for the purpose of assisting the local Unions, and working with the Project Labor Coordinator, together with the Contractors, to complete the construction of the Project economically, efficiently, continuously and without any interruption, delays or work stoppages.

(b) The Project Labor Coordinator, the Contractors, Unions, and employees collectively and individually, realize the importance to all Parties of maintaining continuous and uninterrupted performance Project Work, and agree to resolve disputes in accordance with the grievance provisions set forth in this Article or, as appropriate, those of Article VII or VIII.

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(c) The Project Labor Coordinator shall oversee the processing of grievances under this Article and Articles VII and VIII, including the scheduling and arrangements of facilities for meetings, selection of the arbitrator from the agreed-upon panel to hear the case, and any other administrative matters necessary to facilitate the timely resolution of any dispute; provided, however, it is the responsibility of the principal parties to any pending grievance to ensure the time limits and deadlines are met.

Section 10.2 Processing Grievances. Any questions arising out of and during the term of this Agreement involving its interpretation and application, which includes applicable provisions of the MLAs, but not jurisdictional disputes or alleged violations of Article VII Section 7.1 and 7.4 and similar provisions, shall be considered a grievance and subject to resolution under the following procedures.

Step 1. – Employee Grievances. When any employee subject to the provisions of this Agreement feels aggrieved by an alleged violation of this Agreement, the employee shall, through his local union business representative or job steward, within fourteen (14) calendar days after the occurrence of the violation, give notice to the work site representative of the involved contractor stating the provision(s) alleged to have been violated. A business representative of the local Union or the job steward and the work site representative of the involved contractor shall meet and endeavor to adjust the matter within fourteen (14) calendar days after timely notice has been given. If they fail to resolve the matter within the prescribed period, the grieving party may, within fourteen (14) calendar days thereafter, pursue Step 2 of this grievance procedure provided the grievance is reduced to writing, setting forth the relevant information, including a short description thereof, the date on which the alleged violation occurred, and the provision(s) of the Agreement alleged to have been violated. Grievances and disputes settled at Step 1 shall be non-precedential except as to the parties directly involved.

Union or Contractor Grievances. Should the Union(s) or any Contractor have a dispute with the other party(ies) and, if after conferring within fourteen (14) calendar days after the disputing party knew or should have known of the facts or occurrence giving rise to the dispute, a settlement is not reached within seven (7) calendar days, the dispute shall be reduced to writing and processed to Step 2 in the same manner as outlined in 1(a) above for the adjustment of an employee complaint.

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Step 2. The business manager of the involved local Union or his/her designee, together with the site representative of the involved contractor, and the labor relations representative of the Project Labor Coordinator, shall meet within ten (10) calendar days of the referral of the dispute to this second step to arrive at a satisfactory settlement thereof. If the parties fail to reach an agreement, the dispute may be appealed in writing in accordance with the provisions of Step 3 within ten (10) calendar days after the initial meeting at Step 2.

Step 3. (a) If the grievance has been submitted but not resolved under Step 2, either the Union or contractor party may request in writing to the Project Labor Coordinator (with copy(ies) to the other party(ies)) within ten (10) calendar days after the initial Step 2 meeting, that the grievance be submitted to an arbitrator selected from the agreed upon list below, on a rotational basis in the order listed. Those arbitrators are: (1) Sara Adler; (2) Mark Burstein; (3) Chris Cameron; (4) Najeeb Khoury; (5) Yuval Miller; (6) Kenneth Perea; and (7) David Weinberg. The decision of the arbitrator shall be final and binding on all parties and the fee and expenses of such arbitrations shall be borne equally by the involved contractor(s) and the involved union(s).

The District and the Council (by and through the Project Labor Coordinator and a Council-designated representative, respectively) may add, modify or delete any arbitrator upon mutual agreement during the term of this Agreement.

(b) Failure of the grieving party to adhere to the time limits established herein shall render the grievance null and void. The time limits established herein may be extended only by written consent of the parties involved at the particular step where the extension is agreed upon. The arbitrator shall have the authority to make decisions only on issues presented and shall not have the authority to change, amend, add to or detract from any of the provisions of this Agreement.

Section 10.3 Limit on Use of Procedures. Procedures contained in this Article shall not be applicable to any alleged violation of Article VII or VIII, with a single exception that any employee discharged for violation of Article VII, Section 7.2, or Article VIII, Section 8.3, may resort to the procedures of this Article to determine only if he/she was, in fact, engaged in that violation.

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Section 10.4 Notice. The Project Labor Coordinator (and the District, in the case of any grievance regarding the Scope of this Agreement), shall be notified by the involved contractor of all actions at Steps 2 and 3, and further, the Project Labor Coordinator shall, upon its own request, be permitted to participate fully as a party in all proceedings at such steps.

ARTICLE 11

REGULATORY COMPLIANCE

Section 11.1 Compliance with All Laws. The Council and all Unions, Contractors, subcontractors and their employees shall comply with all applicable federal and state laws, ordinances and regulations including, but not limited to, those relating to safety and health, employment and applications for employment. All employees shall comply with the safety regulations established by the District, the Project Labor Coordinator or the Contractor. Employees must promptly report any injuries or accidents to a supervisor.

Section 11.2 Monitoring Compliance. The Parties agree that the District shall require all contractors and subcontractors to comply with all federal and state laws and regulations that, from time to time may apply to Project Work. The Project Labor Coordinator (on behalf of the District) may investigate or monitor compliance with these various laws and regulations. The Council may monitor, investigate and recommend to the Project Labor Coordinator and/or the District procedures to encourage and enforce compliance with these laws and regulations.

Section 11.3 Prevailing Wage Compliance. The Council or Union shall refer all complaints regarding any potential prevailing wage violation to the Project Labor Coordinator, who on its own, or with the assistance of the District's labor compliance program, shall process, investigate and resolve such complaints, consistent with Article V, Section 5.4. The District intends to maintain a labor compliance program proportionate to the level of active construction on Project Work for the duration of this Agreement. The Council or Union, as appropriate, shall be advised in a timely manner with regard to the facts and resolution, if any, of any complaint. It is understood that this Section does not restrict any individual rights as established under the State Labor Code, including the rights of an individual to file a complaint with the State Labor Commissioner.

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Section 11.4 Violations of Law. Based upon a finding of violation by the District of a federal and state law, and upon notice to the Contractor that it or its subcontractors is in such violation, the District, in the absence of the Contractor or subcontractor remedying such violation, shall take such action as it is permitted by law or contract to encourage that contractor to come into compliance, including, but not limited to, assessing fines and penalties and/or removing the offending contractor from Project Work. Additionally, in accordance with the Agreement between the District and the Contractor, the District may cause the Contractor to remove from Project Work any subcontractor who is in violation of state or federal law.

ARTICLE 12

SAFETY AND PROTECTION OF PERSON AND PROPERTY

Section 12.1 Safety. (a) It shall be the responsibility of each Contractor to ensure safe working conditions and employee compliance with any safety rules contained herein or established by the District, the Project Labor Coordinator or the Contractor. It is understood that employees have an individual obligation to use diligent care to perform their work in a safe manner and to protect themselves and the property of the Contractor and the District.

(b) Employees shall be bound by the safety, security and visitor rules established by the Contractor, the Project Labor Coordinator and/or the District. These rules will be published and posted. An employee's failure to satisfy his/her obligations under this section will subject him/her to discipline, up to and including discharge.

(c) The Project Labor Coordinator may, at the request of the District establish and implement, after negotiation with the Council and the Craft Unions, reasonable substance abuse testing procedures and regulations, which may include pre-hire, reasonable cause, random and post accident testing to the extent permitted by federal and state law. Until there is such a project-wide substance abuse testing procedure negotiated with the Council and the Craft Unions and otherwise adopted by the Project Labor Coordinator, the Parties adopt the Los Angeles/Orange Counties Building and Construction Trades Council Approved Drug and Alcohol Testing Policy, a copy of which is attached hereto as Attachment D.

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Section 12.2 Inspection. The inspection of incoming shipments of equipment, machinery, and construction materials of every kind shall be performed at the discretion of the Contractor by individuals of its choice, unless otherwise limited or required by an MLA.

Section 12.3 Suspension of Work for Safety. A contractor may suspend all or a portion of the job to protect the life and safety of employees. In such cases, employees will be compensated only for the actual time worked; provided, however, that where the Contractor requests employees to remain at the site and be available for work, the employees will be compensated for stand-by time at their basic hourly rate of pay.

Section 12.4 Water and Sanitary Facilities. The Contractor shall provide adequate supplies of drinking water and sanitary facilities for all employees as required by state law or regulation.

ARTICLE 13

TRAVEL AND SUBSISTENCE

Travel expenses, travel time, subsistence allowances and/or zone rates and parking reimbursements shall not be applicable to work under this Agreement, except to the extent provided for in any applicable prevailing wage determination. Parking for employees covered by this Agreement shall be provided by the Contractor(s) according to the provision of the MLAs existing on the effective date of this Agreement, and upon presentation of proof of any expense incurred.

ARTICLE 14

APPRENTICES

Section 14.1 Importance of Training. The Parties recognize the need to maintain continuing support of the programs designed to develop adequate numbers of competent workers in the construction industry, the obligation to capitalize on the availability of the local work force in the area served by the District, and the opportunities to provide continuing work under the construction program funded by Measures K, R, Y, Q and RR. To these ends, the Parties will facilitate, encourage, and assist Local Residents and District students to commence and progress in Apprenticeship Readiness programs that utilize the Building Trades multi-craft core

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curriculum (MC3) and other District vocational programs and the Apprenticeship Training Committees for the crafts and trades they are interested in. The Unions shall assist Local Residents and District students who are seeking Union jobs on the Project and Union membership in assessing their work experience and giving them credit for provable past experience in their relevant craft or trade, including experience gained working for non-union Contractors. The District, the Project Labor Coordinator, other District consultants, and the Council, will work cooperatively to identify, or establish and maintain, effective programs and procedures for persons interested in entering the construction industry and which will help prepare them for the formal Joint Labor/Management Apprenticeship Programs maintained by the signatory unions.

Section 14.2 Use of Apprentices. (a) Apprentices used on Projects under this Agreement shall be registered in Joint Labor Management Apprenticeship Programs approved by the State of California. Apprentices may comprise up to thirty (30) percent of each craft's work force at any time, unless the standards of the applicable joint apprenticeship committee confirmed by the Division of Apprenticeship Standards (DAS) establish a lower or higher maximum percentage. Where the standards permit a higher percentage, such percentage shall apply on Project Work. Where the applicable standards establish a lower percentage, the applicable Union will use its best efforts with the Joint Labor Management apprenticeship committee and, if necessary, the DAS to permit up to thirty percent (30%) Apprentices on the Project. When available and capable of undertaking the tasks involved, forty (40) percent of such Apprentice workforce of each craft shall consist of first (1st) year Apprentices.

(b) The Unions agree to cooperate with the Contractor in furnishing Apprentices as requested up to the maximum percentage. The Apprentice ratio for each craft shall be in compliance, at a minimum, with the applicable provisions of the Labor Code relating to utilization of Apprentices. The District shall encourage such utilization, and, both as to Apprentices and the overall supply of experienced workers, the Project Labor Coordinator will work with the Council to assure appropriate and maximum utilization of Apprentices and the continuing availability of both Apprentices and journey persons.

(c) The Parties agree that Apprentices will not be dispatched to Contractors working under this Agreement unless there is a journeymen or other Contractor employee

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working on the Project where the Apprentice is to be employed who is qualified to assist and oversee the Apprentice's progress through the program in which he is participating.

Section 14.3 Joint Subcommittee on Training and Apprenticeship. To carry out the intent and purposes of this Article, a subcommittee of the Labor Management Committee established pursuant to Article XVI shall be established, jointly chaired by a designee of the District and a designee of the Council, to oversee the identification and/or effective development of procedures and programs leading to the full utilization of apprenticeship programs, and to work with representatives of each signatory craft's joint apprenticeship committee ("JAC") and representatives of the District's technical schools to establish appropriate criteria for recognition by such JAC's of the educational and work experience possessed by District students and graduates toward qualifying for entry or advanced level in the apprenticeship programs under the direction under such JAC's. The Subcommittee will meet as necessary at the call of the joint chairs to promptly to facilitate its purposes in an expeditious manner as soon as this Agreement becomes effective. In addition to the joint chairs, the membership of the committee will consist of at least three representatives of the signatory local Unions and three representatives of contractors signatory to this Agreement and experienced in overseeing and participating in joint labor management apprenticeship programs (or organizations to which the contractors belong).

ARTICLE 15

PRE-JOB CONFERENCES

The prime Contractor shall ensure that each Contractor on their project conducts a pre-job conference in accordance with this Agreement. Each Contractor will conduct a pre-job conference with the Unions not later than seven (7) calendar days prior to commencing work. The Project Labor Coordinator may work with the prime contractor and Council to facilitate the scheduling of the pre-job conference. The prime Contractor shall notify the Project Labor Coordinator and the Council at least seven (7) calendar days (or another mutually agreeable time) in advance of all such conferences. The Council, the Project Labor Coordinator may participate in the pre-job conference. The purpose of the conference will be to, among other things, convey craft manpower needs, and discuss the schedule of work and project work rules/owner rules. All work assignments shall be disclosed by the prime Contractor and all subcontractors at a pre-job conference. Should there be Project Work that was not discussed at

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the pre-job conference, or additional project work be added, the Contractors performing such work will conduct a separate pre-job conference for such work. Should there be any formal jurisdictional dispute raised under Article VIII, the Project Labor Coordinator shall be promptly notified. At the pre-job conference, the Project Labor Coordinator may review the District's employment and contracting programs and goals with the participants.

ARTICLE 16

LABOR/MANAGEMENT AND COOPERATION

Section 16.1 Joint Committee. The Parties to this Agreement may form a joint committee consisting of representatives selected by the Council and the Project Labor Coordinator, to be chaired jointly by a representative of the Project Labor Coordinator and the Council. The purpose of the Committee shall be to promote harmonious and stable labor management relations on this Project, to ensure effective and constructive communication between labor and management parties, to advance the proficiency of work in the industry, and evaluate and ensure an adequate supply of skilled labor for all Project Work. Representatives of the District may participate upon its request.

Section 16.2 Functions of Joint Committee. The Committee shall meet on a schedule to be determined by the Committee or at the call of the joint chairs, to discuss the administration of the Agreement, the progress of the Project, general labor management problems that may arise, and any other matters consistent with this Agreement. Substantive grievances or disputes arising under Articles VII, VIII or X shall not be reviewed or discussed by this Committee, but shall be processed pursuant to the provisions of the appropriate Article.

The Project Labor Coordinator shall be responsible for the scheduling of the meetings, the preparation of the agenda topics for the meetings, with input from the Unions, the Contractors, and the District. Notice of the date, time and place of meetings, shall be given to the Committee members at least three (3) days prior to the meeting. The District should be notified of the meetings and invited to send a representative(s) to participate.

The Project Labor Coordinator shall prepare quarterly reports on Apprentice utilization and the training and employment of District residents, and a schedule of Project work and estimated number of craft workers needed. The Committee, or an appropriate subcommittee,

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may review such reports and make any recommendations for improvement, if necessary, including increasing the availability of skilled trades, and the employment of local residents or other individuals who should be assisted with appropriate training to qualify for apprenticeship programs.

Section 16.3 Subcommittees. The Committee may form subcommittees to consider and advise the full Committee with regard to safety and health issues affecting the Project and other similar issues affecting the overall Project, including any workers compensation program initiated under this Agreement.

ARTICLE 17

SAVINGS AND SEPARABILITY

Section 17.1 Savings Clause. It is not the intention of the District, the Project Labor Coordinator, Contractor, or the Union parties to violate any laws governing the subject manner of this Agreement. The Parties hereto agree that in the event any provision of this Agreement is finally held or determined to be illegal or void as being in contravention of any applicable law or regulation, the remainder of the Agreement shall remain in full force and effect unless the part or parts so found to be void are wholly inseparable from the remaining portions of this Agreement. Further, the Parties agree that if and when any provision(s) of this Agreement is finally held or determined to be illegal or void by a court of competent jurisdiction, the Parties will promptly enter into negotiations concerning the substantive effect of such decision for the purposes of achieving conformity with the requirements of any applicable laws and the intent of the Parties hereto. If the legality of this Agreement is challenged and any form of injunctive relief is granted by any court, suspending temporarily or permanently the implementation of this Agreement, then the Parties agree that all Project Work that would otherwise be covered by this Agreement should be continued to be bid and constructed without application of this Agreement so that there is no delay or interference with the ongoing planning, bidding and construction of any Project Work.

Section 17.2 Effect of Injunctions or Other Court Orders. The Parties recognize the right of the District to withdraw, at its absolute discretion, the utilization of the Agreement as part of any bid specification should a Court of competent jurisdiction issue any order, or any

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applicable statute which could result, temporarily or permanently in delay of the bidding, awarding and/or construction on the Project. Notwithstanding such an action by the District, or such court order or statutory provision, the Parties agree that the Agreement shall remain in full force and effect on covered Project Work to the maximum extent legally possible.

ARTICLE 18

WAIVER

A waiver of or a failure to assert any provisions of this Agreement by any or all of the Parties hereto shall not constitute a waiver of such provision for the future. Any such waiver shall not constitute a modification of the Agreement or change in the terms and conditions of the Agreement and shall not relieve, excuse or release any of the Parties from any of their rights, duties or obligations hereunder.

ARTICLE 19

AMENDMENTS

The provisions of this Agreement can be renegotiated, supplemented, rescinded or otherwise altered only by mutual agreement in writing, hereafter signed by the negotiating parties hereto.

ARTICLE 20

DURATION OF THE AGREEMENT

Section 20.1 Duration. (a) This Agreement shall be effective January 1, 2024 for Project Work awarded on or after such date through December 31, 2033 (provided however, it shall continue in effect for all work awarded prior to such termination date until the completion of such Project Work).

(b) This Agreement may be extended by mutual consent of the Parties for any further construction program(s) initiated pursuant to Measure K, R, Y, Q and RR consistent with the Scope Provisions of Article II of this Agreement. It is agreed that with regard to any new construction or major modification programs undertaken by the District pursuant to further propositions or measures enacted by District voters at any time through December 31, 2033, this

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Agreement shall apply to all construction work awarded through December 31, 2033, for work meeting conditions established in Article II, Section 2.2 above.

Section 20.2 Turnover and Final Acceptance of Completed Work. (a) Construction of any phase, portion, section, or segment of Project Work shall be deemed complete when such phase, portion, section or segment has been turned over to the District by the Contractor and the District has accepted such phase, portion, section, or segment. As areas and systems of the Project are inspected and construction-tested and/or approved and accepted by the District or third parties with the approval of the District, the Agreement shall have no further force or effect on such items or areas, except when the Contractor is directed by the District to engage and repairs or modifications required by its contract(s) with the District.

(b) Notice of each final acceptance received by the Contractor will be provided to the Council with the description of what portion, segment, etc. has been accepted. Final acceptance may be subject to a "punch" list, and in such case, the Agreement will continue to apply to each such item on the list until it is completed to the satisfaction of the District and Notice of Acceptance is given by the District or its representative to the Contractor. At the request of the Union, complete information describing any "punch" list work, as well as any additional work required of a Contractor at the direction of the District pursuant to (a) above, involving otherwise turned-over and completed facilities which have been accepted by the District, will be available from the Project Labor Coordinator.

Section 20.3 Continuation of MLA. MLAs incorporated as part of this Agreement shall continue in full force and effect, as previously stated, until the contractor and union parties to the collective bargaining agreement(s) which are the basis for such MLAs notify the Project Labor Coordinator of the mutually agreed upon changes in such agreements and their effective date(s).

The Parties agree to recognize and implement all applicable changes on their effective dates, except as otherwise provided by this Agreement; provided, however, that any such provisions negotiated in said collective bargaining agreements will not apply to work covered by this Agreement if such provisions are less favorable to the Contractor under the Agreement than those uniformly required of contractors for construction work normally covered by those

agreements; nor shall any provision be recognized or applied if it may be construed to apply exclusively or predominately to work covered by this Agreement. Any disagreement between the Parties over the incorporation into an MLA of any such provision agreed upon in an negotiation of the Local Collective Bargaining Agreement which is the basis for an MLA shall be resolved under the procedures established in Article X.

In witness whereof the Parties have caused this Project Stabilization Agreement for Los Angeles Unified School District New Construction, Major Modernization, and School Upgrade to be executed as of the date and year above stated.

LOS ANGELES
UNIFIED SCHOOL DISTRICT

By: _____
Krisztina Tokes
Chief Facilities Executive

By: _____

LOS ANGELES/ORANGE COUNTIES
BUILDING AND CONSTRUCTION TRADES
CONSTRUCTION COUNCIL

By: _____
Ernesto Medrano
Executive Secretary

Signatory Unions and Districts
(see attached)

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LOS ANGELES UNIFIED SCHOOL DISTRICT
PROJECT STABILIZATION AGREEMENT
UNION SIGNATORY PAGE

Asbestos Heat & Frost Insulators (Local 5)	DocuSigned by: Mike Patterson 11199ACC96CF44A...
Boilermakers (Local 92)	DocuSigned by: Luis Miramontes 83A5B3BEE86F48F...
Bricklayers & Allied Craftworkers (Local 4)	DocuSigned by: Lupe Aldaco EA7AE8519EAE486...
Cement Masons (Local 500)	DocuSigned by: Jack Alvarado 5C661A00E44B47F...
Cement Masons (Local 600)	DocuSigned by: Ricardo Gonzalez 59C2DDBBFF7F442...
Electricians (Local 11)	DocuSigned by: 1A4B5E5AB1C961...
Elevator Constructors (Local 18)	DocuSigned by: Tony Garzaniga 859D43C5C88B417...
Gunite Workers (Local 345)	DocuSigned by: Ed Learn (Gunite #345) 237F9D67A3B5408...
Iron Workers (Reinforced – Local 416)	DocuSigned by: Frankie Jimenez 6E6E642A5F04466...
Iron Workers (Structural – Local 433)	DocuSigned by: 6E172C82FEB4CC...
Southern California District Council of Laborers	DocuSigned by: Jon Preciado 85151D075BAB44A...
Laborers (Local 300)	DocuSigned by: SERGIO RASCON 6D6520D1C3E9449...
Laborers (Local 1309)	DocuSigned by: Nicholas Santos
Laborers (Local 1184)	DocuSigned by: B569A3D2C62940C...
Operating Engineers (Local 12)	
Operating Engineers (Local 12)	
Operating Engineers (Local 12)	
Painters & Allied Trades DC 36	DocuSigned by: Ernesto Toscano 2370C555E467401...
Pipe Trades (Plumbers Local 78)	DocuSigned by: Jeremy Diaz C43D182771ED474...
Pipe Trades (Pipe Fitters Local 250)	DocuSigned by: Ben Clayton B0E3A583E0A494...
Pipe Trades (Local 345)	DocuSigned by: Ricardo Perez 8C146EC36FE5484...
Pipe Trades (Plumbers/Fitters Local 761)	DocuSigned by: Greg Lewis 5498384E0F0C40F...
Pipe Trades (Sprinkler Fitters Local 709)	DocuSigned by: Todd Golden 6D88CFF26138497...
Plasterers (Local 200)	DocuSigned by: 00CA94BF7EC3425...
Plaster Tenders (Local 1414)	DocuSigned by: 9BEB3A0A1B4A7...
Roofers & Waterproofers (Local 36)	DocuSigned by: Cliff Smith E607A88CC0D147F...
Sheet Metal Workers (Local 105)	DocuSigned by: Steve Hinson 925589179AF441F...
Teamsters (Local 986)	DocuSigned by: Caesar Borgas B9F79ED2514D410...
Southwest Mountain States Regional Council of Carpenters	DocuSigned by: Josh Raper 4E0027DAA65B4D0...

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ATTACHMENT A

LETTER OF ASSENT

To be signed by all Contractors awarded work covered by the Project Stabilization Agreement prior to commencing work.

[Contractor's Letterhead]

Project Labor Coordinator
c/o The Los Angeles Unified School District
333 S. Beaudry Avenue
Los Angeles, CA 90017

Re: Project Stabilization Agreement – New Construction, Major Modernization, and School Upgrade Funded by Measures K, R, Y, Q and RR – Letter of Assent

To whom this may concern:

This is to confirm that [Name of Company] agrees to be party to and bound by The Los Angeles Unified School District Project Stabilization Agreement – New Construction, Major Modernization, and School Upgrade Funded by Measures K, R Y, Q and RR or other projects added to this Agreement effective January 1, 2024 as such Agreement, may from time to time be amended by the negotiating parties or interpreted pursuant to its terms. Such obligation to be a party and bound by this Agreement shall extend all work covered by the Agreement undertaken by this Company on the Project pursuant to [Contract No. or identifying description], and this Company shall require all of its subcontractors of whatever tier to be similarly bound for all work within the scope of the Agreement by signing and furnishing to you an identical Letter of Assent prior to their commencement of work.

Sincerely,

[Name of Construction Company]

By: [ ]
Name and Title of Authorized Executive

Contractor's State License No: _____

Project Name: _____

[Copies of this Letter must be submitted to the Project Labor Coordinator and to the Council consist with Article II, Section 2.5(b)].

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ATTACHMENT B

LOS ANGELES UNIFIED SCHOOL DISTRICT
CRAFT REQUEST FORM

TO THE CONTRACTOR: Please complete and submit this form to the applicable union to request craft workers that fulfill the hiring requirements for this project. After submitting your request, please call the Local to verify receipt and substantiate their capacity to furnish workers as specified below. Please keep copies for your records.

The Los Angeles Unified School District Project Stabilization Agreement ("PSA") establishes a goal that 50% of all hours worked on the Project shall be from "Local Residents". As defined in Section 3.5 of the PSA, Local Residents are individuals currently residing in those zip codes which overlap the area covered by the District as reflected on the U.S. Postal Service zip codes and graduates of the Los Angeles Unified School District/Eligible Veterans/individuals who have successfully completed the Building Trades Multi-Craft Core Curriculum Apprenticeship Readiness Program, regardless of where they reside. For dispatch purposes, employees described herein shall be referred to as "Local Residents."

TO THE UNION: Please complete the "Union Use Only" section on the next page and fax this form back to the requesting Contractor. Be sure to retain a copy of this form for your records.

CONTRACTOR USE ONLY

To: Union Local # _____ **Fax/Email** _____**Date:** _____

Cc: Project Labor Coordinator
From: Company: _____ Issued By: _____
Contact Phone: (___)_____ Contact Fax/Email: _____

PLEASE PROVIDE ME WITH THE FOLLOWING UNION CRAFT WORKERS.

Craft Classification (i.e., plumber, painter, etc.)	Journeyman or Apprentice	Local Resident	Number of workers needed	Report Date	Report Time
		☐ YES ☐ NO			
		☐ YES ☐ NO			
		☐ YES ☐ NO			
TOTAL WORKERS REQUESTED = _____					

Please have worker(s) report to the following work address indicated below:

Project Name: _____ Site: _____ Address: _____

Report to: _____ On-site Tel: _____ On-site Fax: _____

Comment or Special Instructions: _____

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UNION USE ONLY

Date dispatch request received:
Dispatch received by:
Classification of worker requested:
Classification of worker dispatched:

WORKER REFERRED

Name:		
Date worker was dispatched:		
The worker referred is a(n): (check all that apply)		
JOURNEYMAN	Yes _____	No _____
APPRENTICE	Yes _____	No _____
LOCAL RESIDENT Zip Code:_____ Other Eligible Criteria: □ LAUSD Graduate □ Eligible Veteran □ Completion of MC3	Yes _____	No _____
GENERAL DISPATCH FROM OUT OF WORK LIST	Yes _____	No _____

[This form is not intended to replace a Local Union's Dispatch or Referral Form normally given to the employee when being dispatched to the jobsite.]

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ATTACHMENT C

LOCAL RESIDENT ZIP CODES

90001 90002 90003 90004 90005 90006 90007 90008 90010 90011 90012 90013 90014 90015 90016 90017
90018 90019 90020 90021 90022 90023 90024 90025 90026 90027 90028 90029 90031 90032 90033 90034
90035 90036 90037 90038 90039 90040 90041 90042 90043 90044 90045 90046 90047 90048 90049 90056
90057 90058 90059 90061 90062 90063 90064 90065 90066 90067 90068 90069 90071 90073 90077 90089
90094 90095 90201 90210 90220 90221 90230 90232 90247 90248 90249 90250 90255 90262 90265 90270
90272 90275 90280 90290 90291 90292 90293 90303 90402 90405 90501 90502 90505 90710 90717 90731
90732 90744 90745 90746 90802 90805 90810 91040 91042 91205 91214 91302 91303 91304 91306 91307
91311 91316 91321 91324 91325 91326 91330 91331 91335 91340 91342 91343 91344 91345 91352 91356
91364 91367 91387 91401 91402 91403 91405 91406 91411 91423 91436 91504 91505 91601 91602 91604
91605 91606 91607 91608 91754

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ATTACHMENT D

DRUG AND ALCOHOL TESTING POLICY

The Parties recognize the problems that drug and alcohol abuse have created in the construction industry and the need to develop drug and alcohol abuse prevention programs. Accordingly, the Parties agree that in order to enhance the safety of the workplace and to maintain a drug and alcohol-free work environment, individual Contractors shall require applicants or employees to undergo drug and alcohol testing in accordance with this PSA and this policy, Attachment D – Drug and Alcohol Testing Policy, hereafter "Policy."

1. It is understood that the use, possession, transfer, or sale of illegal drugs, narcotics, or other unlawful substances, as well as being under the influence of alcohol and the possession of or consuming alcohol is absolutely prohibited while employees are on the Contractor's job premises or while working on any jobsite in connection with work performed under the PSA.

2. No Contractor may implement a drug and alcohol testing program that does not conform in all respects to the provisions of this Policy.

3. No Contractor may implement drug and alcohol testing at any jobsite unless written notice is given to the Union setting forth the location of the jobsite, a description of the project under construction, and the name and telephone number of the Prime Contractor's project manager. Said notice shall be provided at the pre-job conferences for each Covered Project. Failure to give such notice shall make any drug and alcohol testing engaged in by the Contractor a violation of the PSA and subject to the Article 10 grievance procedure.

4. A Contractor who elects to implement drug and alcohol testing pursuant to this Policy shall require all craft employees on the Covered Project to be tested. With respect to individuals who become employed on the Covered Project subsequent to the proper implementation of a valid drug and alcohol testing program, such test shall be administered upon the commencement of employment on the project, whether by referral from a Union Dispatch Office, transfer from another project, or another method. Individuals who were employed on the project prior to proper implementation of a valid drug and alcohol testing program may only be subjected to testing for the reasons set forth in paragraphs 5(g)(l) through 5(g)(3) and paragraphs 6(a) through 6(e) of this Policy. Refusal to undergo such testing shall be considered sufficient grounds to deny employment on the project.

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5. The following procedure shall apply to all drug and alcohol testing:

   a. The Contractor may request urine samples only. The applicant or employee shall not be observed when the urine specimen is given. An applicant or employee, at his or her sole option, shall, upon request, receive a blood test in lieu of a urine test. No employee of the Contractor shall draw blood from a bargaining unit employee, touch or handle urine specimens, or in any way become involved in the chain of custody of urine or blood specimens. A Union Business Representative, subject to the approval of the individual applicant or employee, shall be permitted to accompany the applicant or employee to the collection facility to observe the collection, bottling, and sealing of the specimen.

   b. A Contractor may request an applicant or employee promptly, within four (4) hours of the Contractor's request, perform an alcohol breathalyzer test at a certified laboratory only, and cutoff levels shall be those mandated by applicable state or federal law.

   c. The testing shall be done by a laboratory approved by the Substance Abuse & Mental Health Services Administration (SAMHSA), which is chosen by the Contractor and the Union.

   d. An initial test shall be performed using the Enzyme Multiplied Immunoassay Technique (EMIT). In the event a question or positive result arises from the initial test, a confirmation test must be utilized before action can be taken against the applicant or employee. The confirmation test will be by Gas Chromatography/Mass Spectrometry (GC/MS). Cutoff levels for both the initial test and confirmation test will be those established by SAMHSA and this Policy. Should these SAMHSA levels be changed during the course of the PSA or new testing procedures are approved, then these new regulations will be deemed as part of this existing PSA. Confirmed positive samples will be retained by the testing laboratory in secured long-term frozen storage for a minimum of one (1) year. Handling and transportation of each sample must be documented through strict chain-of-custody procedures.

   e. In the event of a confirmed positive test result, the applicant or employee may request, within forty-eight (48) hours, a sample of his/her specimen from the testing laboratory for purposes of a second test to be performed at a second laboratory, designated by the Union and approved by SAMHSA. The retest must be performed within ten (10) days of the request. Chain of custody for this sample shall be maintained by the Contractor between the original testing laboratory and the Union's designated laboratory. Retesting shall be performed at the applicant's or employee's expense. In the event of conflicting test results, the Contractor may require a third test, at the Contractor's expense.

   f. If, as a result of the above testing procedure, it is determined that an applicant or employee has tested positive, this shall be considered sufficient grounds to deny the applicant or employee his/her employment on the project.

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g. No individual who tests negative for drugs and alcohol pursuant to the above procedure and becomes employed on the project shall again be subjected to drug and alcohol testing with the following exceptions:

1) Employees who are involved in industrial accidents resulting in damage to plant, property, or equipment or injury to him/her or others may be tested for drugs or alcohol pursuant to the procedures stated hereinabove.

2) The Contractor may test employees following thirty (30) days' advance written notice to the employee(s) to be tested and to the applicable Union. Notice to the applicable Union shall be sent by certified mail to the affected Union with a copy to the Project Labor Coordinator. Such testing shall be pursuant to the procedures stated hereinabove.

3) The Contractor may test an employee where the Contractor has reasonable cause to believe that the employee is impaired from performing his/her job. Reasonable cause shall be defined as being aberrant or unusual behavior, the type of which is a recognized and accepted symptom of impairment (e.g., slurred speech, unusual lack of muscular coordination). Such behavior must be actually observed by at least two (2) persons, one (1) of whom shall be a supervisor who has been trained to recognize the symptoms of drug and alcohol abuse or impairment and the other of whom shall be the Job Steward. If the Job Steward is unavailable or there is no Job Steward on the Covered Project, the other person shall be a member of the applicable Union's bargaining unit. Testing shall be pursuant to the procedures stated hereinabove. Employees who are tested pursuant to the exceptions set forth in this paragraph and who test positive will be removed from the Contractor's payroll.

h. Applicants or employees who do not test positive shall be paid for all time lost while undergoing drug and alcohol testing. Payment shall be at the applicable wage and benefit rates set forth in the Applicable Prevailing Wage Laws. Applicants who have been dispatched from the Union and who are not put to work pending the results of a test will be paid waiting time until such time as they are put to work. It is understood that an applicant must pass the test as a condition of employment. Applicants who are put to work pending the results of a test will be considered probationary employees.

6. The Contractors will be allowed to conduct periodic jobsite drug and alcohol testing on the Project under the following conditions:

a. The entire jobsite must be tested, including any employee or subcontractor's employee who worked on that project three (3) working days before or after the date of the test;

b. Jobsite testing cannot commence sooner than fifteen (15) days after start of the work on the project;

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c. Prior to start of periodic testing, a Business Representative will be allowed to conduct an educational period on company time to explain periodic jobsite testing program to affected employees;

d. Testing shall be conducted by an SAMHSA-certified laboratory, pursuant to the provisions set forth in paragraph 5 hereinabove.

e. Only two (2) periodic tests may be performed in a twelve (12)-month period.

7. It is understood that the unsafe use of prescribed medication, or where the use of prescribed medication impairs the employee's ability to perform work, is a basis for the Contractor to remove the employee from the jobsite.

8. Any grievance or dispute that may arise out of the application of this Policy shall be subject to the grievance and arbitration procedures set forth in the PSA.

9. The establishment or operation of this Policy shall not curtail any right of any employee found in any law, rule, or regulation. Should any part of this Policy be found unlawful by a court of competent jurisdiction or a public agency having jurisdiction over the Parties, the remaining portions of the PSA shall be unaffected, and the Parties shall enter negotiations to replace the affected provision.

10. Present employees, if tested positive, shall have the prerogative for rehabilitation program at the employee’s expense. When such program has been successfully completed, the Contractor shall not discriminate in any way against the employee. If work for which the employee is qualified exists, he/she may be reinstated.

11. The Contractor agrees that results of urine and blood tests performed hereunder will be considered medical records held confidential to the extent permitted or required by law. Such records shall not be released to any persons or entities other than designated Contractor representatives and the applicable Union. Such release to the applicable Union shall only be allowed upon the signing of a written release by the employee, and the information contained therein shall not be used to discourage the employment of the individual applicant or employee on any subsequent occasion.

12. Employees who seek voluntary assistance for substance abuse may not be disciplined for seeking such assistance. Requests from employees for such assistance shall remain confidential and shall not be revealed to other employees or management personnel without the employee's consent. Employees enrolled in substance abuse programs will be subject to all Contractor rules, regulations, and job performance standards with the understanding that an employee enrolled in such a program is receiving treatment for an illness.

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13. The Contractor shall indemnify and hold the Union harmless against any and all claims, demands, suits, or liabilities that may arise out of the application of this Policy.

14. This Policy shall constitute the only Policy in effect between the Parties concerning drug and alcohol abuse, prevention, and testing. Any modifications thereto must be accomplished pursuant to collective bargaining negotiations between the Parties.

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SPECIMEN REPORTING CRITERIA

Initial Test Analyte	Initial Test Cutoff [1]	Confirmatory Test Analyte	Confirmatory Test Cutoff Concentration
Marijuana metabolites (THCA)[2]	50 ng/ml [3]	THCA	15 ng/ml
Cocaine metabolite (Benzoylecgonine)	150 ng/ml [3]	Benzoylecgonine	100 ng/ml
Codeine/ Morphine	2000 ng/ml	Codeine Morphine	2000 ng/ml 2000 ng/ml
Hydrocodone/ Hydromorphone	300 ng/ml	Hydrocodone Hydromorphone	100 ng/ml 100 ng/ml
Alcohol	0.02%	Ethanol	0.02%
Oxycodone/ Oxymorphone	100 ng/ml	Oxycodone Oxymorphone	100 ng/ml 100 ng/ml
6-Acetylmorphine	10 ng/ml	6-Acetylmorphine	10 ng/ml
Phencyclidine	25 ng/ml	Phencyclidine	25 ng/ml
Amphetamine/ Methamphetamine	500 ng/ml	Amphetamine Methamphetamine	250 ng/ml 250 ng/ml
MDMA[4]/MDA[5]	500 ng/ml	MDMA MDA	250 ng/ml 250 ng/ml
Initial Test Analyte	Initial Test Cutoff	Confirmatory Test Analyte	Confirmatory Test Cutoff Concentration
Barbiturates	300 ng/ml	Barbiturates	200 ng/ml
Benzodiazepines	300 ng/ml	Benzodiazepines	300 ng/ml
Methadone[6]	300 ng/ml	Methadone	100 ng/ml
Methaqualone	300 ng/ml	Methaqualone	300 ng/ml
Propoxyphene	300 ng/ml	Propoxyphene	100 ng/ml

[1] For grouped analytes (i.e., two or more analytes that are in the same drug class and have the same initial test cutoff):

Immunoassay: The test must be calibrated with one analyte from the group identified as the target analyte. The cross-reactivity of the immunoassay to the other analyte(s) within the group must be 80 percent or greater; if not, separate immunoassays must be used for the analytes within the group.

Alternate technology: Either one analyte or all analytes from the group must be used for calibration, depending on the technology. At least one analyte within the group must have a concentration equal to or greater than the initial test cutoff or, alternatively, the sum of the analytes present (i.e., equal to or greater than the laboratory's validated limit of quantification) must be equal to or greater than the initial test cutoff.

[2] An immunoassay must be calibrated with the target analyte, 9-tetrahydrocannabinoJ-9- carboxylic acid (THCA).

[3] **Alternate technology (THCA and benzoylecgonine):** The confirmatory test cutoff must be used for an alternate technology initial test that is specific for the target analyte (i.e., 15 ng/ml for THCA, 100 ng/ ml for benzoylecgonine).

[4] Methylenedioxymethamphetamine (MDMA)

[5] Methylenedioxyamphetamine (MDA)

[6] Employees with a prescription for methadone who are using the medication as prescribed, and are not impaired and can safely perform their work, will not be considered to have violated this Policy.

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MEMORANDUM OF UNDERSTANDING REGARDING
“QUICK” DRUG SCREENING TESTS PURSUANT TO
ATTACHMENT D – DRUG AND ALCOHOL TESTING POLICY

It is hereby agreed between the Parties hereto that a Contractor who has otherwise properly implemented drug and alcohol testing, as set forth in the Policy, shall have the right to offer an applicant or employee a "quick" drug screening test. This “quick” screen test shall consist either of the “ICUP” urine screen or similar test or an oral screen test. The applicant or employee shall have the absolute right to select either of the two “quick” screen tests, or to reject both and request a full drug test.

An applicant or employee who selects one of the "quick" screen tests, and who passes the test, shall be put to work immediately. An applicant or employee who fails the "quick" screen test, or who rejects the "quick" screen tests, shall be tested pursuant to the procedures set forth in the Policy. The sample used for the "quick" screen test shall be discarded immediately upon conclusion of the test. An applicant or employee shall not be deprived of any rights granted to them by the Policy as a result of any occurrence related to the “quick” screen test.

SECTION 00 9110

PRE-BID CLARIFICATION

1.01 GENERAL

A. This section addresses requests for clarifications of the Bidding Documents.

1.02 SPECIFIC

A. Each request for clarification shall be submitted in writing to only the person and/or firm designated in Section 00 3148 - Project Directory, Item E.

B. Clarifications, interpretations, corrections, and changes to the Bidding Documents will be made by Addendum as provided in Section 00 9113. Clarifications, interpretations, corrections, and changes to the Bidding Documents made in any other manner shall not be binding and bidder shall not rely upon them.

C. Each transmitted request shall contain the name of the person and/or firm filing the request, address, telephone and fax number, Specifications and/or Drawing number. Bidder is responsible for the legibility of handwritten requests. Pre-bid clarification requests shall be filed a minimum of seven (7) days prior to bid opening. Requests received less than seven (7) days before bid opening shall not be considered or responded to. A written response to timely pre-bid clarifications requests will be made by Addendum issued by Facilities Construction Contracts not less than seventy-two (72) hours prior to bid opening.

DATE: _____

PROJECT NAME: VERDUGO HILLS HIGH SCHOOL - NEW SCOREBOARDS FOR SOFTBALL & BASEBALL

PROJECT NUMBER: **10375279 / 233000** CONTRACT NUMBER**: 2710060**

TO: **Shelia Taylor**

EMAIL ADDRESS: **cp-shelia.taylor@lausd.net**

FROM: _____

ADDRESS: _____

TELEPHONE & FAX NUMBER: _____

DOCUMENT/DIVISION NUMBER: _____DRAWING NUMBER: _____

REQUESTED CLARIFICATION:_____

_____

_____

_____

_____

_____

_____

_____

_____

Attach additional numbered sheets as necessary, however, only one (1) request shall be contained on each submitted form.

END OF SECTION

SECTION 01 1100

SUMMARY OF WORK

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. The furnishing of all labor, materials, equipment, services, and incidentals necessary for Work of the **NEW SCOREBOARDS FOR SOFTBALL & BASEBALL** at **VERDUGO HILLS HIGH SCHOOL** located at **10625 Plainview Ave, Tujunga, California 91042,** as set forth in the Construction Documents which include, but are not limited to, the Drawings, Addenda and Specifications.

B. Project Scope of Work: Refer to Division 00 1116 “Invitation to Bid”.

1.02 RELATED REQUIREMENTS:

1. Division 00 1116: Invitation to Bid
2. Section 01 1216: Phasing of the Work.
3. Section 01 3113: Project Coordination.
4. Section 01 3229: Project Forms.
5. Section 01 4523: Testing and Inspection
6. Section 01 5000: Construction Facilities and Temporary Controls.
7. Section 01 7123: Field Engineering.

1.03 REGULATORY REQUIREMENTS

A. Refer to Regulatory Requirements as defined by Specification Section 01 4523 “Testing and Inspection” and requirements of each Specification Section as noted.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 USE OF PREMISES

A. CONTRACTOR shall coordinate Work of all trades, Subcontractors, utility service providers, with OWNER and/or Separate Work Contract. CONTRACTOR shall sequence, coordinate, and perform the Work to impose minimum hardship on the operation and use of the existing facilities and/or Project site. CONTRACTOR shall install all necessary protection for existing improvements, Project site, property, and new Work against dust, dirt, weather, damage, vandalism, and maintain and relocate all protection to accommodate progression of the Work.

B. CONTRACTOR shall confine entrance and exiting to the Project site and/or facilities to routes designated by the OAR.

C. Within existing facilities, OWNER will remove portable equipment, furniture, and supplies from Work areas prior to the start of Work. CONTRACTOR shall cover and protect remaining items in areas of the Work.

D. CONTRACTOR is advised school may be in session during performance of the Work. CONTRACTOR shall utilize all available means to prevent generation of unnecessary noise and maintain noise levels to a minimum. When required by the OAR, CONTRACTOR shall immediately discontinue noise-generating activities and/or provide alternative methods to minimize noise generation. CONTRACTOR shall install and maintain air compressors, tractors, cranes, hoists, vehicles, and other internal combustion engine equipment with mufflers, including unloading cycle of compressors. CONTRACTOR shall discontinue operation of equipment producing objectionable noise as required by the OAR.

E. CONTRACTOR shall furnish, install, and maintain adequate supports, shoring, and bracing to preserve structural integrity and prevent collapse of existing improvements and/or Work modified and/or altered as part of the Work.

F. CONTRACTOR shall secure building entrances, exits, and Work areas with locking devices as required by the OAR.

G. CONTRACTOR assumes custody and control of OWNER property, both fixed and portable, remaining in existing facilities vacated during the Work.

H CONTRACTOR shall cover and protect surfaces of rooms and spaces in existing facilities turned over for the Work, including OWNER property remaining within as required to prevent soiling or damage from dust, dirt, water, and/or fumes. CONTRACTOR shall protect areas adjacent to the Work in a similar manner. Prior to OWNER occupancy, CONTRACTOR shall clean all surfaces including OWNER property.

I. CONTRACTOR shall not use or allow anyone other than OWNER employees to use facility telephones and/or other equipment, except in an emergency. CONTRACTOR shall reimburse OWNER for telephone toll charges originating from the facility except those arising from emergencies or use by OWNER employees.

J. CONTRACTOR shall protect all surfaces, coverings, materials, and finished Work from damage. Mobile equipment shall be provided with pneumatic tires.

K. CONTRACTOR is advised OWNER will award Separate Work Contracts at this Project site.

L. CONTRACTOR shall not permit the use of portable and/or fixed radios or other types of sound producing devices including walkmans and similar devices.

END OF SECTION

SECTION 01 1216

PHASING OF THE WORK

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Requirements for phasing of Work include logistics, phasing, and completion of designated phases prior to commencement of subsequent phases.

1.02 RELATED REQUIREMENTS

A. Section 01 1100: Summary of the Work.

B. Section 01 1219: Phasing of Work – Appendix A - Milestones

C. Section 01 3113: Project Coordination.

D. Section 01 3216: Construction Schedule for Small Projects.

E. Section 01 3300: Submittal Procedures.

F. Section 01 5000: Construction Facilities and Temporary Controls.

G. Section 01 7700: Contract Closeout.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 SUBMITTALS

A. CONTRACTOR shall submit a Project site logistics plans in accordance with and as required by this Section.

3.02 LOGISTICS

A. Prior to commencement of Work, CONTRACTOR shall prepare and submit to OAR, a detailed Project site logistic plan, in same size and scale of Drawings, setting forth CONTRACTOR plan of Work relative to following, but not limited to, items:

1 Hauling route shall be in accordance with local ordinances a truck access route to and from Project site.

2. The identification of any overhead wire restrictions for power, street lighting, signal or cable.

3. Local sidewalk access and street closure requirements.

4. Protection of sidewalk pedestrians and vehicular traffic.

5. Project site fencing and access gate locations.

6. Construction parking.

7. Material staging or delivery areas.

8. Material storage areas.

9. Temporary trailer locations.

10. Temporary service location and proposed routing of all temporary utilities.

11. Location of temporary or accessible fire protection.

12. Trash removal and location of dumpsters.

13. Concrete pumping locations.

14. Crane locations.

15. Location of portable sanitary facilities.

16. Mixer truck wash out locations.

17. Traffic control signage.

18. Perimeter and site lighting.

19. Storm Water Pollution Prevention Plan – SWPPP.

20. Stockpile or lay down areas.

21. Security lighting

B. Revised Project site logistic plan may be required by OAR for separately identified phases of Work as set forth in this Section.

C. CONTRACTOR is responsible for securing and/or obtaining all approvals and permits from authorities having jurisdiction relative to any activities set forth in Article 3.02.A.

3.03 PHASING OF THE WORK

A. Project will be constructed in separate Milestone increments, as identified or as described in this Section or Contract Documents. Phasing will also delineate Work to be completed in each designated phase. Unless otherwise approved or directed by OWNER, each phase shall be completed according to approved Baseline Schedule prior to commencement of next subsequent phase. CONTRACTOR shall incorporate and coordinate Work of Separate Work Contracts relative to this Project into the Phasing and Construction Schedule.

B. CONTRACTOR shall install all necessary Work for, but not limited to, power, lighting, signal, HVAC, drainage, and plumbing systems in phased Work before completion of designated phase. All valves, pull boxes, stub outs, temporary capping, and other Work necessary for phased completion and operation of all necessary systems shall be provided whether or not such Work is specifically identified in Contract Documents.

3.04 PHASING OF THE WORK – GENERAL

A. CONTRACTOR shall prepare Construction Schedule in order to complete Work and related activities in accordance with phasing plan as established in Appendix "A". CONTRACTOR shall include all costs to complete all Work within Milestones or Contract Time.

B. OWNER will be seriously damaged by not having all Work completed within Milestones or Contract Time. It is mandatory that the Work be completed within Milestones or Contract Time.

3.05 PHASING OF THE WORK – SPECIFIC

A. CONTRACTOR shall prepare Construction Schedule, and shall complete following, but not limited to Milestones, as shown in Section 01 1219 – Appendix A and within designated phases in accordance with following:

1. Phase 1 Mobilization – **(30 days)** calendar days: Milestones 1 & 3.

2. Phase 2 Construction – **(164 days)** calendar days: Milestone 2, 4-5.

3. Phase 3 Administrative Closeout – **(30 days)** calendar days: Milestone 6.

B. The Contract Time shall be a total of **224** calendar days from date of commencement of Contract Time.

END OF SECTION

01 1219– PHASING OF THE WORK

APPENDIX A – MILESTONES

CONTRACTOR shall commence performance of the Contract upon the date specified in the Notice to Proceed and shall furnish sufficient forces, facilities and materials, work such hours, including extra shifts and overtime operations, so as to fully perform the Work in accordance with the following Milestones.

Milestone	Description	Schedule	Liquidated Damages Amount Per Calendar Day
No. 1	Notice to Proceed: Is established in accordance with Articles 1.34 and 2.2 of the General Conditions.	As determined in the NTP.	
No. 2	Critical Shop Drawings & Submittals Complete: Is defined as CONTRACTOR prepared Shop Drawings and Submittals that are either critical or near critical to the overall Substantial Completion of the Project. Milestones may include, but not be limited to, DSA Deferred Approvals steel Shop Drawings, excavation support system drawings, seismic calculations, shoring system drawings, or any long lead fabrication/procurement item requiring Shop Drawings.	30 calendar days after the effective date of the NTP.	
No. 3	Completion of Mobilization activities: Is defined as CONTRACTOR mobilization completed, logistics plan submittal and approval (access, gates, parking, trailer locations, signage), site fencing complete, temporary offices complete (trailers- fully functional with furniture, office equipment, network connection and office supplies., storage bins, dumpsters), temporary Utilities complete (water, electric, phone, sanitation, fire protection), Project signage complete, obtain all required permits, implementation of Storm Water Pollution Prevention measures, submission of CONTRACTOR Safety Plan as per OCIP, submission of CONTRACTOR Hazard	30 calendar days after the effective date of the NTP.	

Milestone	Description	Schedule	Liquidated Damages Amount Per Calendar Day
	Communication Plan as per OCIP.		
No. 4	Baseline Schedule Complete: Is defined as an OAR approved baseline schedule that meets all the requirements outlined in Division 01 Sections 01 3216 and 01 1216.	30 calendar days after the effective date of the NTP.	
No. 5	Substantial Completion: Is established in accordance with Article 14.12-14.13 of the General Conditions.	194 calendar days after the effective date of the NTP.	$500.00
No. 6	Contract Completion: Is established in accordance with Article 14.18-14.19 of the General Conditions.	224 calendar days after the effective date of the NTP.	

END OF SECTION

SECTION 01 2513

SUBSTITUTION AND "OR EQUAL" PROCEDURES

PART 1 - GENERAL

1.01 This Section includes administrative and procedural requirements for handling requests for substitutions and "or equal" submitted pursuant to Article 6.14 of the General Conditions.

A. When an item of material or equipment is specified by the use of a proprietary name, make, trade name, or catalog number, the intent of the Guide Specification is to establish the type, function and quality required. Unless the Guide Specification or description contains or is followed by words reading that no like, equivalent item or no substitution is permitted, other items or equipment of other suppliers may be accepted.

B. Specified items of materials or equipment which are no longer manufactured and/or cannot be acquired from existing inventories will be considered as a basis for the proposed substitute items. Substitution evaluation of a proposed material and/or equipment shall be compared against Project Criteria requirements.

1.02 RELATED REQUIREMENTS

A. Section 01 3229: Project Forms.

B. Section 01 3300: Submittal Procedures.

C. Section 01 6000: Product Requirements.

D. Section 01 7700: Contract Closeout.

1.03 APPLICATION

A. OAR will review CONTRACTOR proposed changes in products or materials required by the Contract Documents in accordance with 6.14 of the General Conditions.

1. Substitutions: OAR will consider requests for substitution if a product is no longer manufactured or the OAR and ARCHITECT, after a diligent search have verified that product or material is not available to CONTRACTOR. The following are not considered to be valid requests for substitutions:

a. Revisions to the Contract Documents requested by OAR or ARCHITECT.

b. Specified options of products included in the Contract Documents.

c. Substitutions requested on a “or equal” basis.

2. “Or Equal”: OAR will consider requests for “or equal” if submitted within the time indicated in Article 6.14 of the General Conditions.

1.04 SUBMITTALS

A. Transmit submittals as described in related Sections for each request for substitution or “or equal”.

1. Compete the Substitution Request Form with each request for Substitution per Section 01 3229 “Project Forms”.

2. Identify the product to be replaced in each request. Include related Specification Section and Drawing number.

3. Provide complete documentation denoting compliance with the requirements for substitutions, and the following information, as appropriate.

a. A detailed comparison of significant qualities of the proposed substitution with those specified in the Contract Documents. Significant qualities may include elements, such as performance, weight, size, durability, visual effect, warranties and specific requirements indicated.

b. Product Data, including Drawings, descriptions of products, fabrication, and installation procedures.

c. Samples, where applicable or requested.

d. CONTRACTOR certification the proposed substitution or “or equal” conforms to requirements of the Contract Documents in every respect and is appropriate for the applications indicated.

e. CONTRACTOR waiver of rights to an increase in the Contract Amount, Milestones and/or Contract Time.

4. If required, OAR and/or ARCHITECT will request additional information or documentation for evaluation.

5. ARCHITECT will provide a technical review of requests for substitutions and “or equals” and provide a recommendation to OAR.

6. If ARCHITECT provides a technical review of the proposed substitution, the OAR will forward the evaluation to the OWNER’s Maintenance and

Operations Technical Unit for review. OAR will notify CONTRACTOR of acceptance or rejection of the substitution.

7. Where a proposed substitution or “or equal” involves and/or affects more than one Subcontractor, CONTRACTOR shall ensure each Subcontractor cooperates with the other Subcontractor involved to coordinate the Work, provide uniformity and consistency, and assure compatibility of all products.

8. CONTRACTOR submittal and ARCHITECT review of Shop Drawings, Product Data, material lists or Samples do not constitute an acceptable or valid request for substitutions or “or equals”.

PART 2 - PRODUCTS (Not used)

PART 3 – EXECUTION (Not used)

END OF SECTION

SECTION 01 2613

REQUEST FOR CLARIFICATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Procedure for requesting clarification of the intent of the Contract Documents.

1.02 RELATED REQUIREMENTS

A. Section 01 1100: Summary of Work.

B. Section 01 3113: Project Coordination.

C. Section 01 3216: Construction Schedule for Small Projects.

D. Section 01 3229: Project Forms.

E. Section 01 7700: Contract Closeout.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 PROCEDURE

A. CONTRACTOR shall prepare a Request for Clarification in the COLIN Change Order Workbook.

B. ARCHITECT response via the COLIN Change Order Workbook is a clarification of the intent of the Contract Documents and does not authorize changes in the Contract Amount, Milestones and/or Contract Time.

C. A Request for Clarification may be returned with a stamp or notation "Not Reviewed," if:

1. The requested clarification is ambiguous or unclear.

2. The requested clarification is equally available to the requesting party by researching and/or examining the Contract Documents.

3. CONTRACTOR has not reviewed the Request for Clarification prior to submittal.

4. The Request for Clarification is a request for approval of submittals.

5. The Request for Clarification is a request for approval of Substitutions.

6. The Request for Clarification is a request for approval of the Contractor's means and methods.

7. The Request for Clarification is incomplete.

D. Allow a minimum of nine days for review and response time, after receipt by ARCHITECT and OAR.

E. Changes or alterations to the approved drawings or specifications shall be made by means of addenda or change orders as per section 4-338 of the California Building Standards Commission's, California Administrative Code.

END OF SECTION

SECTION 01 2973

SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Procedure for submission of a certified Schedule of Values for review and approval by the OAR.

1.02 RELATED REQUIREMENTS

C. Section 01 2976: Progress Payment Procedures.

D. Section 01 3113: Project Coordination.

E. Section 01 3216: Construction Schedule for Small Projects.

E. Section 01 3229: Project Forms.

F. Section 01 3300: Submittal Procedures.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 PREPARATION

A. Upon receipt of the Notice of Intent to Award, CONTRACTOR shall commence preparation of a Schedule of Values in accordance with the form included in Section 01 3229.

B. CONTRACTOR shall coordinate the preparation of a Schedule of Values with preparation of the Construction Schedule as set forth in Section 01 3216. The corresponding values from the specification division totals on cost loaded schedule shall match with the approved Schedule of Values.

C. Include the following Project identification on a certified Schedule of Values:

1. Project name and location.

2. Project Number.

3. Contract #.

4. CONTRACTOR name.

5. Date of Submittal.

D. The Schedule of Values shall be in tabular form with separate columns and shall include the following items:

1. Related Specification Section and Division.

2. Description of Work.

3. Name of Subcontractor, manufacturer or supplier.

4. Dollar value, quantity and unit of measure of each line item.

5. Percentage of Contract amount to nearest one-hundredth percent, adjusted to total 100 percent.

E. Round amounts to the nearest whole dollar; the total shall equal the Contract Amount.

F. Provide a breakdown of the Contract Amount in enough detail for the construction phases (and design phases, as applicable for Design Build projects) acceptable to OAR to facilitate continued evaluation of Application for Payment and progress reports. Coordinate with the Project Manual table of content and Schedule of Values form under Section 01 3229. Provide line items for subcontract amounts, where appropriate.

G. Provide separate line items for items in the Schedule of Values for total installed value of that part of the Work.

H. Provide separate line item for labor and material when required by the OAR.

I. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item except the amounts shown as separate line items as indicated under Schedule of Values form under Section 01 3229.

J. Temporary facilities and other cost items that are not direct cost of actual work-in-place shall be shown as separate line items as indicated under Schedule of Values form under Section 01 3229.

K. An approved certified Schedule of Values shall serve as the basis for the monthly certified Application for Payment.

L. If at any time, OWNER determines, in its reasonable discretion, that the schedule of Values does not approximate the actual cost being incurred by CONTRACTOR to perform the Work, CONTRACTOR shall prepare, for OAR approval, a revised Schedule of Values, which then shall be used as the basis for future progress

payments. Without changing the Contract Amount, OWNER reserves the right to require CONTRACTOR:

1. To increase or decrease amounts within the line items in the Schedule of Values; and,

2. To conform the price breakdown to OWNER accounting practice.

3.02 SUBMITTAL

A. CONTRACTOR shall submit five certified copies of a Schedule of Values for review and approval by the OAR at least 14 days before the first Application for Payment.

B. OAR will review and if necessary, return the submitted Schedule of Values with summary comments noting items not in compliance with the requirements of the Contract Documents. CONTRACTOR shall revise the submitted Schedule of Values and return five copies within three days of receipt of summary comments.

C. Signature by OAR shall constitute acceptance of the submitted Schedule of Values.

D. An approved copy of the Schedule of Values by OAR will be transmitted to CONTRACTOR, and Inspector.

END OF SECTION

SECTION 01 2976

PROGRESS PAYMENT PROCEDURES (E-INVOICE)

PART 1 - GENERAL

1.01 SECTION INCLUDES:

A. This Section specifies administrative and procedural requirements for a certified Application for Payment using the E-Invoice process.

1. Coordinate the certified Schedule of Values (SOV) and certified Application for Payment with, but not limited to, the Construction Schedule, submittal log, and list of Subcontractors.

1.02 RELATED REQUIREMENTS:

B. Section 01 2973: Schedule of Values.

C. Section 01 3216: Construction Schedule for Small Projects.

D. Section 01 3229: Project Forms.

E. Section 01 7700: Contract Closeout.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 APPLICATION FOR PAYMENT

A. Each certified Application for Payment shall be consistent with previous E-Invoice applications and payments as reviewed by OAR, paid for by OWNER, and:

1. The initial Application for Payment and Final Application for Payment at time of Substantial Completion involve additional requirements.

B. Payment Application Times: The period of Work covered by each Application for Payment and the payment date for each progress payment shall be as specified in the General Conditions. The period covered by each Application for Payment is the previous month as specified in the General Conditions.

C. Payment Application Forms: Use E-Invoice application template for the Application for Payment. The E-Invoice payment application includes data input directly from the Contractor for review and approval by the OAR.

D. Application Preparation: Complete every entry on the form. Include execution by a person authorized to sign legal documents electronically on behalf of CONTRACTOR. OAR will return incomplete applications without action.

E. Transmittal: Electronically submit via the E-Invoice application each certified Application for Payment to OAR. All submittals shall be complete, including releases and similar attachments.

F. Initial Application for Payment. In accordance with 2.5.2 of the General Conditions; at least 14 days prior to submittal of the initial Application for Payment, the Contractor shall submit to the OAR, for review and approval, a SOV. Administrative actions and submittals, that must precede or coincide with submittal for the first certified Application for Payment shall include, but are not limited to, the following:

1. Approved Schedule of Values.

2. Notice of Award (NOA) / Notice to Proceed (NTP)

3. Copy of Facilities Contract Board Report

4. Advertisement for Bid

5. Duly Signed Agreement

6. Designation of Subcontractors

7. Accord Certificate of OCIP Insurance /Certificate of Insurance for Hazardous Materials, as applicable

8. Escrow Agreement (if retention is by escrow account)

G. Progress Applications for Payment: On or before the fifth (5th) day of each calendar month following the month for which payment is requested, but not more than once per month, the Contractor inputs an itemized “pencil draft” Application for Payment for Work completed during the preceding month into the E-Invoice application for the OAR’s review and approval. The SOV line item amounts shall represent the amounts paid to their subcontractors. Such application shall be certified by the CONTRACTOR under the penalty of perjury and shall be supported by the following or such portion thereof as the OAR requires:

1. the amount paid to the date of the application to CONTRACTOR, to all its Subcontractors, and all others furnishing labor, materials, or equipment;

2. certified payroll records submitted in electronic format as specified by OWNER and hard copy directly to Labor Compliance Program, as per Article 6.48, for the prior Application for Payment period in addition to OWNER OCIP forms;

3. a certification the Project record documents are current;

4. the approved Change Orders to the Contract Amount, Milestones and / or Contract Time;

5. in accordance with Articles 14.2.5 and 14.7, a summary of the retention withheld;

6. material invoices, evidence of equipment purchases, rental, and other supporting documentation and details of cost as OAR may require from time to time;

7. the percentage of completion of the Work by line item referenced to the certified Schedule of Values, and construction schedule updates;

8. a statement showing all payments made by CONTRACTOR for labor and materials on account of the Work covered in the preceding certified Application for Payment;

9. prior to CONTRACTOR receipt of any payment for monies due, as a result of a percentage of the Work completed, it shall furnish the OAR with a summary which must show payments to be made to Subcontractors and all others furnishing labor, material, and equipment covered by the payment application.

10. Owner Withholds and Assessments.

    a. Stop Payment Notices

    b. Prevailing Wage Violations and Certified Payroll (submitted directly to Labor Compliance in electronic format).

    c. Liquidated Damages.

    d. Assessments by OAR.

11. Supplemental Documents

    a. Updated and current Project Record Drawings (as-builts).

    b. Monthly Construction Schedule (updated, submitted and approved).

c. List of Subcontractors (Payments Summary).

H. Final Application for Payment at Substantial Completion: Following OAR issuance of certificate of Substantial Completion, Contractor shall submit an Application for Payment:

1. Administrative actions, submittals and/or Work that shall precede or coincide with this application include:

a. Occupancy permits and similar approvals by authorities having legal jurisdiction over Work.

b. Removal of temporary facilities and services.

c. Testing, adjusting and balance records.

d. Removal of surplus materials, rubbish, and similar elements.

e. Meter readings.

f. Start-up performance reports.

g. OWNER training and orientations.

h. Operating and maintenance instruction manuals.

i. Preliminary Warranties, guarantees and maintenance agreements.

j. Delivery of extra materials, products and or stock.

k. Change over information related to OWNER occupancy, use, operation, and maintenance.

l. Final cleaning.

m. Ensure that Work is completed.

n. Advise on shifting insurance coverage.

o. List of defective Work, recognized as exceptions to certificate of Substantial Completion.

p. Change of door locks, including keys, to OWNER system.

q. Certified Payroll (submitted directly to Labor Compliance in electronic format as specified by the OWNER including hard copy).

r. Certification that all benefit contributions due and owing to appropriate union trusts has been paid by CONTRACTOR and Subcontractors, as specified by the Project Stabilization Agreement (PSA) and Article 6.49 of the General Conditions.

s. Waivers and releases for CONTRACTOR.

I. Release of Retention. Within 60 (sixty) days after Substantial Completion certified by the OAR, the retention shall be paid except for one-hundred fifty percent (150%) of the value of the Punch List items and/or any amount which the OWNER otherwise has a right or obligation to withhold, in accordance with the Public Contract Code Section 7107. 1.

a. OAR shall make a determination of all outstanding items required by the Contract as a condition precedent to payment of retention and may withhold monies for all outstanding items considered in dispute as listed in Article 14.17 and including the following items:

b. Outstanding corrections to the Work which are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and/or ordinances including, but not limited to the filing of a DSA final verified report, or to fulfill any orders or directives of the OAR under the Contract;

c. CONTRACTOR shall have delivered to the OAR legible and reproducible final Project record documents, including “As-Built” drawings, with CONTRACTOR certification of the accuracy of the Project record documents, all guarantees and warranties, bonds, operation and maintenance instructions for equipment, products, and apparatus.

d. The OAR shall send one copy of the final Release of Retention Authorization package with attached Release of Retention Advisory Letter to the Contractor.

END OF SECTION

SECTION 01 3113

PROJECT COORDINATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. This Section specifies administrative and procedural requirements necessary for coordinating Work operations for Design Bid Build projects including, but not limited to, the following:

1. General coordination procedures.

2. Coordination drawings.

3. Building Information Modeling (BIM). *See Attachment A at the end of this Section.*

1.02. RELATED REQUIREMENTS

A. Section 01 1216: Phasing of the Work.

B. Section 01 3216: Construction Schedule for Small Projects.

C. Section 01 3300: Submittal Procedures.

D. Section 01 4523: Test and Inspection.

F. Section 01 7700: Contract Closeout.

PART 2 - PRODUCTS

A. See Attached A at the end of this Section for BIM Software requirements.

PART 3 - EXECUTION

3.01 COORDINATION

A. CONTRACTOR shall coordinate operations included in various sections of Contract Documents to assure efficient and orderly installation of each part of Work. Coordinate Work operations included under related sections of Contract Documents that depend on each other for proper installation, connection, and operation of Work, including but not limited to:

1. Schedule construction operations in sequence required where installation of one part of Work depends on installation of other components, before or after its own installation.

2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.

3. Provide provisions to accommodate items scheduled for later installation.

4. Prepare and administer provisions for coordination drawings and BIM files.

B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required in notices, reports, attendance at meetings, and:

1. Prepare similar memoranda for OAR and Separate Work Contract where coordination of their Work is required.

2. Administer the complete BIM process from modifying the basic files received from the A/E team.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of Work. Such administrative activities include, but are not limited to, following:

1. Preparation of schedules.

2. Installation, relocation, and removal of temporary facilities.

3. Delivery and processing of submittals.

4. Progress meetings.

5. Project closeout activities.

D. Conservation: Coordinate Work operations to assure operations are carried out with consideration given to conservation of energy, water, materials, and:

1. Salvage materials and equipment involved in performance of, but not actually incorporated into Work.

3.02 SUBMITTALS

A. Coordination Drawings and/or BIM Files: CONTRACTOR shall prepare coordination drawings to coordinate the installation of products and materials

fabricated, furnished and installed by separate entities, under different parts of the Contract. CONTRACTOR shall notify OAR and ARCHITECT of all major conflicts in writing in a timely manner so that the design team can respond without construction delays. Coordination drawings shall address the following at a minimum:

1. Limitations in available space for installation or service. CONTRACTOR shall overlay plans of each trade and verify space requirements and conflicts between trades. Minor changes and adjustments that do not affect design intent shall be made by CONTRACTOR and shall be highlighted for ARCHITECT'S review.

2. Incompatibility between items provided under different trades (such as difference in voltage between equipment specified under Divisions 22 and 23 and electrical power provided under Division 26.)

3. Inconsistencies between drawings, specifications and codes (between trades and within each trade).

4. Additional items required for existing facilities construction projects shall be designed and prepared from available as-built drawings that are verified through non-invasive and non-destructive, visual observation only. CONTRACTOR shall field verify actual existing conditions during and upon completion of demolition work and incorporate findings into preparation of co-ordination drawings. Minor changes and adjustments that do not affect design intent shall be made by Sub-Contractor and shall be highlighted for OAR and ARCHITECT'S reviews.

B. Prepare coordination drawings in BIM with each trade on a separate layer, in specified color and scale. CONTRACTOR and each Subcontractor shall provide and forward reproducible copies and CAD drawing files in the order described here:

1. Structural drawings shall indicate location and sizes of columns, beams and other structural members, as well as wall, roof and slab penetrations, and will be provided to mechanical, electrical, low voltage and plumbing Sub-contractors for co-ordination. Structural items shall be indicated using black lines.

2. Plumbing Subcontractor will indicate all plumbing lines, and equipment complete with installation and dimensioned service clearances, pipe sizes, fitting types and sizes, top or bottom of pipe elevations, distances of pipes and equipment from building reference points and hanger/support locations Co-ordinate with HVAC Subcontractor. Minor changes and adjustments that do not affect design intent shall be made by Sub-contractor and shall be highlighted for OAR and ARCHITECT'S reviews

Upon completion drawings shall be forwarded to Fire Sprinkler Subcontractor for further co-ordination. All Plumbing items shall be indicated using blue lines.

3. Electrical and Low Voltage Subcontractors will indicate service and feeder conduit runs and other electrical equipment complete, including low voltage with installation and dimensioned service clearances, sizes, top or bottom of conduit and rack elevations, distances of conduits and equipment from building reference points and hanger and support locations. Co-ordinate with Fire Sprinkler, Plumbing and HVAC Subcontractors. Minor changes and adjustments that do not affect design intent shall be made by sub-contractors and shall be highlighted for OAR and ARCHITECT'S reviews. Upon completion drawings shall be forwarded to CONTRACTOR for further co-ordination. Electrical work shall be indicated in dark green lines. Low voltage work shall be indicated in light green lines.

4. CONTRACTOR will be responsible for the overall coordination review. As directed by OAR and/or ARCHITECT, the CONTRACTOR shall host BIM coordination sessions and provide full access to both OAR and ARCHITECT. As each coordination drawing is completed, CONTRACTOR will meet with OAR to review and resolve all conflicts on coordination drawings.

APPENDIX A
Building Information Modeling

I. Building Information Modeling – General Notes

1. The General Contractor and Subcontractors agrees to participate in BIM Coordination and clash-detection- and-resolution through the creation and editing of 3-dimensional computer models (BIM.) Architect and Engineer's involvement will be requested for major issues via RFC process.

2. The General Contractor will be provided BIM Files from the A/E team for Editing and adding required systems or required elements not included. The files are As Is and are not guaranteed to be fully coordinated. LAUSD / AE makes no guarantee and assumes no responsibility for the accuracy of these models – all trades are responsible for the requirements of the construction documents.

3. The General Contractor and Subcontractors agree to attend and participate in regular clash detection meetings. All relevant Subcontractors must participate in every meeting as determined by the General Contractor. General Contractor acknowledges that all coordination meetings will require attendance of personnel that are familiar with the use and functionality of BIM as well as an understanding of the scope of the Subcontractor's work, and that these personnel will attend all coordination meetings.

4. The General Contractor and Subcontractors will modify and provide models in digital form – Navisworks Manage software is required for this purpose. Uploaded models must be in. NWC, DWG, or IFC format. Any other format unless agreed to prior to coordination will not be acceptable for coordination uploads. Periodically, for archiving and FM purposes, as well as closeout requirements, the source model, or native format, will be required to be provided. For native modeling purposes, the choice of software is up to the General Contractor Subcontractor is required to attend all scheduled BIM coordination meetings. All regular meetings will be held online, through GoTo meeting. Periodically, at significant milestones and at the discretion of General Contractor or the Managing BIM Coordinator, BIM coordination meetings will be held at the project office, onsite. All Subcontractors will be required to attend such meetings or Subcontractor, but non-BIM 3D modelers, such as standard AutoCAD, will NOT meet the submission requirement. AutoCAD MEP is acceptable, as are many others. Questions should go the Managing BIM Coordinator who can discuss with the Design Team / Owner as required.

5. The General Contractor and Subcontractors shall provide a model that is coordinated in space to the coordinate system present in the consolidated

background model. No changes to position, rotation or scale of the Subcontractor's model must be necessary to match the Subcontractor's model to the position, rotation or scale of the consolidated model. Any models that are not coordinated with the consolidated model will be rejected for coordination purposes.

6. The Level of Detail shall meet or exceed the level required for effective clash detection. LOD of 400 is required. The model shall be provided with sufficient detail to ensure that all considerations for design intent, code, function and installation are presented for coordination.

7. General Contractor and Subcontractors shall document all architectural, structural building components, required mechanical, electrical, plumbing, low voltage, fire proofing and fire sprinkler systems equipment operating and maintenance clearances, foundations, site walls, vaults, site utilities and appurtenances from the proposed design, as- builts, surveys, pot holing or any demolition that exposes conditions to remain into the project working BIM model and the final record BIM model.

8. The current BIM to be provided by A/E does not contain steel stud framing. This complete framing system BIM shall be provided by General Contractor / Subcontractor using the specifications, wall types and details included in the Contract Documents for all applicable packages. This will be the basis of shop drawings.

9. General Contractor will administer the clash detection meetings via a District Approved BIM Coordinator and invite personnel as requested by the OAR / AOR. The BIM Coordinator shall have a minimum five (5) years demonstrated experience in BIM Coordination and is expected to remain as BIM Coordinator for the duration of the process. General Contractor and Subcontractors will edit and otherwise update their BIM models as required to clear all clashes related to their scope.

10. The participation in BIM modeling and clash detection does not relieve the General Contractor of its responsibilities under the District contract nor does it supersede the General Contractor responsibilities to meet the requirements of the contract documents, the providing of shop drawings or any other submissions required.

11. The BIM Model and all deliverables are the responsibility of General Contractor, both during and after construction until the final As-Built BIM is submitted to LAUSD for review and acceptance.

12. The General Contractor agrees that the BIM model may require updating throughout the life of the project, to address changes to the work by themselves or others, to ensure that the BIM model at the completion of the

project accurately depicts the finished conditions of the project. The General Contractor agrees to promptly make any changes necessary to meet this requirement.

13. General Contractor will designate a person to act as Managing BIM coordinator for the duration of the project. This person will act as a representative of the General Contractor throughout the project's lifespan and will be responsible for managing the BIM coordination process.

14. General Contractors administration of the BIM coordination process will include the following functions:

    a. Creating and publishing the schedule of coordination, including milestones, submission deadlines, and target completion dates.

    b. Establishing the specific modeling conditions unique to the project.

    c. Providing and maintaining the composite model.

    d. Distributing clash reports prior to each coordination meeting.

    e. Assigning Subcontractor responsibility for clash resolution.

    f. Contracting with subcontractors so they are required to provide and maintain a three-dimensional model of their scope of work. The 3D model will represent an "as-fabricated" level of information that will be sufficient for the purpose of confirming system design to match the intent of the contract documents. Providing and maintaining the 3D model does not relieve the Subcontractor of any additional obligations for providing shop drawings and submissions required by the contract documents and the Subcontractor's scope of work.

II. General Contractor and Subcontractor's Roles and Responsibilities

1. Subcontractors will designate a person to act as BIM Coordinator for the duration of the project. This person will act as a representative of the Subcontractor throughout the project's lifespan and will be responsible for managing the BIM coordination process. See above, for additional personnel requirements.

2. All elements provided in the model are to match installed or to-be-installed components to facilitate the coordination process.

3. All models must be provided in the colors assigned to each Subcontractor. Models not provided in the assigned colors may not be updated in the consolidated model prepared for that week's coordination meeting.

4. All access zones and "no-fly" zones are to be modeled with a transparent surface to differentiate the zones from hard components. Access zones and "no-fly" zones will be coordinated to in the BIM coordination process.

5. Subcontractors are required to maintain their 3D model throughout the BIM coordination and construction processes. These models are to be submitted weekly, or at times specified General Contractor. These models will be the basis of the deliverable as-built model provided to the Owner at the project closeout.

6. Required model elements vary by trade. Details, per trade, follow below:

   A. The **Structural Steel** model elements shall include, but are not limited to, columns, beams, floor slabs, lateral bracing, structural glass, stairs, miscellaneous steel, plates, braces, kickers, shear wall and slab penetrations, and open web joists showing correct web configurations. Means and methods such as hangers, supports, supplemental steel, and falsework must be included in the model. In the steel embedment shop drawing process, Contractor is responsible for coordinating and correcting interference between adjacent embedment's / studs / welded bars and all adjacent steel reinforcing bar (rebar). All steel to be fireproofed should be shown. See Structural Concrete below.

   B. The **Structural Concrete** model elements shall include, but are not limited to, walls, columns, beams, floor and roof slabs, depressed slab areas, lateral bracing, stairs, miscellaneous steel, metal pan steps, plates, braces, kickers, shear wall and slab penetrations, and structural concrete including reinforcement. Typical for DSA poured in place concrete construction, there will be congestion of rebar, embedments, penetrations, and formwork. Contractor and subs shall examine all areas of congestion and assist in the coordination and resolution of embed shop drawings and penetrations to meet the intent of the design and physically fit all components within the constraints. Means and methods such as hangers, supports, supplemental steel, and falsework must be included in the model.

   C. The **Curtain Wall** model elements shall include, but are not limited to, curtain system grids, framing members, mullions, glass, sunshades, louvers, doors, operable vents, anchors, structural connections, and elements where coordination with other trades' specific equipment is required (such as HVAC vents and window-wall fire suppression systems).

   D. The **Metal Stud Framing** model elements shall include, but are not limited to, top tracks, king studs, shaft wall studs, slip / drift, headers, soffit framing, connection clips, openings, joists, rafters, ceiling studs,

kickers, bridging, bracing, wall board and sheathing. Means and methods such as seismic bracing and falsework must be included in the model. All access doors in hard lid ceilings need to be shown. Height of Parapet walls in relation to HVAC equipment.

E. The **HVAC-Dry** model elements shall include, but are not limited to, ducts, air handling equipment, flanges, insulation, fire smoke dampers, variable air systems, and duct fittings. Means and methods such as hangers, supports, seismic bracing, supplemental steel, and falsework must be included in the model. Location of Air Intakes, Economizers.

F. The **HVAC-We**t model elements shall include, but are not limited to, all piping and conduit larger than ¾" in diameter, any grouping of two or more pipes or conduits regardless of size, insulation (modeled as a separate element), fittings, connections, pumps, valves, and all equipment required for system functionality. Means and methods such as hangers, supports, seismic bracing, supplemental steel, and falsework must be included in the model.

G. The **Plumbing** model elements shall include, but are not limited to, all piping 1" and larger in diameter, any grouping of two or more pipes or conduits regardless of size, insulation (modeled as separate elements), fittings, connections, pumps, valves, and all equipment required for system functionality. Means and methods such as hangers, supports, seismic bracing, and vibration isolation must be included in the model. Location of Air Intakes, Economizers in relation to vents with clearance as required by code / LAUSD.

H. The **Electrical** model elements shall include, but are not limited to, all conduit larger than 1" in diameter, any grouping of two or more conduits regardless of size, transformers, VFDs, panel boards, large disconnects, gutter boxes, pull boxes, control panels, annunciator panels, switchgear, transfer stations, cable trays, conduits, light fixtures, and elements where coordination with other trades' specific equipment is required (such as outlets and jacks embedded in casework). Means and methods such as hangers, supports, seismic bracing, and vibration isolation must be included in the model. Show clearances for service /maintenance requirements are met in front of panels and around HVAC equipment on roofs.

I. The **Fire Suppression System** model elements shall include, but are not limited to, main and branch piping, valves, fittings, drains, pumps, tanks, sensors, control panels, sprinkler heads, and seismic bracing. Means and methods such as hangers, supports, seismic bracing, and vibration isolation must be included in the model.

J. The **Building Management System** model elements shall include, but are not limited to, pipes and conduits greater than 1" in diameter, any grouping of two or more pipes or conduits regardless of size, cable trays, all major and critical valves (including shut-off, life-safety, isolation, and tamper and flow valves), all equipment and panels as indicated per the schedule, and elements where coordination with other trades' specific equipment is required (such as outlets and jacks embedded in casework). Means and methods such as hangers, supports, seismic bracing, and vibration isolation must be included in the model.

K. The **Telecommunication & Security** model elements shall include, but are not limited to, all piping and conduit greater than 1" in diameter, any grouping of two or more conduits regardless of size, cable trays, all major and critical valves (including shut-off, life-safety, isolation, and tamper and flow valves), and elements where coordination with other trades' specific equipment is required (such as outlets and jacks embedded in casework). Means and methods such as hangers, supports, seismic bracing, and vibration isolation must be included in the model.

L. The **Complete Underground Utility System** including wet utilities and dry utilities. The model should demonstrate how utilities will be installed in relation to each new utility, existing to remain and all structures. Inverts and POCs shall be included.

M. The **Overall BIM Mode**l shall contain enough information sufficient to visually and graphically (to scale) represent the true "clearance zones" (access) required to service, repair, and maintain all major equipment.

III. Coordination and Clash Resolution Procedure

1. A background model will be provided for the use of the coordination team. Use of this background model is at the sole discretion of the General Contractor and Subcontractors.

2. The Owner and Design Team makes no guarantees of its accuracy nor does the use of the background model relieve the General Contractor and their Subcontractors of their responsibilities to comply with the requirements of the requirements of the contract documents and provide a fully coordinated BIM project

3. Each Subcontractor must submit an updated model two days prior to each scheduled coordination meeting.

4. The models must be provided in the colors assigned to each contractor – see section VII/2 below. Models not provided in the assigned color may not be updated in the consolidated model prepared for that week's coordination

meeting.

5. Each Subcontractor must purchase at least one license of Navisworks Manage software. Native modeling software is at the discretion of the Subcontractor, but Autodesk Revit is recommended. Software must be release 2013 or later.

6. Each Subcontractor is responsible for maintaining a clash-free model and is required to clear all clashes, to the best of his ability, two days prior to each clash detection meeting. This updated model will be uploaded two days prior to the meeting. Subcontractors are encouraged to meet with other Subcontractors, one-on-one or in small groups, to clear clashes prior to the clash detection meeting. This can be done through GoTo Meeting or similar programs.

7. Any clashes remaining by the time of the clash detection meeting will be reviewed. General Contractor will make assignments to the appropriate Subcontractor(s) for resolving the clashes. The resolutions must be completed, to the best of the Subcontractors' abilities, prior to the next coordination meeting.

8. General Contractor and their required Subcontractors shall attend all scheduled BIM coordination meetings. All regular meetings shall be held online, through GoTo meeting. Periodically, at significant milestones and at the discretion of General Contractor or the Managing BIM Coordinator, BIM coordination meetings will be held at the project office, onsite. General Contractor will decide what Subcontractors will be required to attend such meetings.

9. The General Contractor and Subcontractors are required to follow the Hierarchy of Systems Coordination, as outlined below or as agreed to by Owner / Design Team:

   A. Structure
   B. Architecture and visible Trade Elements (Diffusers, Lighting, etc.)
   C. Mechanical Equipment location and access
   D. Hydronics, Plumbing and Fire Protection Mains & Gas lines
   E. All Ductwork
   F. Pressurized Piping over 2" in diameter & Fire Protection Branches
   G. Electrical Duct banks (concrete-encased)
   H. All other Plumbing
   I. All other HVAC and Hydronics
   J. Electrical Switchgear and Conduits over 2" in diameter
   K. Electrical Panels, Conduits 2" and smaller, and other equipment
   L. Fire Protection Drops
   M. Fire Alarm systems
   N. Sleeves through Rated Partitions
   O. Access Panels

10. The General Contractor and Subcontractors are required to attend meetings to review accessibility of system elements including, but not limited to, devices, panels, valves, and other equipment, with the Owner and Design Team.

11. For any clash between an Object and Construction Tolerance where the clash cannot be resolved via coordination, the Subcontractor whose Construction Tolerance is in question must provide field measurements in a timely manner once the scope in question is installed.

12. The General Contractor shall require Subcontractors to process, revise, and resubmit their 3D model in a timely manner in order to resolve coordination issues. If conditions exist where adjacent trades may be affected by a Subcontractor's coordination changes, the revising Subcontractor must contact the adjacent trade's Subcontractor to develop a resolution for all affected trades. General Contractor shall manage this process.

13. The General Contractor and their Subcontractor shall revise and resubmit their three-dimensional model to reflect changes to system design and functionality represented in any supplemental documentation including, but not limited to, RFIs, ASIs, Bulletins, Addenda, and Owner's Directives. Such revisions shall be made in accordance with the following sequence:

    A. Any Subcontractor with work directly affected by the design change documentation will draft a revised three-dimensional model while coordinating with adjacent trades.

    B. All revisions to model scope or layout not specifically described in the contract documents or supplemental information from the Architect or Owner shall be deemed to be Coordination Changes and shall not be eligible for any change request.

    C. The Subcontractor shall, upon completion of the coordination process for a given area and in consultation with the Owner, Architect and General Contractor, sign the 3D Coordination Sign-Off document. This document does not relieve any signee of the roles, responsibilities, or obligations outlined or implied elsewhere in this contract.

IV. Shop Drawing Submittals

1. Once coordination is complete for each zone of each building, General Contractor is required to submit for approval such two-dimensional, annotated, as-fabricated drawings as are required to make a complete representation of the entire scope. These drawings must be fully dimensioned projections including, but not limited to, plans, sections, elevations, and axonometric diagrams. The number, format, and medium of these drawings

shall be determined in the Subcontractor's contract. Printed copies must be delivered to per submittal requirements.

2. The General Contractor shall be responsible for incorporating Design or Field Revisions initiated after the sign-off of a given Zone into the Consolidated Model as negotiated with Owner and according to the sequence set forth in this document.

V. Closeout and As-Built Model Procedure

1. The General Contractor is responsible to provide complete, up to date, coordinated models, in NWD format as well as the native modeling format of the trades at the completion of the coordination process.

2. General Contractor shall require Subcontractors to maintain their BIM model throughout the construction process and reflect any changes in response to coordination changes or to RFIs, ASIs, Bulletins, Addenda and Owner's Directives.

3. At closeout, the Subcontractor must re-submit any shop drawings to reflect changes that occurred during the BIM coordination.

4. At closeout General Contractor shall provide complete As-Built record files to Owner / AOR per LAUSD Submittal and Close out requirements.

END OF SECTION

SECTION 01 3119

PROJECT MEETINGS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. This Section specifies administrative and procedural requirements for Project meetings for Design Bid Build projects, including but not limited to, the following:

1. Job Start Meeting.
2. Pre-installation conferences.
3. Progress meetings.
4. Meetings as required by OAR.

1.02 RELATED REQUIREMENTS

A. Section 01 1216: Phasing of the Work.

B. Section 01 3113: Project Coordination.

C. Section 01 3216: Construction Schedule for Small Projects.

D. Section 01 3229: Project Forms.

E. Section 01 3300: Submittal Procedures.

PART 2 – PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 JOB START MEETING

A. In accordance with General Conditions Article 2.6, OAR will schedule a job start meeting before starting the Work, at a time and date determined by OAR. Meeting shall be held at the Project site or another location as determined by OAR. Meeting will be held in order to review responsibilities, procedures, and other administrative requirements contained within the Contract Documents.

B. Authorized representatives of OWNER, INSPECTOR, ARCHITECT, CONTRACTOR and other parties shall attend the meeting. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work.

C. Agenda items shall include significant items which could affect progress of the Work, including, but not limited to the following:

1. Preliminary Construction Schedule.

2. Critical work sequencing.

3. Designation of responsible personnel.

4. Identification of OAR.

5. Procedures for processing field decisions.

6. Request for Proposal.

7. Request for Clarification.

8. Construction Directive and Change Order.

9. Procedures for processing Applications for Payment.

10. Prevailing wages.

11. Submittal and review of Shop Drawings, Product Data, material lists, and Samples.

12. Close out Document Preparation

    a. Operation and Maintenance Manuals

    b. Warranties

    c. As-built Drawings

13. Use of the Project site and/or premises.

14. Parking availability.

15. Office, work, and storage areas.

16. Equipment deliveries and priorities.

17. Safety procedures.

18. First Aid.

19. Security.

20. Housekeeping.

21. Working hours.

22. Contract Compliance Officer.

23. Insurance Services including OCIP.

24. Environmental Health and Safety.

25. Substantial Completion, Administrative Closeout and Contract Completion requirements and procedures.

26. Procedures for Mandatory Dispute and Claim Resolution.

D. OAR shall prepare and issue meeting minutes to attendees and interested parties no later than five calendar days after the meeting date.

3.02 PRE-INSTALLATION CONFERENCES

A. CONTRACTOR shall coordinate and conduct pre-installation conferences at the Project site as required by related Sections of the Contract Documents.

B. CONTRACTOR, manufacturers, and fabricators involved in or affected by the installation and its coordination or integration with other pre-ceding and/or subsequent installations of Work shall attend the meeting. CONTRACTOR shall advise OAR, INSPECTOR, and ARCHITECT of scheduled meeting dates in order to secure their attendance.

1. CONTRACTOR shall review the progress of construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for the following:

a. Contract Documents.

b. Options.

c. Related Construction Directives and Change Orders.

d. Purchases.

e. Deliveries.

f. Shop Drawings, Product Data, and quality-control samples.

g. Review of mockups.

h. Possible conflicts.

i. Compatibility problems.

j. Time schedules.

k. Weather limitations.

l. Manufacturer's recommendations.

m. Warranty requirements.

n. Compatibility of materials.

o. Acceptability of substrates.

p. Temporary facilities.

q. Space and access limitations.

r. Governing regulations.

s. Safety.

t. Inspecting and testing requirements.

u. Required performance results.

v. Recording requirements.

w. Protection.

2. CONTRACTOR shall record significant discussions and directives received from each conference. CONTRACTOR shall, within three (3) calendar days after the meeting date, distribute the minutes of the meeting to all concerned parties, including but not limited to, OAR, INSPECTOR, and ARCHITECT.

3.03 PROGRESS MEETINGS

A. Progress meetings will be held at the Project site at regular intervals, typically weekly, as determined by the OAR.

B. In addition to representatives of CONTRACTOR, OWNER, and ARCHITECT, each Subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of the Work shall, if requested by OAR, be represented at these meetings. All participants at the conference shall

be familiar with the Project and authorized to conclude all matters relating to the Work.

C. Failure of CONTRACTOR to be so represented at any progress meeting which is held at a mutually agreed time or for which a written notice is given, shall not relieve CONTRACTOR from abiding by any and all OAR determinations or directives issued at such meeting.

D. OAR will review and correct or approve minutes of the previous progress meeting and will review other significant items affecting progress. Topics for discussion as appropriate to the status of the Project include but are not limited to:

1. Interface requirements.
2. Construction Schedule.
3. Sequence and coordination.
4. Status of submittals / RFCs.
5. Deliveries.
6. Off-site fabrication.
7. Access.
8. Site utilization.
9. Temporary Construction Facilities and Controls.
10. Hours of work.
11. Hazards and risks.
12. Housekeeping.
13. Quality of materials, fabrication, and execution.
14. Unforeseen conditions.
15. Testing and Inspection.
16. Defective Work.
17. Construction Directive.
18. Request for Proposal.
19. Change Order Proposals and Change Orders.

20. Documentation of information for payment requests.

21. Application for Payment.

22. Other items as required or as brought forth.

23. Initial Notice of Start of Issue, Event, Condition, Circumstance, or Cause of Perceived Delay, Disruption, Interference, Hindrance, Acceleration. (Article 12.2.1 of the General Conditions).

24. Final Notice of End of Issue, Event, Condition, Circumstance, or Cause of Perceived Delay, Disruption, Interference, Hindrance, Acceleration (Article 12.2.2 of the General Conditions).

E. No later than three (3) calendar days after each progress meeting, OAR will prepare and distribute minutes of the meeting to each present and absent party. Include a brief summary, in narrative form, of progress, decisions, directives, actions taken, and all other issues since the previous meeting and report.

1. Schedule Updating: CONTRACTOR shall revise the Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized and issue the revised schedule at the next scheduled progress meeting.

3.04 PROJECT CLOSEOUT CONFERENCE

A. Preparation of As-Built Documents

B. Procedures required prior to Inspection for Substantial Completion and for Final Completion for acceptance.

C. Submittal of warranties

D. Requirements for preparing operations and maintenance documents and data

E. Requirements for delivery of material samples, attic stock, and spare parts

F. Requirements for demonstration and training

G. Preparation of Punch List

H. Procedures for processing Applications for Payment at Substantial Completion and Final Payment

I. Submittal procedures for closeout documents

J. District’s Beneficial Occupancy requirements

K. Installation of District's FF&E

L. Responsibility for removing temporary facilities and controls.

3.05 ADDITIONAL MEETINGS

A. OAR, upon giving notice to the intended parties and without further obligation, may require additional meetings to discuss Work and/or Project related activities.

3.06 OWNER'S RIGHT TO RECORD

A. CONTRACTOR agrees on behalf of itself and all its subcontractors that the OWNER may audiotape or videotape any meetings, training and any work at any time during the Project

END OF SECTION

SECTION 01 3216

CONSTRUCTION SCHEDULE FOR SMALL PROJECTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Required procedures for the development of the Baseline Construction Schedule, Monthly Schedule Update, Four-Week Rolling Schedule, Recovery Schedules, Fragnets and Time Extension requests.

1.02 RELATED REQUIREMENTS

A. Section 01 1100: Summary of Work.

B. Section 01 1216: Phasing of the Work.

C. Section 01 2973: Schedule of Values.

D. Section 01 3300: Submittal Procedures.

E. Section 01 3119: Project Meetings.

F. Section 01 4523: Testing and Inspection.

G. Section 01 4524: Environmental Import/Export Materials Testing.

H. Section 01 7700: Contract Closeout.

PART 2 – PRODUCTS

2.01 SCHEDULING SOFTWARE

A. CONTRACTOR shall utilize the latest version of Primavera Scheduling Software (P6) to employ the Critical Path Method (CPM) in the development and maintenance of the construction schedule. If the version of Primavera Scheduling Software (P6) used is greater than Version 15.1, the CONTRACTOR shall save & export schedules in Version 15.1 before submitting to Owner for review.

B. All schedule calculation rules, auto cost rules and resource calculation rules shall be in a format acceptable to OAR. When schedule calculations are performed, the “Retained Logic” setting shall be used. CONTRACTOR shall use the zero “Decimal Places” setting. Finish Milestones shall be constrained with a “Finish on or before” type constraint in accordance with the dates stipulated in

Specification Section 01 1219, Phasing of the Work, Appendix A. No "Mandatory Finish" type constraints, no "Zero Free Float" constraints, no special hidden lag time between activities or other "float Suppression" techniques will be permitted. A schedule milestone constraint extending beyond Contract time or less than Contract time will not be acceptable. Rather, CONTRACTOR shall show any unused contract time as float (slack time) available to the project.

PART 3 –EXECUTION

3.01 SCHEDULER QUALIFICATIONS

A. CONTRACTOR shall have a scheduler with a minimum of 5 years direct experience in the development and maintenance of schedules.

B. CONTRACTOR shall submit the resume of the construction scheduler to OWNER for review and approval. OAR has the right to refuse to accept the Scheduler based upon a lack of experience as required by this Section or based on lack of on-site performance and timeliness of schedule submittals. If OAR does not accept the proposed Scheduler, CONTRACTOR shall within one week of disapproval, propose another Scheduler who meets the experience requirements stated above.

3.02 PRE-CONSTRUCTION SCHEDULING CONFERENCE

A. CONTRACTOR and CONTRACTOR Scheduler shall attend a pre-construction scheduling conference with OAR within 7 days after Notice of Award. CONTRACTOR Scheduler shall develop a construction schedule in accordance with this Specification Section. Scheduler shall cooperate with OAR and shall make themselves available for on-site meetings to develop, monitor, maintain and update the schedule in a timely manner.

3.03 SUBMITTALS

A. Within 7 calendar days after the effective date of the Notice to Proceed (or as stipulated in the milestones under *Section 01 1219 Phasing of the Work Appendix A)*, CONTRACTOR shall submit to OWNER for review, a detailed Baseline Construction Schedule setting forth all requirements for complete execution of the Work. Include individual activities for the preparation of specific submittals, activities for owner review periods, activities for the procurement / fabrication period, installation activities, any applicable start-up & testing activities, and all contract milestones. With the exception of submittals and fabrication /procurement activities, each work activity shall range in duration from 1 workday minimum to a 10 workday maximum. The Scheduling system shall indicate all inter-relationships (logic ties) between the activities and shall be logically tied to all relevant milestones listed in Section 01 1219 Phasing of the Work Appendix A. CONTRACTOR shall cost load the activities with a "budgeted cost" that totals up to the Contract award value. The format shall be coordinated with

Specification Section 01 2973 (Schedule of Values), Specification Section 01 3229 (Project Forms), and Specification Section 01 2976 (Progress Payment Procedures).

B. The level of detail indicated in the schedule shall be greater than that provided by *Section 00 0110: Table of Contents of Contract Technical Specifications*, including any *Section 00 9113*: Addenda. Duration and events indicated on schedule shall conform to phasing set forth in *Section 01 1216 Phasing of the Wor*k and shall show any area or building within a particular phase. Each activity description shall outline the specific work scope (by trade) and the location. Schedule shall indicate any and all Contract "milestone events" and other milestones agreed to by OWNER, but no other manually-imposed dates will be accepted unless approved by OWNER.

C. CONTRACTOR shall allow for inclement weather in the Proposed Baseline Schedule by incorporating an activity titled “Rain Day Impact Allowance” as the last activity prior to the Substantial Completion Milestone. No other activities may be concurrent with it. The duration of the Rain Day Impact Allowance activity will be based on Table #1 below and will be calculated from the Notice to Proceed until the original date of Substantial Completion.

Table #1: Cumulative Calendar Days “Rain Day Impact Allowance”:

January	6	July	0
February	5	August	0
March	5	September	1
April	4	October	1
May	1	November	3
June	0	December	5

1. When inclement weather at the Project site impacts Critical Path activities, CONTRACTOR may provide the OAR with a written request for a weather impact day describing the inclement weather delay on the Critical Path activities. The inclement weather delay must be clearly indicated by a 70 percent decrease in the field labor workforce hours on Critical Path activities on the day in question as indicated by CONTRACTOR’S Daily reports from the day in question and the scheduled workdays prior to the day in question. Upon OAR’S independent confirmation of the amount of rainfall and impact, OAR will authorize CONTRACTOR to reduce the duration of the Rain Day Impact Allowance by one day.

2. Inclement weather on non-scheduled workdays shall not be granted as weather impact days. If CONTRACTOR asks to work a specific weekend or holiday and gives OAR advanced, written notification of critical path work to be performed and a substantial amount of precipitation occurs that prevents the work from being performed, then that day can be claimed as a weather impact day. If the effects of inclement weather from a non-scheduled workday carry forward to a scheduled work day and impacts the

Critical Path as noted above, then the scheduled work day will be considered impacted by weather. Any unused rain day allowance at the end of the project will be shown as available float to the Substantial Completion Milestone. Excusable, non-compensable time extensions will be granted for inclement weather to Substantial Completion milestone only after the weather impact area affecting the critical path work has exhausted the allotted cumulative Rain Day Impact Allowance. On projects that have multiple phases with defined start & finish dates, the cumulative rain impact allowance may be split up (pro-rated) into their designated phases upon OAR Approval.

D. Activity Codes: As a minimum, the Activity Codes shown in the Table 1 below shall be assigned to each activity.

Name	Length	Description
TYPE	2	Type of activity (for example: mobilization, submittals, procurement/fabrication, construction, milestones, etcetera.)
AREA	2	Area or Building (for example: Bldg A, Building B, Courtyard, Athletic Fields, Street Work, etcetera.)
STAG	2	Stage (for example: Foundations, Superstructure, Exterior, Interior, Roof, Floor Number etcetera.)
SBST	2	Substage (a specific area within a stage such as: main electrical room, kitchen, room number, etcetera.)
RESP	7	Responsible Party (subcontractor and/or trade)
DIV	2	CSI Division
SPEC	5	CSI Specification Section number

1. OAR may require additional coding of activities. The mandatory activity code requirements listed in Table 1 are not to be construed as setting limits on CONTRACTOR'S management and coordination responsibilities but are intended to guide CONTRACTOR in the administration of its contractual responsibilities.

E. CONTRACTOR shall submit a color bar chart of all activities organized by Area (Location) and sorted by early start date in a graphically "left to right" manner. In addition, submit a Critical Path (Longest Path) color bar chart filter. Include the following column headings on the left hand side of both bar chart reports; activity ID, activity description, original duration, remaining duration, percent complete, start date, finish date, total float (slack time), and budgeted cost. CONTRACTOR shall also include an electronic file in its original format of the schedule. The electronic P6 file shall be saved in "XER" type format (version 15.1).

F. Include a written schedule narrative sufficiently comprehensive to explain the basis of the CONTRACTOR'S approach to work. The written schedule narrative should include a paragraph of the project's Critical Path, the anticipated crew sizes (by trade), any planned equipment needed, a discussion on any long lead procurement/fabrication items, and any site logistic challenges.

G. 7 calendar days after receipt of the OWNER'S review comments, CONTRACTOR shall revise & re-submit the Construction Schedule acceptable to OWNER. Once the Baseline Construction Schedule is approved, no changes will be allowed unless authorized by the OWNER.

H. Failure of CONTRACTOR to submit a Construction Schedule in full compliance with the Contract Documents will result in a delay in progress payment processing. The Construction Schedule is to be used in evaluating progress and for monthly payment approval.

I. Subsequently with each Monthly Progress Payment Request, CONTRACTOR shall deliver to OWNER a Monthly Schedule Update reflecting Work progressed to the end of the Progress Payment Request period (set as the last day of the month). Each such Monthly Schedule Update shall indicate actual progress to date in execution of the Work, together with a projected schedule for completion of all the remaining Work. CONTRACTOR shall copy & re-name the schedule file each month, status the activities with actual start and/or finish dates, adjust remaining durations, add re-submittals (if applicable), calculate the schedule with a “data date” to the end of the pay period, and submit the required reports outlined in Article 3.03 to OWNER. Each Monthly Schedule Update shall be submitted con-currently with the Monthly Pay Application no later than the fifth day of the succeeding month in accordance with Article 14 of the General Conditions. In updating the Schedule, CONTRACTOR shall not modify Activity ID numbers, activity descriptions, original durations, logic, schedule calculation rules/criteria, or the Activity Coding unless authorized by the OAR.

J. All Schedule submittals are subject to review and acceptance by OWNER. OWNER retains the right to withhold progress payments in whole (or in part) until CONTRACTOR submits a Construction Schedule acceptable to OWNER.

3.05 FOUR-WEEK ROLLING SCHEDULE

A. At each Weekly Progress Meeting, CONTRACTOR shall present a Four-Week Rolling Schedule in Bar Chart format. It shall show one (1) week of actual and three (3) weeks of forecasted progress. The Four-Week Rolling Schedule shall be used as a basis for discussing progress and work planned during the three (3) weeks.

1. The Four-Week Rolling Schedule shall be based on the most recent OAR Accepted Monthly Schedule Update. It shall include weekly updates to all construction, submittal, fabrication and procurement, and separate work contract activities. CONTRACTOR shall ensure that it accurately reflects the current progress of the Work.

2. CONTRACTOR shall discuss at the Weekly Progress meeting the actual dates and any variances to critical or near critical activities.

3. Upon request by OAR, CONTRACTOR shall provide the Four-Week Rolling Schedule in electronic format.

4. If the Four-Week Rolling Schedule indicates activities are behind schedule, CONTRACTOR shall provide a Recovery Schedule in accordance with Article 3.06 below.

5. If the CONTRACTOR chooses to provide a Four-Week Rolling Schedule in a greater level of detail (by trade/subcontractor) outside of the monthly schedule database, then upon CONTRACTOR REQUEST and OAR written approval, the CONTRACTOR may proceed as long as the detailed activities roll-up to the contractual monthly schedule updates. These detailed activities will need to be linked to the overall Substantial Completion date as to properly forecast whether the project is ahead or behind schedule during the weekly Progress Meetings. The Four-Week Rolling Schedule must accurately reflect the work that is going on during the current week and must accurately reflect what will happen in the next three weeks.

3.06 RECOVERY SCHEDULES

A. If a Monthly Schedule Update indicates negative float greater than ten (10) days on a critical path as result of events not predicated by Articles10 and 12 of the General Conditions, CONTRACTOR shall prepare a Proposed Recovery Schedule demonstrating CONTRACTOR'S plan to regain the time lost. The Recovery Schedule shall be submitted either in advance of or concurrent with the Monthly Schedule Update and CONTRACTOR progress request. Both the Monthly Schedule Update and the Proposed Recovery Schedule shall be based on the same percentages of completion and actual dates accepted by OAR under Article 3.03.

B. The Proposed Recovery Schedule shall be based on a copy of the Monthly Schedule Update for the calendar month during which the negative float first appears.

C. The Proposed Recovery Schedule shall include a written narrative that identifies the causes of the negative float on the critical path and provides CONTRACTOR'S proposed corrective action to ensure timely completion of all Milestones and the Substantial Completion Date. CONTRACTOR'S corrective actions shall include but are not limited to increasing concurrent operations, increasing labor, adding multiple shifts in a 24-hour period, and adding overtime.

D. During any period of time when CONTRACTOR is found to be behind schedule by OAR, the Monthly Schedule Update described above shall become a weekly requirement (at no additional cost to OWNER) to provide a greater degree of focus on the timely completion of the Work. These Updates shall be submitted to OAR every Monday morning. When CONTRACTOR is deemed by OAR to be

back on schedule, CONTRACTOR may revert to submitting the schedule monthly.

E. CONTRACTOR'S progress payment may not be processed until OAR accepts the Proposed Recovery Schedule. Following such an acceptance, the Proposed Recovery Schedule will be known as the Recovery Schedule and future Work will be performed by CONTRACTOR in accordance with it.

3.07 FRAGNETS AND TIME EXTENSION REQUESTS

A. Float is not for exclusive use or benefit of either OWNER or CONTRACTOR but is an expiring resource available to both parties on a non-discriminatory basis. If required to meet specified Milestones, either party may utilize float. Adjustments to Milestones or Contract Time will only be authorized by Change Order and only to the extent the claimed adjustments exceed total float along the most critical path of the current Monthly Schedule Update in effect at the time of the claimed adjustments. The claimed adjustments to the Milestones and/or Contract Time must also cause the Substantial Completion Date to exceed that currently indicated in the Monthly Schedule Update. No time extensions will be granted nor delay damages paid under contract until all available float is used and the CONTRACTOR obtains a Time Extension Request approval from the OAR in accordance with Article 1.12 in its entirety. CONTRACTOR claimed adjustments to an existing negative float path will not receive consideration until the activity with the highest negative float is driven even further negative.

1. Claimed adjustments to the Milestones or Contract Time will be administered in conjunction with those set forth in the General Conditions.

B. Pursuant to the float sharing requirements of this Section, the use of float suppression techniques such as preferential sequencing or logic, special lead or lag logic restraints, and extended activity times or durations are prohibited. The use of float time disclosed or implied by the use of alternate float suppression techniques shall be proportionally shared to benefit OWNER and CONTRACTOR. The use of any technique solely for the purpose of suppressing float will result in OWNER rejection of the submitted Monthly Schedule Update.

C. In the event CONTRACTOR believes the Project has suffered an adverse impact arising from events predicated by Articles 10 and 12 of the General Conditions, CONTRACTOR may prepare a Time Extension Request by submitting a Schedule Fragnet and a written narrative outlining the detail of the impact. A Schedule Fragnet must demonstrate a critical path delay. Such a delay must adversely impact the Substantial Completion Date for CONTRACTOR to receive a time extension. To demonstrate such an impact successfully, CONTRACTOR shall prepare a Schedule Fragnet based on a copy of OWNER accepted Monthly Schedule Update for the calendar month during which the adverse impact occurred. This "copy" of the OWNER accepted Monthly Schedule Update shall however first be updated (by OWNER and CONTRACTOR jointly) with both Percentages of Completion and Actual Dates up to the day the delay commenced.

This process will provide the "pre-delay" project status. Once OWNER and CONTRACTOR have agreed to the "pre-delay" project status, CONTRACTOR should make a copy of this "pre-delay" schedule and this copy is to be the starting point for CONTRACTOR'S Schedule Fragnet development. OWNER will evaluate the activities, logic, durations, etcetera, in the Schedule Fragnet and will evaluate if the adverse impact arose from events described by Articles 10 and 12 of the General Conditions. The Fragnet shall also include CONTRACTOR-caused delays that affect the critical or near critical path in the network and should be accounted for in the Time Impact Analysis if overlapped at any point in time with OWNER-caused delay. If rain impact days were granted between the Start and Finish of OWNER-caused delay period, they should be accounted for in the Time Impact Analysis as well. Provided OWNER determines such an impact occurred, CONTRACTOR may be due a time extension equal to the number of proportioned days of variance/delay that resulted to the Substantial Completion Date.

D. Activities added into a Schedule Fragnet to demonstrate the impact of adverse event shall be assigned a unique activity code. The Schedule shall be organized by this unique activity code.

E. The Schedule Fragnet shall incorporate logic ties that are accurately reflective of the adverse event to pre-event predecessor activities and post event successor activities.

F. The format and components of a Schedule Fragnet submittal shall be in accordance with this Section and Articles 10 and 12 of the General Conditions. It is crucial for the Fragnet to be submitted within the same month of discovery so it can be resolved during the monthly schedule update review. The notice shall be transmitted to OAR within the stipulations outlined in Article 12 of the General Conditions.

G. If OWNER accepts CONTRACTOR'S Schedule Fragnet and an extension is granted, a Change Order will be prepared. OWNER will advise what change order number the time extension will become. When CONTRACTOR receives this Change Order number, all the activities added to the Schedule Fragnet shall be given Activity Identification Numbers that corresponds with the Change Order number. CONTRACTOR shall cost load the activities if required by OWNER. If resource loading is required, the resource loading shall include a breakdown of labor, material, and equipment quantities.

H. If OWNER rejects CONTRACTOR'S Schedule Fragnet in part based on improper forecast logic or activity tasks, then it shall be revised accordingly to conform to OWNER'S review comments and be re-submitted. If the forecast logic and activity tasks cannot be agreed to then the pre-delay schedule outlined in Article 3.07, C shall be compared to the actual as-built data in the succeeding month of the encountering issue, event, condition, circumstance, and/or cause. The variance to the project between the pre-delay and post delay schedules shall

be discussed in CONTRACTOR'S written narrative and proportioned between the different parties involved in the delay.

I. If OWNER rejects CONTRACTOR'S Schedule Fragnet in whole, then CONTRACTOR may follow the procedures set forth in Article 16 of the General Conditions.

3.08 PAYMENT FOR SCHEDULING

A. The Work of this Section will be included as part of the bid price.

B. Preparation, revising, maintenance, and compliance with this Section and *Section 01 2973* is an integral part of the Contract Documents and is specified to have a minimum value equal to 2 percent of the original Contract Amount. This amount shall be proportionally cost loaded into two activities in both the Proposed Baseline Schedule and the Schedule of Values described in *Section 01 2973*. One activity for the "Baseline Schedule" and the other activity for the "Monthly Schedule Update Process" as follows:

1. CONTRACTOR may allocate thirty percent (30 percent) of the total scheduling cost and place in the "Baseline Schedule" activity. It can then be billed against when the OAR accepts the Proposed Baseline Schedule as the Baseline Schedule.

2. The remaining seventy percent (70 percent) may be cost loaded into the "Monthly Schedule Update Process" activity. This amount may be billed in equal monthly increments. The amount of those increments is determined by dividing the remaining cost by the total number of months in the Contract Time. Payment of these incremental amounts is contingent upon OAR acceptance of CONTRACTOR Monthly Schedule Updates, Recovery Schedules, Four-Week Rolling Schedules, Fragnets, Time Impact Analysis, and the updated Log of Required Submittals.

3. The CONTRACTOR shall anticipate in their base contract scope that numerous Fragnets and written time impact analyses will be required during the duration of the project with the Monthly Schedule Updates. Requests for extra scheduling services will not be considered until the CONTRACTOR demonstrates that all of the costs stipulated in Article 3.08, B has been expended.

3.09 FAILURE TO COMPLY WITH REQUIREMENTS

A. At any time during the project if CONTRACTOR fails to comply with the specified requirements, OWNER reserves the right to engage independent estimating and scheduling consultants to fulfill these requirements. Upon notice to CONTRACTOR, OWNER shall assess against CONTRACTOR, incurred costs for these additional services.

B. In such an event, OWNER will require, and CONTRACTOR shall participate and provide requested information to ensure the resulting Milestones Schedule accurately reflects CONTRACTOR's plan to execute the Work in compliance with the Contract Documents. If it becomes necessary for OWNER to recommend logic or duration revisions as a result of CONTRACTOR failure to furnish acceptable data, and if CONTRACTOR has objections to the recommendations, CONTRACTOR shall provide notice to OWNER within three days and CONTRACTOR shall provide an acceptable alternate plan. If CONTRACTOR fails to so note any objections and provide an acceptable alternate plan, or if CONTRACTOR implements the recommendations of OWNER without so noting any objections, CONTRACTOR will be deemed to have waived all objections and concurred with the recommended logic/duration revisions provided by ARCHITECT and/or OWNER.

C. Submittal of any Monthly Schedule Updates are subject to review and acceptance by OWNER. OWNER retains the right, including, but not limited to Article 14 of the General Conditions, to withhold progress payments in whole or part until CONTRACTOR submits a Monthly Schedule Update acceptable to OWNER. If a Monthly Schedule Update is "Rejected" due to the OWNER not receiving a satisfactory schedule that accurately reflects the on-going work activities, the OWNER will mandate a separate meeting with the CONTRACTOR and approved Scheduler to remedy the non-conformance. If after the 2nd consecutive month, the OWNER still has to "Reject" the monthly Schedule update due to non-conformance, then the CONTRACTOR'S Scheduler will need to be replaced at no additional cost to the OWNER. CONTRACTOR shall within one week of disapproval, propose another Scheduler who meets the required experience.

3.10 CONTRACTOR RESPONSIBILITY

A. Nothing in this Section shall be construed to be a usurpation of CONTRACTOR authority, responsibility, and obligation to plan and schedule Work as CONTRACTOR deems necessary, subject to all other requirements of the Contract Documents.

B. CONTRACTOR shall provide at all times sufficient competent labor, materials, and equipment to properly carry on Work and to ensure completion of each part in accordance with Construction Schedule and within time agreed. CONTRACTOR shall involve the subcontractors, manufacturers, and suppliers in the development and periodic updating of the schedule.

3.11 RECORD DOCUMENTS / FINAL AS-BUILT SCHEDULE

A. Prior to Contract Completion of the Work, CONTRACTOR shall submit a final as-built schedule, and a time-scaled network diagram (bar chart) reflecting the actual dates of all activities. This shall be submitted prior to the final application of payment and prior to the request to release retention.

END OF SECTION

SECTION 01 3229

PROJECT FORMS (DESIGN BID BUILD)

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. The following, but not limited to, administrative forms and documents listed in this Section are to be utilized in the administration of the Work for Design Bid Build (DBB) projects. Upon the CONTRACTOR's request, the OAR may approve the use of alternate forms. Electronic versions of these forms are available on the LAUSD website.

B. From time to time, OWNER may release new revisions and new Project Forms. At any time during the Project, if requested by OAR, CONTRACTOR shall use the newly released Project Forms.

1.02 RELATED REQUIREMENTS

A. Division 01: Design Bid Build General Requirements.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 FORMS

A. The following examples of forms are contained within this Section:

1. Allowance Disbursement Authorization.

    a. Use the COLIN Change Order Management process.

2. Application for Payment.

    a. Use the Application for Payment EInvoice process as indicated in COLIN.

3. Assessments.

    a. Use the FSD Training Materials Invoice Payments EInvoice system.

4. Certification of Compliance with Project Stabilization Agreement and Labor Compliance.

---

[1]Application for Payment (Multiple Projects Form) is available from the OAR.

a. Refer to Exhibit B.

5. Certification of Compliance with CEQA Mitigations.

a. Refer to Exhibit C.

6. Certificate of Substantial Completion.

a. Refer to Exhibit D.

7. Change Order.

a. Use the COLIN Change Order Management process.

8. Change Order Proposal.

a. Use the COLIN Change Order Management process.

9. Change Order Proposal – Compensable Delay Costs.

a. Use the COLIN Change Order Management process.

10. Change Order Proposal Guidelines.

a. Use the COLIN Change Order Management process.

11. Change Order Proposal – Labor Rate Calculation Form (Request for Rate Higher Than Fully burdened Labor Rates).

a. Refer to Exhibit E.

12. Conditional Waiver and Release – Final Payment.

a. Refer to Exhibit F.

13. Construction Directive (CD).

a. Use the COLIN Change Order Management process.

14. Correction Notice.

a. Refer to Exhibit G.

15. Daily Construction Report.

a. Use the COLIN Change Order Management process.

16. Daily Time and Material Record.

[1]Application for Payment (Multiple Projects Form) is available from the OAR.

a. Refer to Exhibit H.

17. Initial Notice of start of Issue. Event, Condition, Circumstance, or Cause of Perceived or Actual Delay, Disruption, Interference, Condition, Circumstance, or Cause of Perceived Delay, Disruption, Interference, Hindrance, Acceleration.

    a. Use the COLIN Change Order Management process.

18. Final Notice of End of Issue, Event, Condition, Circumstance, or Cause of Perceived or Actual Delay, Disruption, Interference, Condition, Circumstance, or Cause of Perceived Delay, Disruption, Interference, Hindrance, Acceleration.

    a. Use the COLIN Change Order Management process.

19. Five Day Notice.

    a. Refer to Exhibit I.B.

20. Liquidated Damages.

    a. Use the COLIN Change Order Management process.

21. List of Subcontractors.

    a. Use the COLIN Change Order Management process.

22. Notice of Award.

    a. Refer to Exhibit J.

23. Notice of Completion.

    a. Refer to Exhibit K.

24. Notice of Intent to Award.

    a. Refer to Exhibit L.

25. Notice of Partial Use or Occupancy (Beneficial Occupancy).

    a. Refer to Exhibit M.

26. Notice of Termination.

    a. Refer to Exhibit I “Five Day Notice”.

27. Notice to Proceed.

[1]Application for Payment (Multiple Projects Form) is available from the OAR.

a. Refer to Exhibit N.

28. "Or Equal" Request.

a. Refer to Exhibit Q.

29. Owner Assessment Summary.

a. Use the COLIN Change Order Management process.

30. Property Inventory.

a. Refer to Exhibit R.

31. Request for Certification of Substantial Completion.

a. Refer to Exhibit S.

32. Request for Clarification.

a. Use the COLIN Change Order Management process.

33. Request for Proposal.

a. Use the COLIN Change Order Management process.

34. Request for Reduction of Retention.

a. Refer to Exhibit T.

35. Schedule of Values.

a. Use the Schedule of Values EInvoice process as indicated in COLIN.

36. Storm Water Pollution Prevention – Site Monitoring Report.

a. Refer to Exhibit U.

37. Submittal Log.

a. Use the COLIN Change Order Management process.

38. Substitution Request.

a. Refer to Exhibit O.

39. Survey of Existing Site Conditions.

[1]Application for Payment (Multiple Projects Form) is available from the OAR.

a. Refer to Exhibit V.

40. Transmittal.

a. Use the COLIN Change Order Management process.

3.02 PROCEDURES

A. Allowance Disbursement Authorization: This form is used for the request and approval of Contract allowances. Sr. Project Manager approval is required for the use of all Allowance Disbursements.

B. Application for Payment: This form is used in requesting a progress payment in the EInvoice system.

C. Certification of Compliance with Project Stabilization Agreement and Labor Compliance Code Section 1776: This form is used to certify that all contributions due and owing to appropriate trust funds have been paid by CONTRACTOR and all Subcontractors, as specified by the Project Stabilization Agreement (PSA) and General Conditions Article 6.49. This form is also used to certify that CONTRACTOR has submitted all certified payroll records mandated by Labor Code 1776, and General Conditions Article 6.49

D. Certification of Compliance with CEQA Mitigations: This form is used to certify that all CEQA requirements were complied with by the CONTRACTOR.

E. Certificate of Substantial Completion: This form is used in accordance with Article 14.12 of the DBB General Conditions.

F. Change Order: This form is used to adjust the Contract Amount, Milestones or Contract Time.

G. Change Order Proposal: This form is used to communicate proposed adjustments to the Contract Amount, Milestones or Contract Time.

H. Change Order Proposal – Compensable Delay Costs: If Work is delayed by the acts or omissions of OWNER, ARCHITECT or separate contractor employed by OWNER, upon CONTRACTOR’s request and notice, in strict conformity with the General Conditions.

I. Change Order Proposal – Labor Rate Calculation Form: Request for Rate Higher Than Fully burdened Labor Rates

J. Construction Directive (CD): This form is used to issue a Construction Directive.

K. Conditional Waiver and Release – Final Payment: This document shall become effective to release any mechanic's lien, stop notice, or bond right the undersigned has on the job of the Los Angeles Unified School District

[1]Application for Payment (Multiple Projects Form) is available from the OAR.

L. Correction Notice: This form is used to provide notice of defective Work.

M. Daily Construction Report: This form is used to report daily Work activities and manpower levels of CONTRACTOR or Subcontractor.

N. Daily Time and Material Record: This form is used to provide daily records as set forth in Article 11.11 of the DBB General Conditions.

O. Initial Notice of Start of Issue, Event, Condition, Circumstance, or Cause of Perceived Delay, Disruption, Interference, Hindrance, Acceleration: This form is used to report any impacts to the Work as provided in COLIN.

P. Final Notice of End of Issue, Event, Condition, Circumstance, or Cause of Perceived Delay, Disruption, Interference, Hindrance, Acceleration: This form is used to report resolution of the Initial Notice of Issue as provided in COLIN.

Q. Five Day Notice: This notice is used according to the General Conditions.

R. List of Subcontractors: This is required as indicated in the COLIN Change Management process.

S. Notice of Award: Notice by OWNER advising the successful bidder that the OWNER has signed the Contract.

T. Notice of Partial Use or Occupancy (Beneficial Occupancy). This form is used for when the District occupies any or all portions of the Work at any time prior to Substantial Completion in accordance with Article 14.14.

U. Notice of Termination: DBE/Contractor shall submit a Notice of Termination (NOT) to the Los Angeles Regional Water Quality Control Board, LARWQCB. Provide a copy of NOT to OAR (See Section 01 7416).

V. Notice To Proceed: This form is used to establish the date of Contract Time commencement, and the date Contractor is authorized to commence performance of Contractor obligations.

W. “Or Equal” Request: This form is used to submit a list of proposed “or equal” substitutions.

X. Owner Assessment Summary: This form is used for all assessments or withholds by the Owner, permitted under the Contract or required by law, including without limitation, stop notices, prevailing wage violations, liquidated damages, additional consultant services, OCIP premiums, etc.

Y. Property Inventory: This form is used to establish Owner property in a space.

Z. “Request for Certification of Substantial Completion”: This form is used according to Article 14.12.

[1]Application for Payment (Multiple Projects Form) is available from the OAR.

AA. Request for Clarification: This form is to be used for clarification of the intent of the Contract Documents.

BB. Request for Proposal: This form is used to request a proposed adjustment in the Contract Amount, Milestones or Contract Time in response to the Work contained within the Request for Proposal.

CC. Request of Reduction of Retention: This form is used according to Article 14.8 of the General Conditions.

DD. Schedule of Values: This form is used to establish the basis of the certified Application for Payment.

EE. Storm Water Pollution Prevention Plan (SWPPP): Site Monitoring Reports: These forms are used to certify that construction activities are in compliance with SWPPP (see Section 01 7416).

FF. HH. Submittal Log: This form is a format for the listing of the required submittals.

GG. Substitution Request: This form is used to submit proposed substitutions of materials or equipment no longer manufactured or which cannot be acquired from existing inventories.

HH. Transmittal: This form is used for transmission of items related to the Contract.

END OF SECTION

[1]Application for Payment (Multiple Projects Form) is available from the OAR.

LOS ANGELES UNIFIED SCHOOL DISTRICT

Facilities Services Division

CERTIFICATION OF COMPLIANCE WITH PROJECT STABILIZATION AGREEMENT AND LABOR CODE SECTION 1776

The undersigned CONTRACTOR ON:

_____

(Project Name and Contract Number)

hereby certifies that CONTRACTOR and all Subcontractors of every tier performing work on this Project have submitted all certified payroll records mandated by Labor Code section 1776 and the Contract Documents.

If OWNER's Project Stabilization Agreement (PSA) is applicable, CONTRACTOR certifies that CONTRACTOR and all Subcontractors of every tier have complied with the PSA on the Project, including, but not limited to, signing the Letter of Assent, signing subscription agreement(s) if applicable and paying all employee benefit contributions to the appropriate trust funds. CONTRACTOR further certifies that, prior to making final payment to each Subcontractor, CONTRACTOR has obtain written releases from all appropriate trust funds affirming that such Subcontractor has paid all required employee benefits.

The undersigned is duly authorized to make this Certification on behalf of CONTRACTOR. The undersigned warrants and represents that he/she has personal knowledge of each statements in this Cerification and/or that he/she has conducted all necessary and appropriate inquiries to determine the truth, completeness and accuracy of the statements. The undersigned declares and certifies that the statements made herein are complete and accurate.

I declare under the laws of the State of California that the foregoing is true and correct.

Signature : _____ Date:_____

Print Name:_____

Title : _____

CONTRACTOR Name:_____

Address: _____

Phone/Fax Number/Email: _____

	CERTIFICATION OF COMPLIANCE WITH CEQA MITIGATIONS
	Project Name: **Date:**
	Contractor Name: **Contract No:**
	Monthly Time Period covered: From_____to_____

NOTE TO OAR: The following requirements are to be edited or expanded here and in Section 01 5000, Article 3.12 as necessary for the specific requirements of the Project. (Remove this note also.)

	REQUIREMENT	Applicable this time period (No/Yes)	In Compliance (No/Yes)
MMI-1.	Prior to Substantial Completion, CONTRACTOR shall, per design and in coordination with OWNER, perform night testing and make necessary adjustments to ensure that the lighting is installed to reduce glare such that neither the light source nor its image from a reflective surface results in spillage of light onto any point measured 5 feet from the school property line.		
MMIII-1	CONTRACTOR shall comply with and implement the applicable provisions of the most recently adopted South Coast Air Quality Management District Rule 403 and Rule 403 Implementation Handbook.		
MMV-1.	CONTRACTOR shall notify the OWNER in the event that an archaeological find or a potential archaeological find is discovered and shall cease construction activities in affected area. CONTRACTOR may resume construction activities only after receiving written notice from the OWNER. For work cessation beyond five days on the critical path, CONTRACTOR will be entitled to additional days.		
MMV-2	CONTRACTOR shall notify the OWNER in the event that human remains or possible human remains are discovered and shall cease construction activities in affected area. CONTRACTOR may resume construction activities only after receiving written notice from the OWNER. For work cessation beyond five days on the critical path, CONTRACTOR will be entitled to additional days.		
MMXI-1	During construction, CONTRACTOR shall ensure that all construction is performed in accordance with City of Los Angeles noise standards. No noise intensive construction or repair work shall be		

	REQUIREMENT	Applicable this time period (No/Yes)	In Compliance (No/Yes)
	performed between the hours of 9:00 pm and 7:00 am on any weekday, nor before 8 am or after 6 pm on any Saturday, or at any time on Sundays or federal holidays.		
MMXI-2.	CONTRACTOR shall ensure that all internal combustion powered equipment shall be equipped with properly operating mufflers and kept properly tuned to alleviate noise and pollution.		
MMXI-3.	During construction, CONTRACTOR shall locate portable equipment as far as possible from nearby residents.		
MMXI-4.	CONTRACTOR shall store and maintain equipment as far as possible from nearby residents.		

I hereby certify that all **CEQA** requirements were complied with in the time period stated or not for the following reasons.
Reasons for Noncompliance and efforts made to make correct such noncompliance:

_____
_____
_____
_____
_____

The undersigned warrants and represents that he/she has personal knowledge of each statements and/or that he/she has conducted all necessary and appropriate inquiries to determine the truth, completeness and accuracy of the statements.

_____ for this contract.
(Position/Title)

_____	_____	_____
Print Name	Signature	Date

Owner's Authorized Representative acknowledgement of Receipt

_____	_____	_____
Print Name	Signature	Date

Los Angeles Unified School District

FACILITIES SERVICES DIVISION

CERTIFICATE OF SUBSTANTIAL COMPLETION

School Name: _____ Date of Issuance: _____

Project Name: _____ Project Number: _____

Issued To: _____ Contract Number: _____

Issued By: _____

Project Description:

The Work performed under this Contract has been reviewed and found to be substantially complete. Substantial Completion is defined as the stage in the progress of the Work when all of the requirements of the Contract are completed, except Punch List items, final warranties and guaranties, and record documents submittals. A Punch List of items to be completed, corrected and/or submitted is attached hereto. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

The Contractor will complete, correct, or submit the items on the Punch List attached hereto within _____(Days) from the date of Substantial Completion.

The date of Substantial Completion of the Project designated above is hereby established as _____(Date) is also the date of commencement of all applicable warranties required by the Contract Documents except as noted below:

Warranty Exceptions:

Architect's Signature	***Name (Printed)***	***Date***
Contractor's Signature	***Name (Printed)***	***Date***

The Owner accepts the Work as substantially complete and will assume full possession thereof at _____ (time) on _____ (date).

Owner Authorized Representative Signature	***Name (Printed)***	***Date***
Senior Project Manager Signature	***Name (Printed)***	***Date***
Regional Construction Director Signature	***Name (Printed)***	***Date***

cc Facilities Construction Contracts, FCIU, Inspection

Certificate of Substantial Completion

EXHIBIT D

CHANGE ORDER PROPOSAL - LABOR RATE CALCULATION FORM
REQUEST FOR RATE HIGHER THAN FULLY BURDENED LABOR RATES

NOTE: The contractor is required to complete one form for each craft/trade/classification for which they request a rate higher than the FSD published fully burdened labor rates and attach the supporting documents.

PERFORMING CONTRACTOR _____ DATE _____

PROJECT _____ CONTRACT #. _____

PRIME CONTRACTOR _____ CONTRACTOR JOB #. _____

LOCAL UNION ☐ YES ☐ NO #. _____ PHONE ( ) _____ P.S.A. ☐ YES ☐ NO

CRAFT / TRADE _____ CLASSIFICATION _____ O.C.I.P. ☐ YES ☐ NO

WORKERS COMP. CLASS CODE _____ DATE WAGE EXPIRES _____

		STRAIGHT TIME Daily	OVERTIME Daily or Saturday	OVERTIME Sunday/Holiday
(A) BASIC HOURLY RATE				
FRINGES (EMPLOYER PAYMENTS)				
Health & Welfare	_____ /Hr	$0.00	$0.00	$0.00
Pension	_____ /Hr	$0.00	$0.00	$0.00
Vacation / Holiday	_____ /Hr	$0.00	$0.00	$0.00
Training	_____ /Hr	$0.00	$0.00	$0.00
Other Payments	/Hr	$0.00	$0.00	$0.00
Other (specify): _____	/Hr	$0.00	$0.00	$0.00
(B) Total Fringes		$0.00	$0.00	$0.00
(C) TOTAL PREVAILING WAGE (A+B)		$0.00	$0.00	$0.00
(D) PAYROLL TAXES & WORKERS' COMPENSATION				
F.I.C.A./Medicare	7.65 %			
F.U.T.A.	0.134 %			
S.U.T.A.	1.043 %			
E.T.T.	0.017 %			
Sub Total	**8.844** %			
Round up to	**9.000** %			
Adder				
Workers' Comp. *	0 %			
(E) Total	**9.00** x (A)	$0.00	$0.00	$0.00
TOTAL - HOURLY LABOR RATE (C+E)		$0.00	$0.00	$0.00

* This amount will be zero if an Owner-Controlled Insurance Program ("OCIP") is in effect

Note: If the actual numbers for payroll taxes are greater than 9%, please submit proper documents to justify the higher rate.

LOS ANGELES UNIFIED SCHOOL DISTRICT

Facilities Services Division

CONDITIONAL WAIVER AND RELEASE UPON FINAL PAYMENT

Upon receipt by the undersigned of a check from _____

in the sum of $ _____
(Amount of Check)

payable to _____
(Payee or Payees of Check)

and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's lien, stop notice, or bond right the undersigned has on the job of the Los Angeles Unified School District located at

_____.
(Project Name/Contract # and Address)

This release covers the final payment to the undersigned for all labor, services, equipment or material furnished on the job, except for disputed claims for additional work in the

amount of $ _____.

Before any recipient of this document relies on it, the party should verify evidence of payment to the undersigned.

Dated: _____ _____
(Company Name)

By: _____
(Title)

NON-CONFORMANCE ITEMS LIST

School Name:
Project Description:
Project Number(s):
DSA App. #(s):
Contract #:
Project Inspector:
General Contractor:

EXHIBIT F

Inspection Department
Trust • Credibility • Performance

Last updated on:

Scope	Item No.	Bldg. Name/# & Item Location	Project#	DSA 03-App#	DSA 154 (# or N/A)	Contract/Code Reference(s)	Description	Date Cited	Cited by	CCD Appvd (Y, N, or N/A)	Board Ratified Change (Y, N, N/A)	Date Closed	Closed by	Age in Days

SAMPLE

LOS ANGELES UNIFIED SCHOOL DISTRICT

Facilities Services Division

DAILY TIME AND MATERIAL RECORD

School Name: _____ Report No: _____

Project Name: _____ Date Performed: _____

Project Number: _____ Date of Report: _____

Issued To: (OAR) _____ CD Number: _____

LABOR:

Quantity	Description	Hours
	TOTAL	

EQUIPMENT:

Quantity	Description	Hours
	TOTAL	

MATERIAL:

Quantity	Description	Hours
	TOTAL	

Issued by: _____ _____ _____

(Contractor's Signature) *Name (Printed)* *Date*

Acknowledged By: _____ _____ _____

(Inspector of Record) *Name (Printed)* *Date*

(This acknowledgment does not constitute approval)

Facilities Services Division
333 S. Beaudry Avenue, 23rd Floor
Los Angeles, California 90017
Phone: (213) 241-4811

Alberto M. Carvalho
Superintendent

Pedro Salcido
Deputy Superintendent
Business Services & Operations

Krisztina Tokes
Chief Facilities Executive

5 DAY NOTICE

(Date of Issuance)

TO: *(Contractor Name and Address)*

TO: *(Performance Bond Surety)*

Project Name:
Project No.:
Contract No.:

In accordance with General Conditions Section 15.5.3 you are hereby given notice that within **five (5) days** of the date of this notice the CONTRACTOR and/or the Performance Bond Surety listed above must commence correction of the following deficiencies listed below:

Item No.	**Item Description**

In the event the Contractor and/or its performance bond surety fail to commence correction within five (5) days, the OWNER in accordance with General Conditions Article 15 Work Suspension and Termination may, at its sole discretion, under Contract, and/or in equity, do any and/or all of the following:

1. Without any further notice, make good such deficiencies (i.e., General Conditions Sections 15.1 through 15.3.9, inclusive) by whatever method OWNER deems most expedient with all costs and expenses thereof being deducted and/or drawn down, and charged against and/or from, the CONTRACTOR, the Contract funds; including retention, and/or the performance bond from the Contract Amount;

2. Without any further notice, terminate CONTRACTOR right to proceed with the Work of the Contract, in whole or in part, without terminating CONTRACTOR obligations under the Contract, the OWNER will then either:
    a. Issue a written notice to the performance bond surety demanding the performance bond to perform under the Contract and providing the surety with ten (10) days to commence performing and/or confirm that it will commence performing immediately under the Contract and the performance bond.
    b. complete the Work of the Contract, in whole or in part, by whatever method OWNER deems most expedient with all costs and expenses thereof being deducted and/or drawn down, and/or charged against and/or from CONTRACTOR, the Contract funds, including retention, and/or performance bond.

3. Initiate procedures to revoke any pre-qualification status the CONTRACTOR may have with the OWNER; and/or

4. Initiate procedures to have the CONTRACTOR declared a non-responsive CONTRACTOR and barred from all current and/or future OWNER Projects for a period of two (2) years to five (5) years;

(If options 2, 3, and/or 4 are to be used, you must consult with and get approval from the District's General Counsel's office BEFORE issuing this Notice.)

Issued By: _____

(Owner's Authorized Representative) *Signature* *Date*

Cc: Facilities Contract Administration, Design Manager, Architect, Inspector of Record, Local District ( ), Complex Project Manager, District ( )

EXHIBIT I

Alberto M. Carvalho
Superintendent

Pedro Salcido
Deputy Superintendent
Business Services & Operations

Krisztina Tokes
Chief Facilities Executive

Facilities Services Division
333 S. Beaudry Avenue, 23rd Floor
Los Angeles, California 90017
Phone: (213) 241-4811

July 14, 2025

(INSERT CONTRACT
NAME AND ADDRESS)

FAXED:

NOTICE OF AWARD

Contract No.:	**(Insert Number)**
Project:	**(Insert Project Name and Number)**
Project Description:	**(Insert Description)**
Contract Amount:	$xxxx
Contract Duration:	xxx Calendar Days

This is your notice that you have been awarded the contract for the above-referenced project on OCTOBER 15, 2014 hereby defined as the **EFFECTIVE DATE OF THE CONTRACT.**

The executed contract documents are ready for you to pick-up in the Facilities Construction Contracts office, 333 S Beaudry Ave., 22nd Fl., Los Angeles, CA 90017. **YOU MUST PICK THEM UP PROMPTLY.**

Please contact your project Owner Authorized Representative (OAR), (NAME), at (213) 241-1001 regarding scheduling of the Job Start Meeting and issuance of the Notice to Proceed.

If you should have any questions regarding award of contract, please contact our office at (562) 654-9007.

Sincerely,

CONTRACT ADMINISTRATOR

c: J DOE, RPMD
T JOHNSON, (OAR)
Inspection Section
Alliant Insurance Services
File (Bid No: 1510000)
Existing Facilities P/S

RECORDING REQUESTED BY

LOS ANGELES UNIFIED SCHOOL DISTRICT
BOARD OF EDUCATION

AND WITH RECORDED MAIL TO

LOS ANGELES UNIFIED SCHOOL DISTRICT
BOARD OF EDUCATION

Facilities Construction Contracts
1545 Wilshire Boulevard, Suite 100
Los Angeles, CA 90017

EXHIBIT J

NOTICE OF COMPLETION

Contract No.:

NOTICE IS HEREBY GIVEN by the Board of Education of

LOS ANGELES UNIFIED SCHOOL DISTRICT,

hereinafter called DISTRICT, address, 333 South Beaudry Avenue, Los Angeles, California, that as owner of property hereinafter described, the DISTRICT,

on or about the duly entered into a

contract with

of the City of ,

for the work of

at the

located at

that the
is the surety under the contract bonds furnished in connection with the contract, and that the work contemplated in the contract has been completed and accepted by the LAUSD Board of Education on the __the DAY OF ____, 201_.

SAMPLE

LOS ANGELES UNIFIED SCHOOL DISTRICT BOARD
OF EDUCATION

_____
ERNIE C. BYRD, JR.
Senior Manager, Construction Contracts

I certify under penalty of perjury that the foregoing is true and correct.

_____ _____
Date ERNIE C. BYRD, JR.

LOS ANGELES, CALIFORNIA
Form 82.27 A (Rev.)

EXHIBIT K

Alberto M. Carvalho
Superintendent

Pedro Salcido
Deputy Superintendent
Business Services & Operations

Krisztina Tokes
Chief Facilities Executive

Facilities Services Division
333 S. Beaudry Avenue, 23rd Floor
Los Angeles, California 90017
Phone: (213) 241-4811

June 16, 2023

(INSERT CONTRACT
NAME AND ADDRESS)

FAXED
Fax No. (888) 123-4567

NOTICE OF INTENT TO AWARD CONTRACT – REMAINING REQUIREMENTS

Contract No.: **(Insert Number)**
Project: **(Insert Project Name and Number)**
Project Description: **(Insert Description)**
Contract Amount: $xxxx
Contract Duration: xxx Calendar Days

This is your notice that you were determined to have submitted the lowest responsive bid for the above-referenced project. It is the District's intent to award the contract provided that you comply with all further requirements. This notice **IS NOT AN AWARD OF THE CONTRACT.**

The contract documents (sealed set of plans and specifications, copy of Bid & Acceptance Form and Bond forms) together with the Workers Compensation and General Liability Claim Kit, will be ready for you to pick-up in the Facilities Construction Contracts office, 333 S. Beaudry Ave., 22nd Fl., Los Angeles, CA 90017, on September 22, 2014. **YOU MUST PICK THEM UP PROMPTLY.**

Within **seven (7)** business days of the above pick-up date, by **[INSERT DATE]** you shall furnish to the FACILITIES CONSTRUCTION CONTRACTS office, the documents indicated below. (Refer to Bidding Requirements: Document 00700 General Conditions, Section 5.4.2)

PLEASE EXECUTE AND RETURN ALL DOCUMENTS RECEIVED. FAILURE TO DO SO WILL RESULT IN THE FORFEITURE OF YOUR BID BOND.

NOTICE OF INTENT TO AWARD: REMAINING REQUIREMENTS

X 1. Bonds – Executed by contractor, and by Attorney-in-Fact for surety. The bonds with acknowledgment attached must be executed by a surety who is an admitted insurer authorized to transact surety insurance in the State of California. It is NOT necessary for the contractor or surety to obtain the Los Angeles County Clerk's Office certification prior to returning the bond to PROCUREMENT ADMINISTRATION.

2. Original Certificate of Insurance (Document 00620), as indicated below, executed by an authorized representative of insurer:

_____ Workers' Compensation
_____ Comprehensive General Liability
_____ Automobile Liability (Owned, hired, and non-owned)
_____ Pollution Liability (includes Asbestos/Lead Abatement) endorsement
_____ Facilities Construction Contracts already has the required insurance certificates on file

__X__ 3. **Confirmation of Enrollment in the Owner Controlled Insurance Program (OCIP).**
It is your responsibility to enroll into the OCIP. It is also your responsibility to ensure OCIP enrollments of all eligible listed subcontractors, and to provide assurance of their enrollment. The current Insurance Manual is available from the LAUSD Facilities website at *http:/www.laschools.org/fcs/cc/pq/file-storage/?folder_id=1045824*.

Please contact the Insurance Administrator at Alliant Insurance Services at 866-394-7937, or via email at *alliantwrapX@alliantinsurance.com*, to request enrollment packages. Note: All enrollments should be completed online. Access will be granted once Alliant has been notified of your awarded contract.

An OCIP enrollment packet will be sent to you by Alliant. It will include instructions for online access and enrollment. Please complete the enrollment ASAP to ensure your ability to start work in a timely fashion.

__X___4. A signed **Letter of Assent** (Attachment A to the Project Stabilization Agreement (PSA)). A Letter of **Assent must be executed and submitted by the prime contractor and all listed subcontractors to both Procurement Administration and Labor Compliance Department. Additionally, signed Letter(s) of Assent for subcontractors of all tiers that were not listed on Document 00440 must be submitted directly to Labor Compliance Department. Procurement Administration will NOT award any contract until ALL Letter(s) of Assent for the Prime Contractor and the listed subcontractors have been received.** See Section 2.5(b) of the PSA. Make sure all appropriate information is included in the body of the letter (i.e., company name, LAUSD construction contract #, and school name(s) or project site(s)). A sample Letter of Assent is attached herein for your reference.

Attachment B- Elevator Contractors- Acknowledges that the International Union of Elevators Constructors is signatory to the Project Stabilization Agreement (PSA)

__X___5. I certify under penalty of perjury under the laws of the State of California that my firm and all Subcontractors employed by my firm are in compliance with all requirements as set forth in the bidding and contract documents for this project.

__X___6. I certify under penalty of perjury under the laws of the State of California that my firm is still prequalified with the District and is eligible for an award of this contract, and that the information we submitted as part of the prequalification process remains unchanged.

Executed on _____, at _____, California
Date City

_____
Signature of Authorized Officer

_____ _____
Print Name Title

_____
Date

If you should have any questions regarding this notice, please contact your Owner Authorized Representative (OAR), [Insert Name], at (xxx.xxx.xxx), or our office at (213) 241.1000.

Please sign and return this notice to Facilities Construction Contracts.

Sincerely,

CONTRACT ADMINISTRATOR

c: (Name) , OAR
Alliant Insurance Services
File

Bid No: 1510000
EXISTING FACILITIES

P/S

EXHIBIT L

LOS ANGELES UNIFIED SCHOOL DISTRICT
Facilities Services Division

Date of Issuance:

Issued to Contractor:

NOTICE OF PARTIAL USE OR OCCUPANCY

Issued for School:
Project Name:
Project #:
Contract #:

As of and per Article 17 of the General Conditions (2017 Version), the Los Angeles Unified School District will take Partial Use or Occupancy of the following portions of the Work:

Occupancy:

_____

_____

_____

_____

Attached is a list of corrective work and/or deficiencies in those areas to be occupied. The corrective work and/or deficiencies listed are to be completed on, or before, and prior to the District's Partial Use or Occupancy of the areas and at no additional cost to the District.

This Notice does not constitute an acceptance of the Work, nor does it relieve Contractor from any obligations under the Contract Documents, including timely performance of the Punch List as defined in the General Conditions, which Punch List will not include the listed corrective work and/or deficiencies in the Work verified as complete prior to Partial Use or Occupancy of the areas identified in this Notice.

_____	_____	_____
Contractor's Signature	Printed	Date
_____	_____	_____
Owner's Authorized Representative	Printed	Date

LOS ANGELES UNIFIED SCHOOL DISTRICT

Facilities Services Division

1. Area(s) to be Occupied: (Attach a copy of the Safe School Plan identifying, with crosshatching, those specific areas to be occupied.)

2. Safety Measures and Responsibilities:_____
_____
_____
_____
_____

3. Security Measures and Responsibilities:_____
_____
_____
_____
_____

4. Maintenance and Operations Responsibilities:_____
_____
_____
_____
_____

5. Utility Service and Payment Responsibilities:_____
_____
_____
_____

6. Damage to Work Responsibilities:_____
_____
_____
_____
_____

7. Equipment Warranties and Guarantees Activated:_____
_____
_____
_____
_____
_____

(Attachments)

Office of Environmental Health & Safety
333 S. Beaudry Avenue, 21st Floor
Los Angeles, Ca 90017
Phone: (213) 241-3199

Essential Safety Checklist & Certificate of Occupancy

SAMPLE

*The purpose of this document is to identify **essential safety requirements** to be met prior to occupancy of new schools, buildings or major renovation projects at existing schools. A comprehensive listing of federal, state and local regulations dealing with school safety maybe found in the "OEHS School Inspection Guidebook".*

Date: 4/7/2023	**OEHS Inspector: George Karibyants**	**CPM: Mauricio Pinto**	
School: Kennedy SH	**OAR: Thomas Valdez**	**CPM in attendance?**	**Yes ☐ No ☒**
Designated Area: New Portable Bldgs-PKG-2	**Principal: Oscar Vasquez**	**Certificate of Substantial Completion?**	**Yes ☐ No ☒**

		Y	N	N/A
A.	**Access and Egress**			
1.	Are pathways to and from buildings adequately marked, unobstructed, and free of debris and tripping hazards?	☒	☐	☐
2.	Are the areas of the campus to be occupied adequately segregated from ongoing construction activity through the use of barricades, fencing or other means?	☒	☐	☐
3.	Are stairways, halls, and other exit pathways in all building corridors clearly identified with proper signage?	☒	☐	☐
4.	Are fire doors and associated panic hardware functional?	☒	☐	☐
5.	Are there at least 2 exit pathways for rooms with an occupant load greater than 50?	☒	☐	☐
B.	**Building & Room Conditions**			
1.	Is adequate lighting provided in all rooms?	☒	☐	☐
2.	Are electrical outlets and panels covered, and are other electrical components and wiring properly guarded and functional?	☒	☐	☐
3.	Has each classroom been provided with a hard-wired or wireless connection capable of calling 911 (if applicable to project)?	☒	☐	☐
4.	Are flooring materials, walls, and ceilings installed and properly finished and ready for use?	☒	☐	☐
5.	Are project areas free of significant chemical odors?	☒	☐	☐
6.	Is hot water available in food preparation areas and health office (if applicable to project)?	☒	☐	☐
7.	Are classrooms and other areas of the campus clean and free of construction debris?	☒	☐	☐
C.	**Fire Alarm and Suppression Systems**			
1.	Has the IOR issued a Project Status Report for the buildings to be occupied, indicating the fire alarm and suppression systems are complete?	☒	☐	☐
2.	If the Project Status Report indicates that fire safety systems are not complete and certified, has the IOR distributed a Fire Safety Status Report?	☒	☐	☐
3.	Has the Local Fire Authority reviewed the Fire Safety Status Report and concurs that there are no outstanding issues that prohibit occupancy?	☒	☐	☐
4.	Have fire extinguishers been mounted throughout project areas (within 75 feet of classrooms and 25 feet of flammable liquids storage areas (if applicable to project)?	☒	☐	☐
E.	**Clearance for Occupancy**			
1.	Has the Owner's Authorized Representative (OAR) issued a *Certificate of School Functional Readiness*, and has the IOR issued a Project Status Report indicating the facility or designated locations are ready for occupancy?	☒	☐	
2.	Has OEHS assessed compliance with the above requirements and determined the designated areas are safe to occupy?	☒	☐	

Notes:

1. Permanent covers for copper pipes will be installed within 30 days per construction team statement. Temporary barricades were placed by the cafeteria to minimize the safety hazards.
2. NFPA 72 and NFPA 24 are not certified as of 4/6/2023.
3. The portable Bldgs. under MEP connection & fixture installation progress, permanent switchgear JA1 not installed.
4. Ground testing report pending. - Complete per PSR on 4/7/23
5. County Health Department inspection completed, certification pending. - Final inspection report provided on 4/10/23; the kitchen is cleared for occupancy.

Signature: _____ **Date:** 4/7/2023

Revised 3/1/18

COUNTY OF LOS ANGELES ◆ DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH
SPECIALIZED SURVEILLANCE AND ENFORCEMENT BRANCH
PLAN CHECK PROGRAM - METROPLEX
3530 WILSHIRE BLVD, 9th FL, LOS ANGELES, CA 90010
PHONE: (213) 351-7352
WWW.PUBLICHEALTH.LACOUNTY.GOV/EH

SAMPLE

PLAN CHECK OFFICIAL INSPECTION REPORT

DATE	04/10/2023	**EHS**	MARISTELA YAMBAO
PLAN CHECK NUMBER	SR0262739		
PROGRAM ELEMENT	1702 - RESTAURANT (501-1,999 SF)		
OWNER / REQUESTER	JOHN BONILLA, PM		
DBA	LAUSD - JOHN F KENNEDY HIGH SCHOOL		
ADDRESS	11254 GOTHIC AVE, GRANADA HILLS, CA 91344		

FINAL REINSPECTION STATUS: APPROVED

CORRECTIONS COMPLETED

CORRECTION CATEGORY	DATE IDENTIFIED	DATE CORRECTED
WATER SUPPLY	03/07/2023	03/20/2023
PLAN SUBMITTAL/REMODEL	03/07/2023	03/20/2023
PLAN SUBMITTAL/REMODEL	03/20/2023	04/10/2023

ADDITIONAL REQUIREMENTS

OFFICE APPROVAL

COMMENTS

FINALED - TEMPORARY KITCHEN IS APPROVED FOR USE - CAMPS AND SCHOOL PROGRAMS WILL BE NOTIFIED

- NO NEW PERMIT WILL BE ISSUED; THE TEMPORARY KITCHEN WILL BE USING THE PERMIT FOR THE EXISTING CAFETERIA SINCE THE MAIN CAFETERIA WILL BE CLOSED WHILE THERE ARE CONSTRUCTION IN THE NEIGHBORING BUILDINGS. THIS IS THE REASON WHY A TEMPORARY KITCHEN IS BUILT. ONCE ALL CONSTRUCTION IS DONE, THIS TEMPORARY KITCHEN WILL BE DEMOLISHED AND THE MAIN CAFETERIA WILL REOPEN. A LETTER FROM THE SCHOOL IS ON FILE AND CHIEF OF CAMPS AND SCHOOL PROGRAMS IS AWARE.

Help us serve you better by completing a short survey. Visit our website at www.publichealth.lacounty.gov/eh.

EHS Signature

PLAN CHECK OFFICIAL INSPECTION REPORT

DATE	04/10/2023	**EHS**	MARISTELLA YAMBAO
PLAN CHECK NUMBER	SR0262739		
PROGRAM ELEMENT	1702 - RESTAURANT (501-1,999 SF)		
OWNER / REQUESTER	JOHN BONILLA, PM		
DBA	LAUSD - JOHN F KENNEDY HIGH SCHOOL		
ADDRESS	11254 GOTHIC AVE, GRANADA HILLS, CA 9[illegible]344		

SAMPLE

DISCLOSURES

It is a misdemeanor violation to begin operation without a valid Public Health Permit/License. The Public Health Permit/License will be issued by the Los Angeles County Department of Public Health Environmental Health Division (DPH-EH) Plan Check Program at the job site following final inspection and approval by all applicable agencies. Remodeled areas of an existing food facility/establishment must obtain a final inspection and approval from all applicable enforcement agencies prior to use.

Any future alteration, construction, building, renovation, repair, change of equipment, change of the operation of a food facility/establishment or change of menu may require plans to be submitted to the DPH-EH Plan Check Program. Additional approvals may be required from other enforcement agencies.

It is improper and illegal for any County officer, employee or inspector to solicit bribes, gifts or gratuities in connection with performing their official duties. Improper solicitations include requests for anything of value such as cash, discounts, free services, paid travel or entertainment, or tangible items such as food or beverages. Any attempt by a County employee to solicit bribes, gifts or gratuities for any reason should be reported immediately to either the County manager responsible for supervising the employee or the Fraud Hotline at (800) 544-6861 or www.lacountyfraud.org. YOU MAY REMAIN ANONYMOUS

Public Health Permit/License:
A separate fee is required for the Public Health Permit/License. A billing statement will be sent to the permit/license holder annually by the DPH-EH. The fee is required to be paid to perform or carry on, conduct or engage in any mobile food facility listed in Los Angeles County Code, Title 8, Section 8.04.720.

State and Local Licenses and Permits:
Contact the State of California and your local city hall regarding additional license and permit requirements.

Restrooms:
Customer may use restroom facilities if they are located in a customer area. Customers may not enter the food preparation area, food storage area, or the utensils washing /storage areas in order to access the restrooms. All food, utensils and equipment must be protected from contamination.

Routine Inspection: The DPH-EH conducts routine inspections of all food facilities in Los Angeles County. Following the issuance of your Public Health Permit by the Plan Check Program, an Environmental Health Specialist from your local district will conduct an inspection of your facility. If your Business is located in a city that has adopted the grading ordinance, the inspector will post a grade or score card at your facility. Grade / Score cards are not issued by the Plan Check Program.

Help us serve you better by completing a short survey. Visit our website at www.publichealth.lacounty.gov/eh.

EHS Signature

Los Angeles Unified School District

Facilities Services Division

CERTIFICATE OF SCHOOL READINESS

School/Project Name: Kennedy HS - Comprehensive Modernization
School Address: 11254 Gothic Ave
Granada Hills, CA 91344

Project Number: 10368160
Contract Number: 2110045
Date: 4/3/2023

SAMPLE

All school building areas to be occupied below are functionally complete and ready for occupancy by students and school administrators. See below:

- ☑ **New Portables at Jane Adams Continuation High School - Pkg 10**
- ☑ **Interim Housing Classrooms, Restrooms and Supporting Spaces at Village- Pkg 2**
- ☑ **Utility Make Ready - Pkg 1**
- ☑ **Interim Kitchen/Scramble Building**
- ☑ **Interim Clinic**
- ☑ **Interim Lunch Shelter**
- ☑ **Interim Basketball Courts**
- ☑ **Interim Housing Locker Rooms**

Thomas Valdez **Owner Authorized Representative (OAR) Name**	Thomas Valdez **OAR Signature**	4/3/2023 **Date**
Mike Bagheri **Senior Project Manager Name**	**Senior Project Manager Signature**	4/3/2023 **Date**
Robert Lester **Regional Director Name**	Robert Lester Digitally signed by Robert Lester DN: cn=Robert Lester, o=Project Execution, ou=LAUSD - FSD, email=robert.lester@lausd.net, c=US Date: 2023.04.04 05:53:14 -07'00' **Regional Director Signature**	4/4/2023 **Date**

cc: OEHS Safety Representative
IOR
M&O
School Mgmt Services
Director of Construction
Project File

EXHIBIT M

Los Angeles Unified School District

Facilities Services Division
Facilities Construction Contracts

JOHN DEASY
Superintendent of Schools

KELLY SCHMADER
Chief Facilities Executive
Facilities Services Division

MARK HOVATTER
Director
Facilities Contracts

July 17, 2025

FAXED:
CERTIFIED MAIL:
RETURN RECEIPT REQUESTED

SAMPLE

This is your **NOTICE TO PROCEED** in connection with .

Contract No.:
Project:
Description:

The period for completion of the subject work, according to the contract, is as follows:

Start Date	Calendar Days	Contract Completion Date:

Your attention is called to the Contract provisions with reference to the liquidated damages in the event the work is not completed within the Contract Time and/or Milestones.

Before you accept the site for construction, you are required to make a survey of the site with the assigned Project Inspector. Damages and irregularities existing on the site, not noted during the preconstruction survey, will be assumed to be caused by your operation.

The Owner Authorized Representative (OAR) for this project is _____ , at (Telephone number) and he/she will be the focal point for all formal communication on this project from this date on.

LOURDES V. JUSAY
CONTRACT EXECUTION SUPERVISOR

LVJ/

C:	Inspection Section	Fax: 213-745-1486	District Board Member(s):
	Labor Compliance	Fax: 213-633-3387	LD Superintendent:
	FCIU	Fax: 213-633-8191	LD Facilities Director:
	Accounts Payable	Fax: 213-241-8912	LD Project Manager:
	OEHS	Fax: 213-241-6816	Complex PM:
	Asbestos Technical Unit (ATU)	Fax: 213-745-1488	School Principal:
	School Police: Watch Commander	Fax: 213-742-0221	Field CAA-
	AON Risk Services	Fax: 213-689-4358	
	AON Service Center	Fax: 800-363-6695	
	OCIP Representative: Robert Reider	Fax: 213-241-8993	
	OAR:		

New Construction/Existing Facilities

LOS ANGELES UNIFIED SCHOOL DISTRICT

Facilities Services Division

EXHIBIT B

OR EQUAL / SUBSTITUTION / DEVIATION SUPPORTING DOCUMENT REQUEST FORM

School Name: _____ Date: _____

Project Name: _____ Project Number: _____

Substitution Request No.: _____

Contractor pursuant to General Condtions 6.14.5 submits the proposed items. If the OWNER accepts such items so described, the undersigned may furnish such item with all necessary labor, materials, equipment and incidentals to perform and complete the Work.

Item No.	SPECIFIED ITEM	Specification Section	Proposed Or Equal / Substitution / Deviation (and name of Subcontractor if different)

CERTIFICATION

Under penalty of perjury under the Laws of California, I certify that the proposed substitution will be readily available, perform adequately the functions and achieve the results called for by the design concept, be similar in substance to that specified, and be suited to the same use as that specified.

Contractor: _____ _____ _____

(Please print name of company) (Name and title) (Contractor's Signature) (Date)

Los Angeles Unified School District

Facilities Services Division

PROPERTY INVENTORY

School Name: _____ Date: _____

Project Name: _____ Project No.: _____

Issued To: _____ Contract No.: _____

Item No.	Description Room/Space	Qty	Fixed and/or Portable (F/P)	Condition (Poor/Fair/New)	Comments

Issued by: _____ _____ _____

Signature *Name (Printed)* *Date*

cc:

LOS ANGELES UNIFIED SCHOOL DISTRICT

Facilities Services Division

Exhibit C

REQUEST FOR CERTIFICATE OF SUBSTANTIAL COMPLETION

The undersigned CONTRACTOR on:

_____

(Project Name and
Contract Number)

hereby certifies, that the Work under the Contract is substantially complete as defined by this Contract. CONTRACTOR further certifies that the remaining Work as shown in the attached CONTRACTOR's Corrective List developed and substantiated by the CONTRACTOR, are minor corrective items and will be corrected within the time frame prescribed in the Administrative Closeout.

All of the following submittals and/or actions must be delivered, completed and approved to achieve Substantial Completion:

- ☐ Contractor's Corrective List attached
- ☐ Operation/Maintenance Manuals
- ☐ Preliminary Warranties and Guarantees
- ☐ Spare parts & extra materials
- ☐ Final clean-up
- ☐ Owner training & orientations
- ☐ Testing, Inspection and Balance of all equipment and systems
- ☐ Certification of Compliance with PSA and Labor Code
- ☐ Regulatory agency operating and construction permits
- ☐ All Deviation corrections and Change Order(s) Work
- ☐ All documents precedent to Substantial Completion

The undersigned is duly authorized to make this request on behalf of CONTRACTOR. The undersigned warrants and represents that he/she has personal knowledge of each statement in this Request and/or that he/she has conducted all necessary and appropriate inquiries to determine the truth, completeness and accuracy of the statements. The undersigned declares and certifies that the statements made herein are complete and accurate.

I declare, under the law of the State of California, that the foregoing is true and correct.

Signature: _____ Date: _____

Print Name: _____ Title: _____

LOS ANGELES UNIFIED SCHOOL DISTRICT

Facilities Services Division

CONTRACTOR Name: _____

Address: _____

Phone/Fax Number/Email: _____

Owner Use Only:

OAR Signature Date: _____ Date: _____

LOS ANGELES UNIFIED SCHOOL DISTRICT

EXHIBIT Q

Facilities Services Division

Request for Reduction of Retention

Section I: Completed by the Contractor

To: _____ **Date:** _____

Owner Authorized Representative (OAR)

From (Contractor): _____ **Project Number:** _____

Project Name: _____ **Contract Number:** _____

I request a reduction of retention on the above project subject to verification of the following criteria:

1. The project is more than 50 percent complete.
2. All work performed to date has been completed per the Contract Documents to the full satisfaction of the OAR.
3. [1]No Stop Notices or Withholds from my subcontractors on previously approved progress payments are filed.
4. "As built" drawings are current, maintained at the job site, and available for verification.
5. The Project Schedule for the current month is submitted and approved.
6. The job is fully staffed and will continue to be staffed in all crafts and is on Schedule.
7. The Project is in full compliance with the OCIP (Safety) Program.
8. The Project is fully compliant with CEQA and SWPP requirements.

I declare that the above criteria have been met and are true and correct. I further certify that upon receipt of payment, retention owed to subcontractors will be disbursed as required per the Public Contract Code Section 7107.

Contractor Name	Contractor Signature	Date

Section II: Completed by the Owner Authorized Representative (OAR)

Today's Date: _____ **Substantial Completion Date:** _____ **Actual % of work completed:** _____ %

(A) Current Contract Amount *(including approved COs):*		$0.00
(B) Completed & Stored To Date: *(from last Pay Appl)*		$0.00
(C) Current Amount Retained	(10 % x B):	$0.00
(D) Recommended Retention	(5-10% x A):	$0.00
(E) *Additional Retention Required (Line D - Line C):		$0.00
(F) Retention Release Amount (Line C - Line D):		$0.00

For Contracts with Escrow Agreements

Escrow Agent: _____

Escrow Account No.: _____

Amount currently in Escrow Account:

$ _____

Amount to be Retained in Escrow:

$ _____

**FCC requires copy prior to processing*

***Additional Retention Amount will be retained at the rate 10% from the future Application for Payments to a maximum of amount indicated under line item D.**

Current Contract Amount to Date: $0.00 **% Retention Recommended to be Held:** (Enter %) **Retention To Be Held:** $0.00

(Recommend between 5% minimum and 10% maximum)

I concur that all criteria listed above is verified, true and correct and recommend approval of this request.

Enter Name		
Owner Authorized Representative	*(Signature)*	Date

Section III: Administrative Approvals

Owner may consider other factors, outside of the criteria listed above, when determining and approving the percentage reduction of retention granted.

Enter Name		
Regional Dir/Regional Proj Management Dir	*(Signature)*	Date
Enter Name		
Director of Construction	*(Signature)*	Date
Approved: *Enter Name*		
Deputy Chief Facilities Executive	*(Signature)*	Date

[1] OAR must attach a statement that he has verified there are no current Stop Notices or Withholds.

EXHIBIT R

_____ _ OWNER Project Number	**Los Angeles Unified School District As OWNER** ATTACHMENT "A" **STORM WATER POLLUTION PREVENTION SITE MONITORING REPORT**	STATE OF CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

School Name: _____ _____

Project Description: Contract Number

I. **Type of Examination:** (Use one form for each type of examination):

☐ Prior to Anticipated Storm Event ☐ After Actual Storm Event ☐ Weekly

Date Examined: _____

II. **Check the response for each SWPPP question below**:

	YES	NO
1. Do you have an approved Storm Water Pollution Prevention Plan (SWPPP) and a BMP Handbook on the Project site?	☐	☐
2. Does your SWPPP incorporate an up-to-date erosion control plan?	☐	☐
3. Is the erosion control installed per plan?	☐	☐
4. Is the Work at a stage where the erosion control plan can not be constructed, is the erosion control at the Maximum Extent Practicable for the stage you are in?	☐	☐
5. Did you observe the presence of any floating materials such as oil, grease, pieces of wood, paper, etc., odor, toxics, and/ or sediments?	☐	☐
6. If yes, what is it that you observed?	_____	

III. Check the status of the following items as observed:

SWPPP Items	Not Applicable	Acceptable	Not Acceptable		Repairs Required	Date Repairs Completed
1. De-silting Basins (Cleaned)	☐	☐	☐	--	☐	_____
2. Water Quality Basin	☐	☐	☐	--	☐	_____
3. Silt Fences	☐	☐	☐	--	☐	_____
4. Hay bales/ Check dams/ Sandbags	☐	☐	☐	--	☐	_____
5. Berms and Dikes	☐	☐	☐	--	☐	_____
6. Sand/Gravel Inlet	☐	☐	☐	--	☐	_____
7. Slope Protection - Polymer and Mulch	☐	☐	☐	--	☐	_____
8. Vegetation / Re-vegetation	☐	☐	☐	--	☐	_____
9. Dust Control	☐	☐	☐	--	☐	_____

10. Surface Erosion	☐	☐	☐	--	☐	
11. Slope Instability	☐	☐	☐	--	☐	
12. Storage	☐	☐	☐	--	☐	
13. Disposal	☐	☐	☐	--	☐	
14. Spills	☐	☐	☐	--	☐	
15. Clean-up	☐	☐	☐	--	☐	
16.	☐	☐	☐	--	☐	
17.	☐	☐	☐	--	☐	

Detailed Storm Water Quality Construction Site Inspection Checklist

ATTACHMENT "A" (Cont.)

GENERAL INFORMATION				
Project Name				
Project Number	LAUSD Ref. No.			
Contractor				
Inspector's Name				
Inspector's Title				
Signature				
Date of Inspection				
Inspection Type (Check Applicable)	❒ Prior to forecast rain ❒ 24-hr intervals during extended rain		❒ After a rain event ❒ Other _____Weekly or Quarterly____	
Season (Check Applicable)	❒ Rainy		❒ Non-Rainy	
Storm Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min. Hr. Days	Approximate Rainfall Amount (inches)	

PROJECT AREA SUMMARY AND DISTURBED SOIL AREA (DSA) SIZE		
Total Project Area	_____	Acres
Field Estimate of Active DSAs	_____	Acres
Field Estimate of Non-Active DSAs	_____	Acres

INSPECTION OF BMPs - ATTACHMENT "A" (Cont.)				
BMP	**Yes**	**No**	**N/A**	**Corrective Action**
Preservation of Existing Vegetation				
Is temporary fencing provided to preserve vegetation in areas where no construction activity is planned?				
Location:				
Location:				
Location:				
Location:				
Erosion Control				
Does the applied temporary erosion control provide 100% coverage for the affected areas?				
Are any non-vegetated areas that may require temporary erosion control?				
Is the area where erosion controls are used required free from visible erosion?				
Location:				
Location:				
Location:				
Location:				
Temporary Linear Sediment Barriers (Silt Fence, Fiber Rolls, Sandbag Barriers, etc.)				
Are temporary linear sediment barriers properly installed, functional and maintained?				
Are temporary linear sediment barriers free of accumulated litter?				
Is the built-up sediment less than 1/3 the height of the barrier?				
Are cross barriers installed where necessary and properly spaced?				
Location:				
Location:				
Location:				
Location:				
Location:				
Storm Drain Inlet Protection				
Are storm drain inlets internal to the project properly protected?				
Are storm drain inlet protection devices in working order and being properly maintained?				
Location:				
Location:				
Location:				
Location:				

INSPECTION OF BMPs - ATTACHMENT "A" (Cont.)				
BMP	**Yes**	**No**	**N/A**	**Corrective Action**
Location:				
Sediment Basins				
Are basins designed in accordance with the requirements of the General Permit?				
Are basins maintained to provide the required retention/detention?				
Are basin controls (inlets, outlets, diversions, weirs, spillways, and racks) in working order?				
Location:				
Location:				
Location:				
Location:				
Stockpiles				
Are all locations of temporary stockpiles, including soil, hazardous waste, and construction materials in approved areas?				
Are stockpiles protected from run-on, run-off from adjacent areas and from winds?				
Are stockpiles located at least 15 m from concentrated flows, downstream drainage courses and storm drain inlets?				
Are required covers and/or perimeter controls in place?				
Location:				
Location:				
Location:				
Location:				
Concentrated Flows				
Are concentrated flow paths protected and free from visible erosion?				
Location:				
Location:				
Location:				
Location:				
Tracking Control				
Is the entrance stabilized to prevent tracking				
Is the stabilized entrance inspected daily to ensure that it is working properly				
Are points of ingress/egress to public/private roads inspected and swept and vacuumed as needed?				
Are all paved areas free of visible sediment tracking or other particulate matter?				
Location:				
Location:				

INSPECTION OF BMPs - ATTACHMENT "A" (Cont.)				
BMP	**Yes**	**No**	**N/A**	**Corrective Action**
Location:				
Location:				
Wind Erosion Control				
Is dust control implemented?				
Location:				
Location:				
Location:				
Location:				
Dewatering Operations				
Are all one-time dewatering operations covered by the General Permit inspected before and as they occur and BMPs implemented as necessary during discharge?				
Is ground water dewatering handled in conformance with the dewatering permit issued by the LARWQCB?				
Is required treatment provided for dewatering effluent?				
Location:				
Location:				
Location:				
Location:				
Vehicle & Equipment Fueling, Cleaning, and Maintenance				
Are vehicle and equipment fueling, cleaning and maintenance areas reasonably clean and free of spills, leaks, or any other deleterious material?				
Are vehicle and equipment fueling, cleaning and maintenance activities performed on an impermeable surface in dedicated areas?				
If no, are drip pans used?				
Are dedicated fueling, cleaning, and maintenance areas located at least 15 m away from downstream drainage facilities and watercourses and protected from run-on and runoff?				
Is wash water contained for infiltration/ evaporation and disposed of appropriately?				
Is on-site cleaning limited to washing with water (no soap, soaps substitutes, solvents, or steam)?				
On each day of use, are vehicles and equipment inspected for leaks and if necessary, repaired?				
Location:				
Location:				
Location:				
Location:				
Waste Management & Materials Pollution Control				

INSPECTION OF BMPs - ATTACHMENT "A" (Cont.)				
BMP	**Yes**	**No**	**N/A**	**Corrective Action**
Are material storage areas and washout areas protected from run-on and runoff, and located at least 15 m from concentrated flows and downstream drainage facilities?				
Are all material handling and storage areas clean; organized; free of spills, leaks, or any other deleterious material; and stocked with appropriate clean-up supplies?				
Are liquid materials, hazardous materials, and hazardous wastes stored in temporary containment facilities?				
Are bagged and boxed materials stored on pallets?				
Are hazardous materials and wastes stored in appropriate, labeled containers?				
Are proper storage, clean-up, and spill-reporting procedures for hazardous materials and wastes posted in open, conspicuous and accessible locations adjacent to storage areas?				
Are temporary containment facilities free of spills and rainwater?				
Are temporary containment facilities and bagged/boxed materials covered?				
Are temporary concrete washout facilities designated and being used?				
Are temporary concrete washout facilities functional for receiving and containing concrete waste and are concrete residues prevented from entering the drainage system?				
Do temporary concrete washout facilities provide sufficient volume and freeboard for planned concrete operations?				
Are concrete wastes, including residues from cutting and grinding, contained and disposed of off-site or in concrete washout facilities?				
Are spills from mobile equipment fueling and maintenance properly contained and cleaned up?				
Is the site free of litter?				
Are trash receptacles provided in the yard, field trailer areas, and at locations where workers congregate for lunch and break periods?				
Is litter from work areas collected and placed in watertight dumpsters?				
Are waste management receptacles free of leaks?				
Are the contents of waste management receptacles properly protected from contact with storm water or from being dislodged by winds?				
Are waste management receptacles filled at or beyond capacity?				
Location:				
Location:				
Location:				
Location:				
Temporary Water Body Crossing or Encroachment				
Are temporary water body crossings and encroachments constructed appropriately?				

INSPECTION OF BMPs - ATTACHMENT "A" (Cont.)				
BMP	**Yes**	**No**	**N/A**	**Corrective Action**
Does the project conform to the requirements of the 404 permit and/or 1601agreement?				
Location:				
Location:				
Location:				
Location:				
Illicit Connection/ Discharge				
Is there any evidence of illicit discharges or illegal dumping on the project site?				
If yes, has the Owner/Operator been notified?				
Location:				
Location:				
Location:				
Location:				
Discharge Points				
Are discharge points and discharge flows free from visible pollutants?				
Are discharge points free of any significant sediment transport?				
Location:				
Location:				
Location:				
Location:				
SWPPP Update				
Does the SWPPP and Project Schedule adequately reflect the current site conditions and contractor operations?				
Are all BMPs shown on the Erosion Control Plans installed in the proper location(s) and according to the details in the SWPPP?				
Location:				
Location:				
Location:				
Location:				
General				
Are there any other potential concerns at the site?				
Location:				
Location:				
Location:				
Location:				
Storm Water Monitoring				

INSPECTION OF BMPs - ATTACHMENT "A" (Cont.)				
BMP	**Yes**	**No**	**N/A**	**Corrective Action**
Does storm water discharge directly to a water body listed in the General Permit as impaired for sediment/sedimentation or turbidity?				
If yes, were samples for sediment/sedimentation or turbidity collected pursuant to the sampling and analysis plan in the SWPPP?				
Did the sampling results indicate that the discharges are causing or contributing to further impairment?				
If yes, were the erosion/sediment control BMPs improved or maintained to reduce the discharge of sediment to the water body?				
Were there any BMPs not properly implemented or breaches, malfunctions, leakages or spills observed which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water?				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				
If sampling indicated pollution of the storm water, were the leaks, breaches, spills, etc. cleaned up and the contaminated soil properly disposed of?				
Were the BMPs maintained or replaced?				
Were soil amendments (e.g., gypsum, lime) used on the project?				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan in the SWPPP?				
If sampling indicated pollution of the storm water by the use of the soil amendments, is there a contingency plan for retention onsite of the polluted storm water?				
Did storm water contact stored materials or waste and run off the construction site? (Materials not in watertight containers, etc.)				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan in the SWPPP?				

IV. Describe any problems or required repairs checked above and the necessary actions needed:

Item	Description of Problem or Required Repair	Action Needed

Examination Performed by CONTRACTOR: _____ _____

By (Print Name, Title and Sign) Date

Verified by Inspector: _____ _____

Print Name, Title and Sign Date

_____ OWNER Project Number	**Los Angeles Unified School District** **As OWNER** **ATTACHMENT "B"** **GENERAL CONSTRUCTION** **ACTIVITY STORM WATER PERMIT**	STATE OF CALIFORNIA STATE WATER BOARD WDID NO. _____

COMPLIANCE CERTIFICATION

School Name: _____ _____

Project Description: Contract Number

ANNUAL CERTIFICATION

I certify the Project has met the following conditions: All elements of the Storm Water Pollution Prevention Plan are in place; construction materials and equipment maintenance waste have been disposed of properly; and the Project site is in compliance with all local storm water management requirements including erosion/sediment control requirements, and the appropriate use permits have been obtained. The reports have been uploaded to smarts.waterboards.ca.gov system.

CONTRACTOR: _____

Print Name: _____ Title: _____

Signature: _____ Date: _____

SUBSTANTIAL COMPLETION CERTIFICATION

I certify the Project has been completed and the following conditions have been met: All elements of the Storm Water Pollution Prevention Plan have been completed; construction materials and equipment maintenance waste have been disposed of properly; the Project site is in compliance with all local storm water management requirements including erosion/sediment control requirements and the appropriate use permits have been obtained; and a post-construction storm water operation, and management plan is in place.

CONTRACTOR: _____

Print Name: _____ Title: _____

Signature: _____ Date: _____

Los Angeles Unified School District
Facilities Services Division

REPORT DATE

SAMPLE ONLY; CONTRACTOR MAY USE HIS OWN FORM.

ATTACHMENT "C"

POST CONSTRUCTION BMP INSTALLATION LOG AND MAINTENANCE LOG

Quarterly Certification Letter

ATTACH SITE PLAN WITH BMPS HIGHLIGHTED

BMP	INSTALLATION INSTRUCTIONS LOCATION	MAINTENANCE DATE	NEXT SCHED DATE
1			
2			
3			
4			
5			
6			

OAR NAME SIGNATURE DATE	CONTRACTOR NAME SIGNATURE DATE

ATTACHMENT "D"
LAUSD CONSTRUCTION STORM WATER TRAINING FORM
01 7416 ATTACHMENT C JUNE 2010

SAMPLE ONLY; CONTRACTOR MAY USE HIS OWN FORM.

MEETING DATE	PROJECT	PROJECT NUMBER

ATTENDANCE-SIGNATURE (Add additional sheets if required)

STORM WATER TOPICS DISCUSSED

SUGGESTIONS / COMMENTS

OAR COMMENTS

OAR SIGNATURE	DATE	CONTRACTOR	DATE

SUGGESTED TOPICS FOR DISCUSSION

[ ] PREPARING FOR A STORM EVENT	[ ] GOOD HOUSEKEEPING	[ ] MAINTENANCE POST
[ ] MAINTAINING STOCKPILES	[ ] SOURCE CONTROL	[ ] CASQA MANUAL
[ ] DUST CONTROL	[ ] OAR ROLE & RESPONSIBILITY	[ ] SWPPP UPDATING
[ ] TRAINING NEW STAFF	[ ] CONTRACTOR ROLE	[ ] SCHEDULING
[ ] RECORD KEEPING	[ ] FREQUENTLY ASKED QUESTIONS	[ ] PREVENTING FLOODI

Los Angeles Unified School District
Facilities Services Division

REPORT DATE

SAMPLE ONLY; CONTRACTOR MAY USE HIS OWN FORM.

ATTACHMENT "E"

OAR / CONTRACTOR CHECK LIST

Quarterly Certification Letter

SITE _____

PROJECT NUMBER _____

IS SWPPP BOOK ONSITE AND UPDATED	[ ] YES	[ ] NO
TRAINING RECORDS	[ ] YES	[ ] NO
CONSTRUCTION SCHEDULE	[ ] YES	[ ] NO
EROSION CONTROL PLAN	[ ] YES	[ ] NO
Property Line Dileanated	[ ] YES	[ ] NO
Active / Inactive Areas	[ ] YES	[ ] NO
Drainage Patterns	[ ] YES	[ ] NO
Discharge Points	[ ] YES	[ ] NO
Sampling Points	[ ] YES	[ ] NO
BMPs with legend	[ ] YES	[ ] NO
Staging Areas, Stockpiles, entrance exit	[ ] YES	[ ] NO
Vehicle Storage, concrete wahsout	[ ] YES	[ ] NO
SIGNED COPY OF NOI ON WALL	[ ] YES	[ ] NO
WEEKLY REPORTS FILED	[ ] YES	[ ] NO
LATEST DATED: _____		

SWPPP AMENDMENTS DOCUMENTED

ANNUAL FEES PAID AND REPORTS FILED LATEST DATED: _____

Data Submitter _____
login _____
OAR _____
login _____

DATE OF LAST OEHS INSPECTION VISIT LATEST DATED: _____

WERE OEHS RECOMMENDATION IMPLEMENTED [ ] YES [ ] NO

CERTIFICATION OF CONTRACTORS QSP

Name _____
Agency _____
Number _____
Expiration Date _____
Email _____
Phone _____

Sampling Kit Lab Name

COMMENTS

OAR NAME	CONTRACTOR NAME
SIGNATURE	SIGNATURE
DATE	DATE

SAMPLE ONLY; CONTRACTOR SHALL USE WATER BOARDS FORM.

Los Angeles Unified School District
Facilities Services Division

Attachment "F"
Quarterly / Annual Non-Stormwater Form

I. WDID NO. _____

II. FACILITY OPERATOR INFORMATION

Facility Name _____ Contact Person _____

Mailing Address _____ Title _____

City _____ State **CA** Zip _____ Phone _____

III. FACILITY SITE INFORMATION

Facility Name _____ Contact Person _____

Location _____ Title _____

City _____ State **CA** Zip _____ Phone _____

IV. PERMIT LANGUAGE

All dischargers are required to conduct quarterly, non-storm water visual inspections. For these inspections, the discharger must visually observe each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.

CGP Section II.E describes authorized non-storm water discharges including those from de-chlorinated potable water sources such as: fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, uncontaminated ground water

dewatering, and other discharges not subject to a separate general NPDES permit adopted by a region. Additionally, authorized non-storm water discharges must not be used to clean up failed or inadequate construction or post-construction BMPs designed to keep materials onsite. Authorized non-storm water dewatering discharges may require a permit because some Regional Water Boards have adopted General Permits for dewatering discharges. The General Permit prohibits the discharge of storm water that causes or threatens to cause pollution, contamination, or nuisance.

Non-storm water discharges directly connected to receiving waters or the storm drain system have the potential to negatively impact water quality. The discharger must implement measures to control all non-storm water discharges during construction, and from dewatering activities associated with construction. Examples include; properly washing vehicles in contained areas, cleaning streets, and minimizing irrigation runoff.

Non-storm water discharges include a wide variety of sources, including improper dumping, spills, or leakage from storage tanks or transfer areas. Non-storm water discharges may non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

V. <u>DOCUMENT CHECKLIST</u> (Please check each item to verify that the documents are attached)

☐ Did Authorized Discharge take place ☐ Did Unauthorized Discharge take place

☐ Form 2 Attached ☐ Form 3 Attached

Structural Best Management Practices Housekeeping for Non-Visible Pollutants	**BMP Conditions E, NM, N/A YES OR NO**	**Actions Taken or BMPs Added**
Drainage Areas		
Free of Floating & Suspended Material		
Free of Sheen/Discoloration		
Free of Turbidity		
Free of Odor		
Construction Materials Storage Areas		
Materials Properly Stored		
Pollutants Covered		
Pollutants Bermed		
Construction Waste Management		
Containment Stockpiled Waste		
Containment Sanitary Facilities		
Containment Waste Watertight Containers		
Vehicle Storage/Fueling/Spill Prevention		
Fueling Procedures/Designated Areas		
Vehicle Storage with Containment		
Spill Kit Onsite		
Concrete Residuals & Washouts Wastes		
Properly Placed Washout		
Secondary Containment		
Landscape Materials		
Stored Away from Flow Lines		
Containment Fertilizers/Soil Amendments		
Secondary Containment Plants		
Observations/Comments:		

E-EFFECTIVE N/M-NEEDS MAINTENANCE N/A-NOT APPLICABLE
YES or NO

Attachment "F" (Cont.)

REPORT – PART A FORM 2 QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED NON STORM WATER DISCHARGES (NSWDs)

- Quarterly dry weather visual observations are required of each authorized NSWD.
- Observe each authorized NSWD source, impacted drainage area, and discharge location.
- Authorized NSWDs must meet the conditions provided in Section D (pages 5-6), of the General Permit.
- Make additional copies of this form as necessary.

QUARTER: **JULY-SEPT.** DATE: _	**Observers Name:** _ **Title:** **Signature:**	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** **YES** ☐ If **YES**, complete Part B of this form. **NO** ☐
QUARTER: **OCT.-DEC.** DATE: _	**Observers Name:** _ **Title:** **Signature:**	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** **YES** ☐ If **YES**, complete Part B of this form. **NO** ☐
QUARTER: **JAN.-MARCH** DATE: _	**Observers Name:** _ **Title:** **Signature:**	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** **YES.** ☐ If **YES**, complete Part B of this form. **NO** ☐
QUARTER: **APRIL-JUNE** DATE: _	**Observers Name:** _ **Title:** **Signature:**	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER? NO** **YES** ☐ If **YES**, complete Part B of this form. **NO** ☐

Attachment "F" (Cont.)

REPORT
FORM 2 – QUARTERLY VISUAL OBSERVATIONS OR AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

DATE/TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD Example: Air conditioner Units on Building C	NAME OF AUTHORIZED NSWD Example: Air conditioner condensate	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate weather authorized NSWD is clear, cloudy, or discolored, causing staining, contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMP's AND PROVIDE THEIR IMPLEMENTATION DATE
			At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
_____ _____☐ AM ☐ PM					
_____ _____☐ AM ☐ PM					
_____ _____☐ AM ☐ PM					
_____ _____☐ AM ☐ PM					
_____ _____☐ AM ☐ PM					

Attachment "F" (Cont.)

REPORT – PART A FORM 3 QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED NON STORM WATER DISCHARGES (NSWDs)

- Unauthorized NSWDs are discharges (such as wash or rinse waters) that do not meet the conditions provided in Section D (pages 5-6) of the General Permit.
- Quarterly visual observations are required to observe current and detect prior unauthorized NSWD.
- Quarterly visual observations are required during dry weather and at all facility drainage areas.
- Each unauthorized NSWD source, impacted drainage area, and discharge location must be identified and observed.
- Unauthorized NSWDs that can not be eliminated within 90 days of observation must be reported to the Regional Board in accordance with Section A.10.e of the General Permit.
- Make additional copies of this form as necessary.

QUARTER: **JULY-SEPT.** **DATE/TIME OF OBSERVATIONS** ☐ **AM** ☐ **PM** _____	**Observers Name:** _ **Title:** **Signature:**	**WERE ANY AUTHORIZED NSWDs OBSERVED?** **YES** ☐ **NO** ☐ **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NAWDS?** **YES** ☐ **NO** ☐ If **YES**, complete Part B of this form.
QUARTER: **OCT.-DEC.** **DATE/TIME OF OBSERVATIONS** ☐ **AM** ☐ **PM** _____	**Observers Name:** _ **Title:** **Signature:**	**WERE ANY AUTHORIZED NSWDs OBSERVED?** **YES** ☐ **NO** ☐ **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NAWDS?** **YES** ☐ **NO** ☐ If **YES**, complete Part B of this form.
QUARTER: **JAN.-MARCH** **DATE/TIME OF OBSERVATIONS** ☐ **AM** ☐ **PM** _____	**Observers Name:** _ **Title:** **Signature:**	**WERE ANY AUTHORIZED NSWDs OBSERVED?** **YES** ☐ **NO** ☐ **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NAWDS?** **YES** ☐ **NO** ☐ If **YES**, complete Part B of this form.
QUARTER: **APRIL-JUNE** **DATE/TIME OF OBSERVATIONS** ☐ **AM** ☐ **PM** _____	**Observers Name:** _ **Title:** **Signature:**	**WERE ANY AUTHORIZED NSWDs OBSERVED?** **YES** ☐ **NO** ☐ **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NAWDS?** **YES** ☐ **NO** ☐☐

_		If **YES**, complete Part B of this form.

Attachment "F" (Cont.)

REPORT
FORM 3 – QUARTERLY VISUAL OBSERVATIONS OR UNAUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

OBSERVATION DATE (FROM REVERSE SIDE)	**NAME OF UNAUTHORIZED NSWD** Example: Vehicle Wash Water	**SOURCE AND LOCATION OF AUTHORIZED NSWD** Example: NW Corner of Parking Lot	**DESCRIBE UNAUTHORIZED NSWD CHARACTERISTICS** Indicate weather unauthorized NSWD is clear, cloudy, or discolored, causing stains, contains floating objects or an oil sheen, has odors, etc.		**DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS. PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE**
			AT THE UNAUTHORIZED NSWD SOURCE	**AT THE UNAUTHORIZED NSWD DRAINAGE AREA AND DISCHARGE LOCATION**	
_____ _____☐ AM ☐ PM					
_____ _____☐ AM ☐ PM					
_____ _____☐ AM ☐ PM					
_____ _____☐ AM ☐ PM					
_____ _____☐ AM ☐ PM					

ATTACHMENT "G"

EDIT NOTE: Architect/Engineer shall fill all applicable information requested in this form. Contractor to complete the remaining information.

POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN

Project:

(Facility Owner)
(Facility Name)

(Facility Location)

Date Prepared: *(Date of Submission)*

Prepared for:

Prepared by:

Landowner Name

Address

Telephone Number

Name of person(s) responsible for maintenance of stormwater management practices

Address

Telephone Number

I. INTRODUCTION

A. Project Description

This section provides description of the new project construction;

The proposed *[elementary/middle/high]* school will be constructed on an approximately ____ acre site located along the *[north/south/east/west]* side of _____. The majority of this new *[elementary/middle/high]* school site is in a *[flat/hillside]* area and initially covered with_____. The site generally slopes from *[north/south/east/west]* to *[north/south/east/west]*. There is a difference in elevation of about ___ feet across the site.

1. Site Address: _____

2. Project Status: ***[Indicate** if submitted to DSA for final approval or not]* _____

3. Site Conditions:

EDIT NOTE: Refer to LAUSD Stormwater Technical Manual Chapter 2.1 Assessing Site Conditions and Other Constraints

Groundwater

Groundwater was [*not*] encountered in the borings in any of the explorations done for geotechnical evaluation prepared by _____.

The borings were drilled to a maximum depth of _____ ft.

Soils

The project site is located within the Los Angeles River flood plain and is overlain by alluvial deposits consisting of inter-bedded layers of sand, gravel, silt and clay.

Slopes

The proposed school site is at approximately ____ feet above mean sea level. And has a general slope of approximately ___%.

B. Vicinity Map

See Appendix #1

(*Provide in a separate sheet with scale and north arrow showing project site with reference to major highways and freeways.)*

II. STORM WATER TREATMENT STRATEGY

See Appendix #2

Describe the post-construction stormwater management strategy based on the recommendations of the "LAUSD Stormwater Technical Manual, dated October 2009". The "Technical Manual" recommends the use of Low Impact Design (LID) strategies for

stormwater management. LID is a site design approach that uses techniques to store, infiltrate, evaporate, and detain run-off on site. Assess the site's potential for stormwater infiltration and implementation of LID techniques and structural BMPs based on study of available information regarding site layout and slope, soil type, geotechnical conditions, and local groundwater resources.

Outline individual systems applied at the site, detailing the series of flow and treatment patterns and conveyance to the main stormwater line. Include diagrams as necessary.

EDIT NOTE: Refer to LAUSD Stormwater Technical Manual Chapter 2: Site Assessment and BMP Selection

Site Drainage Areas, Land Uses and Proposed BMPs

Drainage Area	Land Use	BMP Selected	Treatment Type
A	Buildings/Roofs and Associated Landscaped Areas; Playfield	GS-1 Hydrodynamic Separator; GS-1 Catch Basin Inserts	Pre-Treatment
		INF-3 Proprietary Infiltration BMP	Highly Recommended Structural Treatment BMP
B	Buildings/Roofs and Associated Landscaped Areas	BIO-2 Planter Boxes	Recommended Structural Treatment BMP
C	Outdoor Eating Area	GS-2 Catch Basin Inserts	Pre-Treatment
		BIO-1 Bioretention	Highly Recommended Structural Treatment BMP
D	Roadway, Driveways and Parking Lot	INF-4 Permeable Pavement	Highly Recommended Structural Treatment BMP

IV. NON-STRUCTURAL BMPs

EDIT NOTE: Refer to LAUSD Stormwater Technical Manual Chapter 5.1: Maintenance and Operations for detailed guidance on source control (non structural) BMPs. Indicate whichever is applicable

V. MONITORING AND MAINTENANCE

Indicate a maintenance plan developed for the life of each stormwater management practice including the required maintenance activities and maintenance activity schedule.

EDIT NOTE: Refer to LAUSD Stormwater Technical Manual Chapter 5: Maintenance and Operations for detailed guidance on monitoring and maintenance operations.

- All BMPs shall be operated, monitored, and maintained for the life of the project and at a minimum, all structural BMPs shall be inspected, cleaned-out, as needed and where necessary, repaired, at the following minimum frequencies: 1) prior to October 1st each year, 2) during each month between October 1st and April 15th of each year and, 3) at least twice during the dry season (between April 16 and September 30th of every year).
- Debris and other water pollutants removed from structural BMPs during cleanout shall be contained and disposed of in a proper manner as needed.
- The drainage system and the associated structures and BMPs shall be maintained according to manufacturer's specification and to ensure maximum pollutant removal efficiencies as needed.
- All structural BMPs must be accessible for inspection by City personnel during regular business hours.

VI. OTHER INFORMATION

EDIT NOTE: Other information requested in writing by the district to determine compliance of the proposed stormwater management measures with the provisions of this ordinance.

APPENDIX 1

EDIT NOTE: Architect: insert vicinity plan.

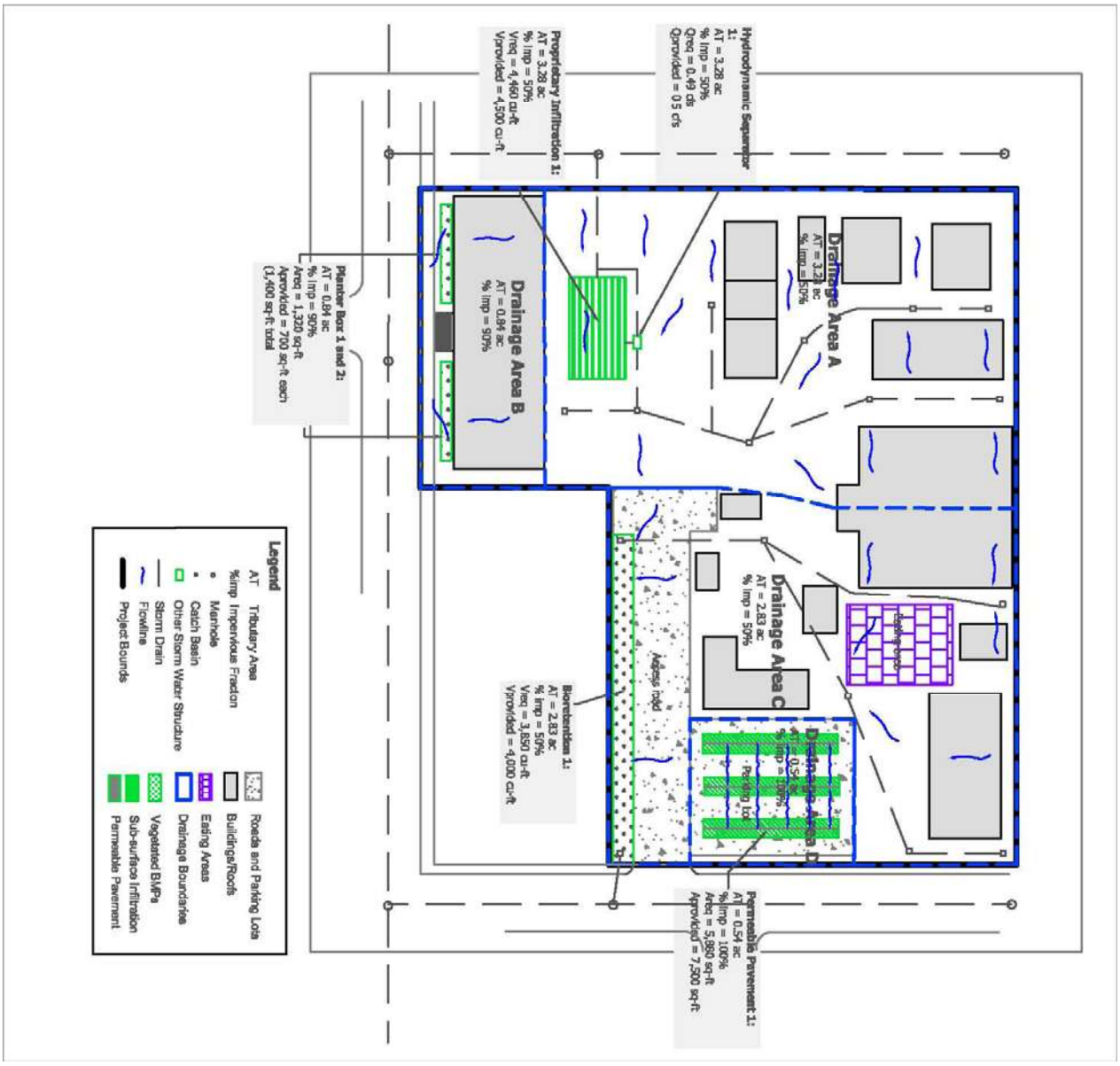
VICINITY MAP

APPENDIX 2

SCHEMATIC OF POST CONSTRUCTION BMP's

EDIT NOTE: Architect: insert project site plan.

(Sample Only)



LOS ANGELES UNIFIED SCHOOL DISTRICT

Facilities Services Division

SURVEY OF EXISTING SITE CONDITIONS

School Name: _____ Date: _____

Project Name: _____ Project Number: _____

To *(OAR)* : _____ Contract Number: _____

This is to certify that we have inspected the Project site and that we hereby agree that it conforms to the conditions represented as existing by the Contract documents at the start of the Contract Time, except:

Attachments: Pictures dated _____.

Video Tape dated _____.

CONTRACTOR signature	*Name (Printed)*	*Date*

Accepted by:

Owner Authorized Representative (OAR)	*Name (Printed)*	*Date*
Inspector of Record (IOR) signature	*Name (Printed)*	*Date*

cc:

7/17/2025

SECTION 01 3300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Administrative and procedural requirements for electronic submittal via COLIN as required for the Work for Design Bid Build projects including, but not limited to; Shop Drawings, Product Data, Samples, material lists, and quality control items.

B. Throughout the Contract Documents, the minimum acceptable quality of materials, fabrication, and execution have been defined by the name and catalog number of a manufacturer and by reference of recognized industry standards.

C. To ensure that specified products are furnished and installed in accordance with the design intent, procedures have been established for submittal of design data and for its review by the OAR, and others.

1.02 RELATED REQUIREMENTS

A. Section 01 1216: Phasing of the Work.

B. Section 01 2513: Product Substitution Procedures.

C. Section 01 2973: Schedule of Values.

D. Section 01 2976: Progress Payment Procedures.

E. Section 01 3113: Project Coordination.

F. Section 01 3216: Construction Schedule for Small Projects.

G. Section 01 3229: Project Forms.

H. Section 01 4523: Testing and Inspection.

I. Section 01 5000: Construction Facilities and Temporary Controls.

J. Section 01 7123: Field Engineering.

K. Section 01 7329: Cutting and Patching.

L. Section 01 7700: Contract Closeout.

M. Section 01 7836: Warranties.

PART 2 – PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 PROCEDURES

A. CONTRACTOR is required to review and approve every submittal and shop drawing prior to submittal through COLIN to the OAR. Should CONTRACTOR determine a submittal contains errors, or does not meet the requirements of the contract, CONTRACTOR shall immediately return the submittals and shop drawings to the producer and expedite the corrections prior to submitting through COLIN. Submittals shall not be used by CONTRACTOR to request clarifications, submit questions, substitutions, or deviations. The CONTRACTOR shall perform the following prior to submitting it through COLIN:

1. Verify the submittal is complete in all respects and follows the requirements of the Contract Documents without variance.

2. Confirm that no substitutions have been included. If substitutions are included, CONTRACTOR shall eliminate them from the submittal and process them in accordance with General Conditions Article 6.14.

3. Identify any variances from the requirements of the Contract Documents and confirmed that the identified variance meets but does not exceed the allowable limitations or tolerances as defined in these specifications.

4. Verify that all submitted materials, dimensions and tolerances are compatible with existing or planned conditions of the Work in order to erect, fabricate, or install the submitted assembly in conformance with the requirements of the Contract Documents.

5. Coordinate and verify that the dimensions match CONTRACTOR measured field or installation conditions.

6. Coordinate and verify that the products of separate manufacturers required within any field produced assembly are compatible in all respects for such assembly.

7. Package together all related submittals or shop drawings where such is necessary for a comprehensive OWNER review and approval prior to submission to COLIN.

B. CONTRACTOR shall separate by trade and system type with reference to the appropriate specification sections and electronically submitted to COLIN for review by the OAR. OAR will not accept submittals received from sources other than from CONTRACTOR.

C. The OAR shall further distribute electronically through COLIN to PROJECT INSPECTOR and other District personnel as required. Work shall not commence, unless otherwise approved by OAR, until approved submittals are transmitted to CONTRACTOR.

D. CONTRACTOR shall clearly identify any deviations from the Contract Documents on each submittal. Any deviation not so noted is not acceptable.

E. CONTRACTOR shall coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities requiring sequential activity.

F. Timing of Submittals:

1. In accordance with General Conditions, CONTRACTOR shall submit through COLIN, those Shop Drawings, Product Data, diagrams, materials lists, Samples and other submittals required by the Contract Documents for review by the OAR.

2. The scheduling of submittals shall be sequenced to support the progress of the Work, and shall be:

a. Submitted sufficiently in advance of construction, fabrication or installation in order to allow time for transmittal, review, modification, correction, (and resubmission and re-review when required.)

b. Phased with adequate time between submittals and resubmittals, as necessary, in order to allow for proper review by the OWNER without negative impact to the Milestones Schedule.

3. CONTRACTOR shall revise, update and submit the submittal schedule to OAR on the first of each month, or as required by OAR.

4. CONTRACTOR shall allow in the Construction Schedule, at least fifteen (15) days for OAR and AOR/EOR reviews following submittal to COLIN. Deferred approval items shall be allowed additional time for DSA review.

5. No adjustments to the Contract Time or Milestones will be authorized because of a failure to transmit submittals through COLIN sufficiently in advance of the Work to permit review and processing or where CONTRACTOR fails to provide OAR submittals on related items.

6. In case of product substitution, Shop Drawing preparation shall not commence until such time as OWNER accepts or rejects the proposed substitution in accordance with the procedures via a Change Directive as described in the General Conditions.

G. If required, resubmit submittals in a timely manner. Resubmit as specified for initial submittal but identify as such. Review times for re-submitted items shall be as per the time frames for initial submittal review.

H. Shop Drawing preparation shall not commence until such time as CONTRACTOR receives Product Data acceptance.

I. The CONTRACTOR's ARCHITECT will use COLIN for the ACTION Stamp.

3.02 SHOP DRAWINGS

A. Shop Drawings are original drawings prepared by CONTRACTOR, Subcontractor, supplier, or distributor illustrating some portion of Work by showing fabrication, layout, setting, or erection and shall not be based on reproduced Contract Documents or copied standard information.

B. Produce Shop Drawings to an accurate scale that is large enough to indicate all pertinent features and methods. Except for templates, patterns, and similar full-size drawings, electronically submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches.

C. Shop Drawings shall include fabrication and installation drawings, setting diagrams, schedules, patterns, templates, and similar drawings. Include the following information:

1. Dimensions.

2. Identification of products and materials included by sheet and detail number.

3. Compliance with specified standards.

4. Notation of coordination requirements.

5. Notation of dimensions established by field measurement.

D. Provide a space of approximately 4 by 5 inches on the label or beside the title block on Shop Drawings to record CONTRACTOR and ARCHITECT review, and the action taken. Include the following information on the label for processing and recording action taken:

1. Project name.

2. Date.

3. Name and address of ARCHITECT.

4. Name and address of CONTRACTOR.

5. Name and address of Subcontractor.

6. Name and address of supplier.

7. Name and address of manufacturer.

8. Name and title of appropriate Specification section.

9. Drawing number and detail references, as appropriate.

3.03 PRODUCT DATA

A. Collect Product Data into a single submittal for each element of Work or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, wiring diagrams, schedules, illustrations, or performance curves.

1. Mark each copy to show or delineate pertinent materials, products, models, applicable choices, or options. Where Product Data includes information on several products that are not required, clearly mark copies to indicate the applicable information. Include the following information:

a. Manufacturer's printed recommendations.

b. Compliance with trade association standards.

c. Compliance with recognized testing agency standards.

d. Application of testing agency labels and seals.

e. Notation of dimensions verified by field measurement.

f. Notation of coordination requirements.

g. Notation of dimensions and required clearances.

h. Indicate performance characteristics and capacities.

i. Indicate wiring diagrams and controls.

2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed by CONTRACTOR.

3.04 SAMPLES

A. Procedure:

1. Submit Samples of sufficient size, quantity, cured and finished and physically identical to the proposed product or material. Samples include partial or full sections or range of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches denoting color, texture, and/or pattern.

a. Mount or display Samples in the manner to facilitate review of qualities indicated. Include the following:

1) Specification section number and reference.

2) Generic description of the Sample.

3) Sampling source.

4) Product name or name of manufacturer.

5) Compliance with recognized standards.

6) Availability and delivery time.

2. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.

a. Where variations in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least three (3) multiple units that show the approximate limits of the

variations. Refer to other Specification Sections for additional requirements.

b. Refer to other Specification sections for requirements for Samples that illustrate materials, fabrication techniques, assembly details, connections, operation, and similar construction characteristics.

c. Refer to other sections for Samples to be returned to CONTRACTOR for incorporation into the Work. Such Samples must be undamaged at time of installation. On the transmittal indicate special requests regarding disposition of Sample submittals.

d. Samples not incorporated into the Work, or otherwise not designated as Owner property, remain the property of CONTRACTOR and shall be removed from the Project site prior to Substantial Completion.

3. Color and Pattern: Whenever a choice of color or pattern is available in a specified product, submit accurate color chips and pattern charts to OAR for review and selection.

4. Number Required: Submit six, minimum, of each. Two will be returned to CONTRACTOR.

B. When specified, erect field Samples and mock-ups at the Project site to illustrate products, materials, fabrications, or execution and to establish standards by which completed Work shall be judged.

C. Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of the Work. Sample sets may be used to obtain final acceptance of the Work associated with each set.

3.05 QUALITY CONTROL SUBMITTALS

A. Submit quality control submittals, including design data, certifications, manufacturer's field reports, and other quality control submittals as required under other sections of the Contract Documents.

B. When other sections of the Contract Documents require manufacturer's certification of a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.

C. Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the represented company.

D. Requirements for submittal of inspection and test reports are specified in other sections of the Contract Documents.

END OF SECTION

SECTION 01 4523

TESTING AND INSPECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Testing and inspection services to meet requirements of the California Building Code (CBC) and the Division of the State Architect (DSA).

B. Related Requirements:

1. Section 03 2000 – Concrete Reinforcing.
2. Section 03 3000 – Cast-in-Place Concrete.
3. Section 05 1200 – Structural Steel Framing.
4. Section 31 2319 – Excavation Fill for Structures.

1.02 REFERENCES

A. American Concrete Institute (ACI):

1. ACI 318 – Building Code Requirements for Structural Concrete and Commentary.

B. American Institute of Steel Construction (AISC):

1. AISC 360 – Specification for Structural Steel Buildings.
2. AISC 341 – Seismic Provisions for Structural Steel Buildings.

C. ASTM International (ASTM):

1. ASTM A108 – Standard Specification for Steel Bar, Carbon and Alloy, Cold-Finished.
2. ASTM A370 – Standard Test Methods and Definitions for Mechanical Testing of Steel Products.
3. ASTM A706 – Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement.

4. ASTM C31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field.

5. ASTM C172 - Standard Practice for Sampling Freshly Mixed Concrete.

6. ASTM C780 - Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry.

7. ASTM C1140 - Standard Practice for Preparing and Testing Specimens from Shotcrete Test Panels.

8. ASTM C1314 - Standard Test Method for Compressive Strength of Masonry Prisms.

9. ASTM C1604 - Standard Test Method for Obtaining and Testing Drilled Cores of Shotcrete.

10. ASTM E164 - Standard Practice for Contact Ultrasonic Testing of Weldments.

11. ASTM E488 - Standard Test Methods for Strength of Anchors in Concrete Elements.

12. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing.

13. ASTM E605 - Standard Test Methods for Thickness and Density of Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members.

14. ASTM E1444 - Standard Practice for Magnetic Particle Testing.

15. ASTM F606 - Standard Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets.

D. Association of the Wall and Ceiling Industry (AWCI):

1. AWCI Technical Manual 12-B - Standard Practice for the Testing and Inspection of Field Applied Thin Film Intumescent Fire-Resistive Materials; an Annotated Guide.

E. American Welding Society (AWS):

1. AWS D1.1 – Structural Welding Code.

2. AWS D1.4 – Structural Welding Code – Reinforcing Steel.

3. AWS D1.8 – Structural Welding Code – Seismic Supplement.

F. Division of the State Architect (DSA) Interpretation Regulations (IR):

1. DSA IR 17-2 – Nondestructive Testing (N.D.T.) of Welds.

2. DSA IR 17-3 – Structural Welding Inspection.

3. DSA IR 17-8 – Sampling and Testing of High Strength Bolts, Nuts and Washers.

4. DSA IR 17-9 – High Strength Bolting Inspection.

5. DSA IR 17-10 – Sampling, Testing and Tagging of Reinforcing Bars.

6. DSA IR 17-11 – Identification, Sampling and Testing of Threaded Steel Anchor Bolts and Anchor Rods.

7. DSA IR 22-3 – Open Web Steel Joists and Joist Girders.

8. DSA IR 23-4 – Metal-Plate-Connected Wood Trusses.

9. DSA IR-23-8 – Manufactured Wood-Chord-Metal-Web Trusses.

1.03 REGULATORY REQUIREMENTS

A. Laboratories performing testing shall have DSA's Laboratory Evaluation and Acceptance Program approval prior to providing material testing or special inspection services.

B. Tests of materials and inspections shall be in accordance to Section 4-213 through 4-219 of the California Building Standards Commission's, California Administrative Code.

C. Required material testing, inspections and special inspections are indicated on the DSA approved DSA-103, Listing of Structural Tests & Special Inspections (T&I List). OAR will provide CONTRACTOR copy of DSA-103.

1.04 TESTS

A. OWNER will contract with a DSA approved testing laboratory to perform the testing indicated on the Contract Documents, including the Tests and Special Inspections (T&I) list.

B. Selection of material to be tested shall be by the Testing Laboratory and not by CONTRACTOR.

C. Any material shipped from the source of supply prior to having satisfactorily passed such testing and inspection, or prior to the receipt of notice from Project

Inspector such testing and inspection is not required, shall not be incorporated into the Work.

D. OWNER will select, and directly reimburse, the Testing Laboratory for costs of all DSA required tests and inspections; however, the Testing Laboratory may be reimbursed by CONTRACTOR for such costs as specified or noted in related sections of the Contract Documents.

E. The Testing Laboratory is not authorized to release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.

F. The Testing Laboratory shall not perform any duties of CONTRACTOR.

G. CONTRACTOR shall provide an insulated curing box with the capacity for twenty concrete cylinders and will relocate said box and cylinders as rapidly as required in order to provide for progress of the Work.

1.05 TEST REPORTS

A. Test reports shall include all tests performed, regardless of whether such tests indicate the material is satisfactory or unsatisfactory. Samples taken but not tested shall also be reported. Records of special sampling operations, when and as required, shall also be reported. Reports shall indicate the material (or materials) was sampled and tested in accordance with requirements of CBC, Title 24, Parts 1 and 2, as indicated on the Contract Documents. Test reports shall indicate specified design strength and specifically state whether or not the material (or materials) tested comply with the specified requirements.

1.06 VERIFICATION OF TEST REPORTS

A. Each Testing Laboratory shall submit to the Division of the State Architect, in duplicate, a verified report covering all tests required to be performed by that agency during the progress of the Work. Such report, covering all required tests, shall be furnished prior to Substantial Completion and/or, when construction on the Work is suspended, covering all tests up to the time of Work suspension.

1.07 INSPECTION BY OWNER

A. OWNER, and its representatives, shall have access, for purposes of inspection, at all times to all parts of the Work and to all shops wherein the Work is in preparation. CONTRACTOR shall, at all times, maintain proper facilities and provide safe access for such inspection.

B. OAR shall have the right to reject materials and/or workmanship deemed defective Work and to require correction. Defective workmanship shall be

corrected in a satisfactory manner and defective materials shall be removed from the premises and legally disposed of without charge to OWNER. If CONTRACTOR does not correct such defective Work within a reasonable time, fixed by written notice and in accordance with the terms and conditions of the Contract Documents, OWNER may correct such defective Work and proceed in accordance with related Articles of the Contract Documents.

C. CONTRACTOR is responsible for compliance to all applicable local, state, and federal regulations regarding codes, regulations, ordinances, restrictions, and requirements.

1.08 PROJECT INSPECTOR

A. A Project Inspector will be employed by OWNER in accordance with requirements of Title 24 of the California Code of Regulations with their duties specifically defined therein. Additional DSA Special Inspectors may be employed and assigned to the Work by OWNER in accordance with the requirements of the CBC and DSA.

B. Inspection of Work shall not relieve CONTRACTOR from any obligation to fulfill all terms and conditions of the Contract Documents.

C. CONTRACTOR shall be responsible for scheduling times of inspection, tests, sample taking, and similar activities of the Work.

1.09 STRUCTURAL TESTS AND SPECIAL INSPECTIONS

A. Soils:

1. General: Periodic inspection by Geotechnical Engineer for verification of the following construction activities in conformance to CBC Table 1705A.6:

a. Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations.

b. Foundation excavations are extended to proper depth and have reached proper material.

c. Materials below footings are adequate to achieve the design bearing capacity.

2. Compacted Fills: Testing and inspections shall be in conformance to Table 1705A.6:

a. Geotechnical Engineer will continuously verify the use of proper materials and inspect lift thicknesses, placement, and compaction during placement of fill.

b. Testing Laboratory under the supervision of the Geotechnical Engineer will:

1) Perform qualification testing of fill materials.

2) Test the compaction of fill.

3. Cast-in-place Deep Foundations (Piers): Continuous inspections by Geotechnical Engineer in conformance to Table 1705A.8:

a. Inspect drilling operations and maintain complete and accurate records for each pier.

b. Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, and embedment into bedrock (if applicable). Record concrete or grout volumes.

c. Confirm adequate end strata bearing capacity.

d. Concrete Piers: Tests and inspections will be as indicated on paragraphs below for concrete.

B. Concrete:

1. Cast in Place Concrete: Inspection and testing in conformance to CBC Table 1705A.3:

a. Inspection of reinforcement, including prestressing tendons and verification of placement, per ACI 318, sections 25.2, 25.2, 25.5.1 through 26.5.3.

b. Reinforcing bar welding: Inspect per AWS D1.4, ACI 318 26.5.4.

1) Verification of weldability of reinforcing bars other than ASTM A706.

2) Inspect single-pass fillet welds, maximum 5/16”.

3) Inspect all other welds.

c. Inspect anchors cast in concrete per ACI 318, section 17.8.2.

d. Inspect anchors post-installed in hardened concrete members:

1) Continuous inspection of adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads, per ACI 318, section 17.8.2.4.

2) Mechanical anchors and adhesive anchors, not defined in previous paragraph, per ACI 318, section 17.8.2.

e. Design Mix:

1) Verify use of required mix, per ACI 318, chapter 19 and sections 26.4.3 and 26.4.4.

2) Batch Plant Inspection: The quality and quantity of materials used in transit-mixed concrete and in batched aggregates shall be continuously inspected as required by CBC section 1705A.3.2. If approved by DSA, batch plant inspection may be reduced to periodic if plant complies with CBC section 1705A3.3.1, item 1, and requires first batch inspection, weightmaster, and batch tickets.

f. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete, per ASTM C172, ASTM C31, ACI 318, sections 26.4.5 and 26.12.

g. Inspect concrete and shotcrete placement for proper application techniques, per ACI 318, section 26.4.5.

h. Verify maintenance of specified curing temperature and techniques per ACI 318 sections 26.4.7 through 26.4.9 and CBC section 1908.9.

i. Inspect prestressed concrete for:

1) Application of prestressing forces, per ACI 318 section 26.9.2.1

2) Grouting of bonded prestressing tendons per ACI 318 section 26.9.2.3.

j. Inspection of erection of precast concrete members per ACI 318 chapter 26.8.

k. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs per ACI 318 section 26.10.1.b.

l. Sampling and testing of reinforcing steel per ASTM A370, DSA IR 17-10 and CBC section 1910A.2. CONTRACTOR shall submit mill certificate indicating compliance with requirements for reinforcement, anchors, ties, and metal accessories.

C. Structural Steel:

1. Special inspector will verify that all materials are properly marked in conformance with AISC 360, Section 3.3 and applicable ASTM standards.

a. Mill certificates indicating material properties that comply with requirements.

b. Materials, sizes, types and grades complying with requirements.

2. Testing Laboratory will test unidentified materials in conformance with ASTM A370.

3. Special inspector will examine seam welds of HSS shapes in conformance with DSA IR-17-3.

4. Special inspections and non-destructive testing of structural steel elements shall be in conformance to CBC section 1705A.2.1.

D. High Strength Bolts:

1. Special inspector will verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the Contract Documents, per DSA IR 17-9.

2. Testing Laboratory will test high-strength bolts, nuts and washers in conformance with ASTM F606, ASTM A370 and DSA IR 17-8.

3. Special inspector will inspect bearing-type ("snug tight") bolt connections in conformance with AISC 360, section M2.5 and DSA IR 17-9.

4. Special inspector will inspect slip-critical bolt connections in conformance with AISC 360, section M2.5.

E. Welding:

1. Verification of Materials, Equipment and Welders:

a. Special inspector will verify weld filler material identification markings per AWS designation listed on the Contract Documents and the WPS.

b. Special inspector will verify material manufacturer's certificate of compliance.

c. Special inspector will verify WPS, welder qualifications and equipment in conformance to DSA IR 17-3.

2. Shop Welding: Special inspector will inspect the following, per CBC 1705A.2.1, AISC 360 (and AISC 341, as applicable) and DSA IR 17-3:

a. Groove, multi-pass fillet welds larger than 5/16", plug and slot welds.

b. Single-pass fillet welds equal or less than 5/16".

c. Inspect welding of stairs and railing systems.

d. Verification of reinforcing steel weldability.

e. Welding of reinforcing steel, per AWS D1.4.

3. Field Welding: Special inspector will inspect the following, per CBC 1705A.2.1, AISC 360 (and AISC 341, as applicable) and DSA IR 17-3:

a. Groove, multi-pass fillet welds larger than 5/16", plug and slot welds.

b. Single-pass fillet welds equal or less than 5/16".

c. End welded studs (ASTM A108) installation, including bend test.

d. Floor and roof deck welds.

e. Welding of structural cold-formed steel.

f. Welding of stairs and railing systems.

g. Verification of reinforcing steel weldability.

h. Inspect welding of reinforcing steel.

PART 2 – PRODUCTS (Not used).

PART 3 – EXECUTION (Not used).

END OF SECTION

SECTION 01 4524

ENVIRONMENTAL IMPORT/EXPORT MATERIALS TESTING

PART 1 - GENERAL

1.01 SUMMARY

A. This Section specifies the requirements for the sampling, testing, transportation and certification of imported fill materials or exported fill materials from school sites.

B. This Section defines:

1. CONTRACTOR requirements for use of existing, imported or generated materials on school sites.
2. CONTRACTOR requirements for stockpiling materials for use on schools sites.
3. CONTRACTOR requirements for exporting materials from a school site including transportation.
4. Testing requirements for all materials imported, exported, stockpiled or generated for use on a school site.
5. CONTRACTOR testing and reporting requirements.
6. CONTRACTOR submittal requirements.

C. Related Requirements:

1. Division 1: General Requirements.
2. Section 01 1100: Summary of Work.
3. Section 01 3113: Project Coordination.
4. Section 01 3216: Construction Schedule for Small Projects.
5. Section 01 3300: Submittal Procedures.
6. Section 01 7700: Contract Closeout.
7. Section 31 2200: Grading.
8. Section 31 2313: Excavation and Fill.
9. Section 31 2316: Excavation and Fill. (Pavement)
10. Section 31 2319: Excavation and Fill (Structures).
11. Section 31 2323: Excavation and Fill (Utilities).

1.02 OBJECTIVES

A. Ensure that fill materials imported to school sites are safe for students, staff and visitors.

B. Ensure that materials exported from school sites for use at school and non-school sites or offsite disposal/recycling are adequately characterized for lawful disposition.

C. Ensure that representative data be collected so that analytical determinations can be made in regard to the first two objectives.

D. Require CONTRACTOR to contract with and pay for the services of a licensed environmental professional (licensed State of California Professional Engineer [PE Civil] or Professional Geologist [PG]) familiar with environmental site assessment and waste classification and disposal requirements to perform such services.

E. Require CONTRACTOR to contract with and pay for an independent, approved California Department of Health Services certified testing laboratory to perform analytical testing of imported, exported and site generated fill materials.

F. Require CONTRACTOR to pay all fees required by authorities having jurisdiction over area.

G. Require CONTRACTOR to post bonds required by authorities having jurisdiction over area.

1.03 DEFINITIONS

A. Definitions not furnished in text of this section:

1. CEQA: California Environmental Quality Act.

2. EIR: Environmental Impact Report.

3. Environmental Health Supervisor, Environmental Compliance Group: Individual at OEHS, who ensures OWNER compliance with all pertinent regulations, ordinances, codes, and/or policies.

4. OEHS: OWNER's Office of Environmental Health and Safety.

5. Licensed Environmental Professional: Person licensed in the State of California and with sufficient knowledge and experience to competently perform environmentally-related work, including (but necessarily limited to) environmental site investigations, remedial projects, and other tasks involving the collection of soil, soil vapor, and groundwater samples; the selection of analytical methods for said samples; the interpretation of analytical data; the preparation of work plans, reports, and other relevant documents; and the supervision and/or oversight of remedial contractors. For the purposes of this Section, a licensed environmental professional shall include a Professional Geologist or "P.G." or a Civil Professional Engineer or "P.E."

6. ug/kg: micrograms/kilogram.

7. mg/kg: milligrams/kilogram.

8. NA: Not Applicable.

9. RCRA: federal Resource Conservation and Recovery Act.

10. Soil Certification/Sample Data Report: Report documenting location, volume, sampling procedures, analytical methods, chemical test results, and

recommendations for either disposing or re-using stockpiled soil excavated from OWNER sites or proposed for import to same. Preparation of report is to follow the procedures given in Article 1.04 of this Section.

11. Soil Sampling Plan (SSP): As described in Article 1.04 of this Section, a document providing sufficient guidance with which to adequately characterize soil proposed for import to, or export from, an OWNER's school Site. Guidance in this document is to be in accordance with the procedures described in Article1.04 of this Section.

12. STLC: Soluble Threshold Limit Concentrations as defined in Tables II and III, Chapter 11, Article 3, § 66261.24-1 of Title 22 of the California Code of Regulations (CCR).

13. TCLP: Toxicity Characteristic Leaching Procedure, test Method 1311, documented in Title 40, Part 261, Subpart C, § 261.24 of the Code of Federal Regulations (CFR).

14. TPH: Total Petroleum Hydrocarbons.

15. TTLC: Total Threshold Limit Concentrations, as defined in Tables II and III, Chapter 11, Article 3, § 66261.24-1 of Title 22 of the CCR.

16. USEPA or EPA: United States Environmental Protection Agency.

17. VOCs: Volatile Organic Compounds.

18. WET: Waste Extraction Test, as defined in Appendix II-1, Chapter 11 of Title 22 of the CCR.

1.04 SUBMITTALS

A. CONTRACTOR shall submit to OAR for transmittal to the OEHS:

1. A qualifications statement for CONTRACTOR's independent California certified testing laboratory and required licensed environmental professional (California Professional Civil Engineer (PE) or Professional Geologist (PG) prior to the start of Work. CONTRACTOR's licensed environmental professional must possess recent demonstrated environmental experience in soil sampling and waste classification.

2. A draft import/export Soil Sampling Plan (SSP) prepared by CONTRACTOR's licensed environmental professional for review and concurrence by OEHS. The objective of the SSP is to obtain representative sample data. The Draft SSP or equivalent document acceptable to OEHS must be submitted at least 72 hours prior to all proposed import/export sampling activities. The consultant's proposal (with or without fees) is acceptable in lieu of a SSP.

a. At a minimum, the Draft SSP shall include a site map which shows the location of the proposed import/export soils and the location and number of the proposed stockpile samples. The draft SSP shall also contain information pertaining to the total volume of the stockpile proposed for sampling and the rationale in support of the proposed sampling approach. Existing environmental documentation specific to the

import/export site shall be utilized by the CONTRACTOR's environmental professional to support the proposed sampling approach and analytical method suite. It is the responsibility of the CONTRACTOR to request this information in advance from the OAR if they do not already have access to a copy at the jobsite.

b. Lacking this information or rationale, samples shall be analyzed for all analytical methods described in paragraph 3.02 E. Guidance for the minimum number of samples per total volume of soil to be excavated is provided in Table 1. Supplemental samples may be required by OEHS if pothole sampling is utilized. In addition, the draft SSP shall contain all necessary contact information for the import/export site and a proposed schedule for the sampling activities.

c. OEHS will either approve the document or request that revisions be made. This process shall continue until OEHS approves the draft SSP.

3. Draft Soil Certification/Sample Data Report:

a. A draft Soil Certification/Sample Data Report prepared by CONTRACTOR's licensed environmental professional for review and concurrence. At a minimum the draft Soil Certification/Sample Data Report shall contain:

1) A site map showing the location of the in situ sampling locations or the stockpile(s) and stockpile sample locations.

2) A detailed discussion and evaluation of the laboratory results.

3) A summary of findings and recommendations that provide a determination on the waste classification of the subject materials, based on the representative sample results.

4) Recommendations for additional step-out samples, if any.

5) Chain-of-custody forms and all laboratory data with respective QA/QC sheets.

b. CONTRACTOR must allow OEHS a minimum of 72 hours to review the draft Soil Certification/Sample Data Report. OEHS will either approve the document or request that revisions be made. This shall continue until OEHS approves the draft Soil Certification/Sampling Data Report.

c. Upon revision of the draft Soil Certification/Sample Data Report by the CONTRACTOR'S licensed environmental professional and acceptance by OEHS, the final report, signed and stamped by the licensed professional, shall be submitted to the OAR for distribution to OEHS and the project file. If the soil is to be exported to or imported from, an OWNER school site, if it satisfied the requirements of paragraphs 3.02.F and 3.02.G of this Section, then a PG or civil PE must sign and stamp the final report.

1) The Environmental Health Supervisor, Environmental Compliance Group will confirm that the proposed waste

classification for the proposed import/export material is appropriate. For materials designated unacceptable for export except to a licensed facility, or for those materials sent electively by CONTRACTOR to a licensed facility, the Environmental Health Supervisor, Environmental Compliance Group will provide information on the necessary waste manifest documentation.

2) If an OAR/Complex Project Manager (CPM) would like OEHS to conduct the soil sampling and/or soil removal, the OAR/CPM should submit a Project Referral Form with completed COLIN funding line information to OEHS at least 3 weeks prior to when the work needs to be conducted. Submit the Project Referral Form to: environmental_review@lausd-oehs.org

4. Written documentation, e-mail is acceptable, verifying that all export soil data for any soils exported for use at a non-school site, including the final Certification Report prepared by CONTRACTOR's licensed environmental professional, were provided to the proposed recipient prior to export and delivery.

5. Prior to import/export, written documentation in the form of a letter sent by the transporter to the CONTRACTOR, who must in turn submit it to OEHS, to verify the following:

   a. The hauling contract for each load imported to, or exported from, the school site specifies the use of "clean" trucks and/or trailer beds, in which the material will be carried;

   b. The actual trucks and/or trailer beds utilized for import/export activities will be clear of visible contamination or deleterious materials;

   c. The trucks will go directly from the source location to the recipient location with no detours or stops at other locations; and

   d. Short loads will not be augmented by other materials that were not tested as part of the final SSP.

   e. All import/export transportation activities shall be conducted in accordance with all applicable local, state and federal rules and regulations.

6. Certification, in the form of haul tickets or completed waste manifests, documenting the volume and recipient of all import/export materials and activities. This documentation shall be coordinated through the OEHS Environmental Health Supervisor, Environmental Compliance Group.

   a. For approved import/export to unregulated facilities (landfill) or non-school sites, haul tickets may be utilized, but shall contain the following minimum information:

      1) Date(s) of haul activity.

      2) Address of source site.

      3) Address of recipient.

4) Load volume.

5) Time of departure from source.

6) Time of arrival at recipient site.

7) Signature of recipient or recipient's agent.

8) It is the CONTRACTOR's responsibility to confirm that no other trips or short-load augmentation occurred and submit documentation to the OAR and OEHS.

b. For export to regulated facilities (landfills, recyclers, etc.), the appropriate waste manifest as determined by the OEHS Environmental Health Supervisor, Environmental Compliance Group in paragraph 1.04.A.3 must be completed and a copy of the executed manifest, signed by the receiving site, must be provided to the OAR. The waste manifest copy, signed by the receiving facility and based on the manifest address, will be sent directly to OEHS and the OEHS Environmental Health Supervisor, Environmental Compliance Group.

1.05 APPROVALS

A. No import or export of earth or geotechnical grading or filling materials can occur at OWNER sites without prior approval by OEHS.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Imported:

1. Soils: Soils proposed for import shall be tested pursuant to the requirements of this Section (01 4524), unless a variance has been requested by CONTRACTOR and approved by OEHS prior to the import of the subject materials.

2. Gravels: Clean gravel, consisting of native rock from a commercial source, may be granted a variance from the testing requirements of this Section provided a request for variance is submitted by CONTRACTOR for review and approval at least 72 hours prior to import. CONTRACTOR shall provide written documentation, which identifies the source, volume and proposed transport date(s) of the material for review.

a. Furthermore, a letter signed and stamped by either a Civil PE or PG and originating from the commercial source must state the following:

1) The quarry does not mine ultramafic (i.e. natural asbestos containing) materials.

2) The gravel is produced from virgin aggregate materials and does not contain any contaminated or reclaimed or recycled materials.

b. Additionally, a letter from the material transporter and signed by the same must state the following:

1) Haul truck and/or trailer beds transferring the material are clear of visible contamination and deleterious materials.

2) Haul trucks will go directly from the quarry source to the site with no trips or augmentation of short loads with other materials.

c. The request for variance requires approval by OEHS prior to CONTRACTOR importing the materials.

3. Sands: Clean sand from a commercial source may be granted a variance from the testing requirements of this Section provided a request for variance is submitted by CONTRACTOR for review and approval at least 72 hours prior to import. CONTRACTOR shall provide written documentation, which identifies the source, volume and proposed transport date of the material for review.

a. Furthermore, a letter signed and stamped by either a Civil PE or PG and originating from the commercial source must state the following:

1) The source does not mine ultramafic (i.e. natural asbestos containing) materials.

2) The sand is produced from virgin materials and does not contain any contaminated or reclaimed or recycled materials.

b. Additionally, a letter from the material transporter and signed by the same must state the following:

1) Haul truck and/or trailer beds transferring the material are clear of visible contamination or deleterious materials.

2) Haul trucks will go directly from the commercial source to the site with no trips or augmentation of short loads with other materials.

c. The request for variance requires approval by OEHS prior to CONTRACTOR importing the materials.

4. Miscellaneous Material: No miscellaneous material containing crushed concrete, asphalt, construction debris, recycled, or other potential deleterious materials may be utilized or imported to an OWNER project site for use as fill or grading material.

B. Exported/Site Generated:

1. Soils: Soils proposed for export shall be tested pursuant to the requirements of the subject section, unless a variance has been requested by CONTRACTOR and approved by OEHS prior to the import of the subject materials. Once soils or other materials for export have been tested, they cannot be disturbed or reused for any purpose without prior approval by OEHS.

2. Gravels/Sands: Gravels, sands, or other natural rock materials shall not be exported from an OWNER project site without prior testing by CONTRACTOR

pursuant to this Section (01 4524) and/or approval by OEHS. An exception to this provision is gravel adhering to concrete or asphalt pavement. In this instance and in consultation with OEHS, which shall make the final decision, CONTRACTOR may dispose of said materials and construction debris without sampling and analytical testing required under this Section.

3. Miscellaneous Material. No miscellaneous material or other similar materials shall be exported from an OWNER project site without prior testing by CONTRACTOR pursuant to this Section (01 4524) and/or approval by OEHS. No crushed miscellaneous material containing concrete, asphalt, construction debris, or other potential deleterious materials that is generated onsite may be used as fill or grading material of any sort at an OWNER project site. Crushed asphalt shall be segregated and stockpiled separately. The onsite use of crushing equipment is not permitted.

PART 3 - EXECUTION

3.01 GRADING/EXCAVATION

A. If the CONTRACTOR encounters an area with discolored, stained, and/or odorous soils or any other evidence of contamination during excavation/grading work, CONTRACTOR must immediately notify the OAR, cease work in the aforementioned area, and secure the area with fencing, tape, stakes or other suitable means to prevent entry by personnel or equipment. In turn, the OAR will immediately notify OEHS, which will initiate a construction response to address the contamination, in accordance with pertinent regulatory requirements.

3.02 SAMPLING AND TESTING

A. CONTRACTOR shall contract with, and pay for, the services of a licensed environmental professional, licensed State of California Professional Civil Engineer (PE) or Professional Geologist (PG), to oversee or perform sampling of Materials that are subject to this Section.

B. CONTRACTOR shall contract with, and pay for, an independent, approved California Department of Health Services certified testing laboratory to perform testing of imported, exported and site generated fill materials.

C. All fill/grading material, unless otherwise specified in writing by OEHS, whether imported or exported, must be tested at the site of origin. Import/export testing and certification process shall include the steps listed below. OWNER retains the right to refuse any fill material proposed for use at a school site.

1. Stockpile all materials for sampling (standard stockpile or backhoe pothole stockpile). Crushed fill materials generated by CONTRACTOR at a school site must be segregated by material.

2. Submit draft SSP for review and concurrence by OEHS. SSP must include figures identifying the site location, the in situ sampling boundary or stockpile

location, the sampling locations, and a brief site history including the type of remedial activity that occurred at the source site, if any.

3. Collect and analyze samples (see Table 1 for number of samples per volume) per the SSP. Samples must include both discrete samples and composite samples.

   a. Discrete samples correspond to a single sample depth at a single sampling/boring location. Discrete samples are to be used for producing composite samples, as described in subparagraph b. below, and for analysis, in accordance with paragraph 3.02.E.1, which applies only to VOCs and TPH-g. For analysis of these compounds, the licensed professional shall collect one discrete sample from each sampling location and samples should be collected at different depths between these locations, so that all stockpile depths are equally represented.

   b. Composite samples correspond to three sample depths from a single sampling location (this includes in situ samples). Each composite sample shall consist of three discrete samples collected near the top, middle, and bottom of the stockpile or in situ boring location at each sampling location. The licensed environmental professional shall then have the analytical laboratory combine the discrete samples into a single composite sample. The laboratory should be directed to retain a sufficient quantity of each discrete sample for further analysis, as necessary. The composite sample shall be analyzed, in accordance with paragraph 3.02.E.2, which describes required testing other than for VOCs and TPH-g. Once materials for export have been stockpiled and tested, they may not be used onsite for any purpose without prior approval by OEHS.

      1) Composite samples with analyte concentrations approximating or exceeding acceptable screening criteria, as specified below in paragraphs F through H, may be attributed to constituents within one or more discrete samples. Analyzing the discretes comprising the composite may reveal the discrete samples with elevated analyte concentrations and, thus, better isolate (and minimize) the volume of soils within the stockpile requiring removal and licensed disposal.

4. Submit draft Soil Certification/Sample Data Report for review and concurrence by OEHS.

5. Submit final Soil Certification/Sample Data Report to the OEHS. All certified material not utilized or exported within a period of 90 days will be subject to retesting unless a variance is requested by CONTRACTOR and is approved by OEHS prior to use or import/export of the subject materials.

6. Submit required pre import/export documentation/record to the OAR and to OEHS, e-mail is acceptable.

7. Submit post import/export certifications to the OAR and OEHS, e-mail is acceptable.

8. In addition to the preceding, requirements, and as necessary or as specified by OEHS, certifications and submittals as indicated in previous articles of PART 3 or in the remainder of this Section may be required.

D. Import/export fill materials shall be samples in situ or stockpiled by CONTRACTOR (or at export site) and are deemed acceptable for import/export or reuse only when it is demonstrated to the satisfaction of OEHS that the subject materials meet the requirements of this Section.

E. As described in paragraph 1.04.A.2.b, lacking site-specific data or sample rationale to support a more focused analytical approach; the CONTRACTOR shall analyze all samples for the following substances according to the methods indicated below. Table 3 is a waste classification flowchart for use by CONTRACTOR's licensed environmental professional. In all cases, detection levels and quality assurance/quality control methods shall be in accordance with standard method reporting limits, best laboratory practices and the following USEPA (EPA) methods for discrete and composite samples:

1. Discrete samples shall be analyzed for Volatile Organic Compounds (VOCs), utilizing EPA Method 8260B/5035 and for Total Petroleum Hydrocarbons (TPH) gasoline (TPH-g), utilizing EPA Method 8015M [with EPA Method 5035 extraction using either volatile organic analysis (VOA) kits, EnCores®, or an equivalent soil collection device].

2. Composite samples shall be analyzed for the following:

   a. TPH, utilizing EPA Method 8015M, for full carbon-chain speciation (including diesel, oil, and other long-chain hydrocarbons).

   b. Polychlorinated biphenyls, utilizing EPA Method 8082.

   c. Semi-Volatile Compounds (SVOCs), utilizing EPA Method 8270C.

   d. Organochlorine Pesticides (OCPs), utilizing EPA Method 8081A.

   e. Organophosphorous Pesticides (OPPs), utilizing EPA Method 8141A.

   f. Chlorinated Herbicides, utilizing EPA Method 8151A.

   g. California Code of Regulations Title 22 (CAM 17) Metals, utilizing EPA Method 6010B/7470A.

   h. Hexavalent Chromium, utilizing EPA Method 7199.

   i. Arsenic/Thallium, utilizing EPA Method 6020.

3. For EPA Method 8270C, a Method Detection Limit (MDL) of 250 ug/kg in addition to the Practical Quantitation Limit (PQL) or equivalent. This requirement is due to a recent DTSC directive requiring MDLs or PQLs to be sufficiently low to detect Carcinogenic Polycyclic Aromatic Hydrocarbons (CPAHs) in the composite sample, even if these compounds exceed actionable concentrations (900 ug/kg) in only one of the three discrete samples comprising the composite.

4. The certified laboratory may also need to analyze the composite samples for polycyclic aromatic hydrocarbons (PAHs), a component of semi-volatile compounds, if the data evaluation performed in accordance with paragraph 3.02.G of this Section (01 4524) does not meet DTSC requirements. The analytical methods to be used for this purpose are EPA Method 8270 SIM, if the samples contain relatively high concentrations of hydrocarbons, or EPA Method 8310, if the samples contain low concentrations of hydrocarbons.

F. Import/export fill material may be deemed defective for use by OEHS at a school site if any of the following results are obtained:

1. TPH are present at concentrations exceeding 100 milligrams per kilogram (mg/kg) for gasoline and/or 1,000 mg/kg for oil/diesel and long-chain hydrocarbons.

2. Solvents and other VOCs are present at concentrations exceeding the laboratory reporting limit. Detections between the laboratory reporting limit and the practical quantitation limit (J-flags) should not be reported.

3. PCBs are present at concentrations exceeding the laboratory reporting limit. Detections between the laboratory reporting limit and the practical quantitation limit (J-flags) should not be reported.

4. SVOCs are present at concentrations exceeding the laboratory reporting limit. Detections between the laboratory reporting limit and the practical quantitation limit (J-flags) should not be reported.

5. OCPs are present at concentrations exceeding the laboratory reporting limit. Detections between the laboratory reporting limit and the practical quantitation limit (J-flags) should not be reported.

6. OPPs are present at concentrations exceeding the laboratory reporting limit. Detections between the laboratory reporting limit and the practical quantitation limit (J-flags) should not be reported.

7. Chlorinated herbicides are present at concentrations exceeding the laboratory reporting limit. Detections between the laboratory reporting limit and the practical quantitation limit (J-flags) should not be reported.

8. California Code of Regulations Title 22 (CAM 17) Metals at concentrations exceeding site-specific background. Detections between the laboratory reporting limit and the practical quantitation limit (J-flags) should not be reported.

9. Hexavalent chromium is present at concentrations exceeding 300 ug/kg.

G. As mentioned in paragraph 3.02.E, evaluate concentrations of CPAHs, a subset of SVOCs, in the import/export material by conducting the analyses set forth below.

1. Comparing CPAH concentrations with the benzo(a)pyrene [b(a)p] equivalent concentration of 900 ug/kg, the background concentration for CPAHs defined in "A Methodology For Using Background PAHs To Support Remediation Decisions," prepared by the Environ Corporation for the Southern California Gas Company and Southern California Edison, January 24, 2002 (referred to as

"document"). In this document, CPAHs are defined in Table 2, and Potency Equivalency Factors (PEFs) for each CPAH are listed in Table 3. Using the correct PEF for each CPAH, the licensed environmental professional shall convert the concentration of each CPAH into its b(a)p equivalent concentration. The summation of these b(a)p equivalents for each CPAH must not exceed 900 ug/kg. If CPAHs do not exceed the laboratory reporting limit, then the licensed environmental professional must perform the procedure described above, using the PEF and the laboratory reporting limit (LRL) for each CPAH. The result will be the LRL for each CPAH converted to b(a)p equivalent concentrations. The summation of these b(a)p equivalent concentrations (representing the LRL for each CPAH) must not exceed 900 ug/kg.

H. Evaluate concentrations of metals in import fill by conducting the analysis set forth below.

1. Compare the maximum detected metal concentrations in import/export material samples to either DTSC or US EPA regulatory action levels for either residential or school sites, whichever is more conservative. If any metal concentration exceeds its listed regulatory action level, the fill material fails and shall be deemed defective and unacceptable for use.

2. In addition to paragraph 3.02.G.1, import/export fill shall be deemed defective and unacceptable for use if any of the following results are obtained:

a. Arsenic concentrations greater than or equal to12.0 mg/kg.

b. Lead concentration greater than or equal to 80 mg/kg.

c. Import/Export materials at school sites with total lead concentrations greater than or equal to 50 mg/kg shall be analyzed for leachability (STLC) prior to export. Materials exceeding STLC limits identified in Table 2 are deemed defective and unacceptable for use at school sites.

d. Import/Export materials at school sites with total chromium concentrations greater than or equal to 100 mg/kg shall be tested for hexavalent chromium.

I. All export/import material shall be characterized, handled, and documented in accordance with applicable US EPA and State of California hazardous waste and hazardous materials regulations (See Table 2). For the purpose of this specification, "contaminated" shall mean any soil or geotechnical material with constituent concentrations, which would require disposal at a regulated facility (i.e., California hazardous waste or RCRA hazardous waste). Refer to Article 3.04 COSTS which outline the disposal fee requirements for excavated contaminated soil. OAR must be notified at least 72 hours prior to the disposal of hazardous waste or hazardous material. No material disposal or reuse can take place without prior written approval of OEHS.

J. Specification test results and OEHS approvals are valid for a period of 90 days from the date of the subject testing unless a variance is requested by CONTRACTOR and approved by OEHS. Previously approved materials shall not be utilized or disposed offsite after the 90 day limit without prior review and approval by OEHS.

K. Requests for variances to this Specification Section shall be submitted in writing to OEHS a minimum of two weeks in advance of need for review and approval. The

request for a variance from soil sampling for export must state the following: “The soil for export is less than 10 cubic yards, has no visible staining, is not odorous, and appears native”. A photograph of the stockpiled soil must be included in the variance request. The photograph must have a representative scale within it in order for OEHS to determine the volume of soil to be exported. The request for variance must provide all available testing data, and a rationale to support the request. OEHS will review the request for variance and will provide its preliminary determination within 72 hours. Once OEHS approves the variance from sampling, the soil stockpile may be removed as “construction related debris”. Certain requests may require final approval by the DTSC.

3.03 TRANSPORTATION

A. Details of the samples and testing must be submitted to and approved by OEHS Environmental Compliance Manager before the materials from which the samples were collected undergo transportation.

B. Haul Routes and Regulations/Restrictions: CONTRACTOR must comply with requirements of project environmental disclosure documents (i.e., CEQA EIR) and authorities having jurisdiction over the project area and the proposed activities (e.g. Regional Water Quality Control Board, DTSC, etc.).

3.04 COSTS

A. CONTRACTOR shall pay all fees required by authorities having jurisdiction over area.

B. Contractor shall pay all fees for disposal and/or processing of impacted and/or hazardous fill materials at a regulated facility.

C. CONTRACTOR shall post and pay for all bonds required by authorities having jurisdiction over area.

TABLE 1: MINIMUM SAMPLING FREQUENCY	
Volume (Cubic Yards)*	Sampling Frequency*
0 - 500	1 per 100 CY
501 - 1,000	1 per 250 CY
1,001 - 5,000	1 per 250 CY for first 1000 CY 1 per 500 CY thereafter
> 5,000	12 samples for first 5000 CY 1 per 1000 CY thereafter

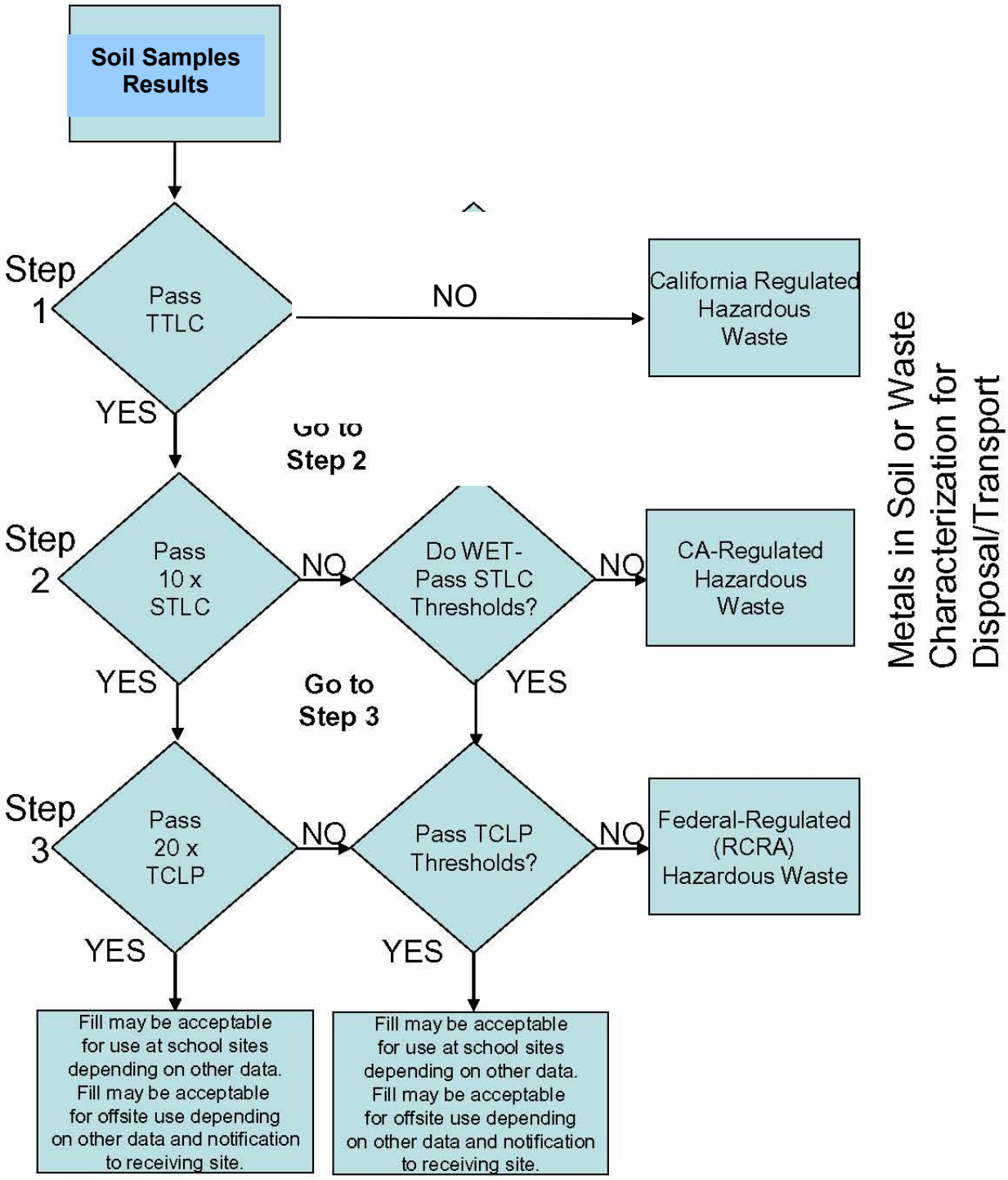
All samples are to be collected, analyzed and accepted before import/export: materials going to licensed facilities must meet sampling criteria from that facility. The rationale for sample approach should be discussed in the draft SSP.

Pothole stockpile sampling may require discrete depth supplemental sampling in order to achieve representative results. The rationale for sample approach should be discussed in the draft SSP. In-situ (in place) sampling by mechanical boring or a hand auger method is acceptable if no space exists to store the soil stockpile at the site with prior OEHS approval.

*Discuss alternative screening & sampling approaches with OEHS representative for project.

Chemicals of Potential Concern	TABLE 2 WASTE CHARACTERIZATION				
	Hazardous Waste if Exceed Criteria - TTLC Level* (mg/kg)	Additional WET Leaching Tests if Exceed Hazardous Waste Criteria - 10 times STLC Level** (mg/kg)	California - Regulated Hazardous Waste - Soluble Threshold Limit Concentration - STLC Level (mg/l)	Additional TCLP Leaching Tests if Exceed Hazardous Waste Criteria - 20 times TCLP Level** (mg/kg)	Federally-Regulated (RCRA) Hazardous Waste - Toxicity Characteristic Leaching Procedure - TCLP Level (mg/l)
CAM 17 Metals					
Antimony	500	150	15	NA	NA
Arsenic	500	50	5	100	5
Barium	10,000	1,000	100	2,000	100
Beryllium	75	7.5	0.75	NA	NA
Cadmium	100	10	1	20	1
Chromium	2,500	50	5	100	5
Cobalt	8,000	800	80	NA	NA
Copper	2,500	250	25	NA	NA
Lead	1,000	50	5	100	5
Mercury	20	2	0.2	4	0.2
Molybdenum	3,500	3,500	350	NA	NA
Nickel	2,000	200	20	NA	NA
Selenium	100	10	1	20	1
Silver	500	50	5	100	5
Thallium	700	70	7	NA	NA
Vanadium	2,400	240	24	NA	NA
Zinc	5,000	2,500	250	NA	NA
Chromium (VI)	500	50	5	NA	NA

TABLE 3 – WASTE CLASSIFICATION FLOWCHART



END OF SECTION

SECTION 01 5000

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Temporary utilities, construction facilities and temporary controls to be provided, maintained, relocated, and removed by CONTRACTOR.

B. Temporary office furnishings and office equipment.

1.02 QUALITY ASSURANCE

A. CONTRACTOR shall comply with applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:

1. Building Code requirements.

2. Division of the State Architect.

3. Health and safety regulations.

4. Utility company regulations.

5. Police, fire department and rescue squad requirements.

6. Environmental protection regulations.

B. CONTRACTOR shall arrange for the inspection and testing of each temporary utility prior to use. Obtain required certifications and permits and transmit to OAR.

1.03 SUBMITTALS

A. Temporary Utilities: Submit to OAR reports of tests, inspections, meter readings, certifications, permits and similar procedures performed on temporary utilities.

1.04 TEMPORARY UTILITIES

A. CONTRACTOR shall coordinate with the appropriate utility company to install temporary services. Where the utility company provides only partial service, CONTRACTOR shall provide and install the remainder with matching compatible materials and equipment.

B. CONTRACTOR shall furnish, install and pay for all necessary permits, inspections, move ins/out, temporary lines, connections and fees, extensions and distribution, metering devices and use charges, deliveries/pickups, rentals, storage, transportation, taxes, labor, insurance, bonds, material, equipment and all other miscellaneous items for the temporary utility systems. CONTRACTOR shall pay to utility companies for the consumption of the following temporary utility services:

1. Temporary Water service.

2. Temporary Electrical service.

3. Temporary Gas service.

4. Temporary Telephone and Data.

C. Maintain, extend and/or relocate temporary utility systems as rapidly as required in order to provide for progress of the Work.

1. Water distribution piping and outlet devices shall be of the size and required flow rates in order to provide service to all areas of the Project site.

2. Furnish, install, maintain, extend and distribute temporary electric area distribution boxes, so located that individual trades can obtain adequate power and artificial lighting, at all points required for the Work, for inspection and for safety.

a. Provide 20 foot candles minimum lighting levels inside building(s) and 5 foot candles outside for safety and security.

b. Ensure welding equipment is supplied by electrical generators.

D. Upon Substantial Completion of the Work, remove temporary systems, devices and appurtenances.

1.05 TEMPORARY OFFICES

A. CONTRACTOR shall provide Project Site temporary office facilities for his own use.

B. At CONTRACTOR'S expense and without limitation remove and/or relocate temporary office(s) and related facilities as rapidly as required in order to provide for progress of the Work.

C. Trailer shall remain property of CONTRACTOR. CONTRACTOR shall remove such property upon Substantial Completion of Work or as otherwise determined in writing by OAR.

1.06 FURNISHINGS – NOT USED

A. Unless otherwise noted in this Section, all furniture shall remain property of CONTRACTOR. CONTRACTOR shall remove such property upon Substantial Completion of Work or as otherwise determined in writing by OAR.

1.07 TELEPHONE & DATA AND TRANSMISSION LINES – NOT USED

1.08 TEMPORARY STORAGE UNITS

A. CONTRACTOR shall provide secure and waterproof storage units for the temporary storage of furniture, equipment and other items requiring protection.

B. Walls, roof and doors shall be a minimum of 16-gauge steel with floors of 1 inch tongue and groove hardwood or ¾ inch minimum exterior type plywood. The undercarriage shall be designed to accommodate forklift blades 42-inch to 60-inch long. There shall be doublewide swing out lockable doors at one end equipped with waterproof gaskets.

C. CONTRACTOR shall be responsible for delivery charges and will install the storage unit in an appropriate area.

D. CONTRACTOR shall remove the storage unit from the Project site when the storage unit is no longer required for the Work or upon Substantial Completion of the Work.

E. CONTRACTOR shall at their expense and without limitation remove and/ or relocate storage units as rapidly as required in order to provide for progress of the Work.

1.09 TEMPORARY SANITARY FACILITIES

A. CONTRACTOR shall provide portable chemical toilet facilities. Quantity of portable chemical toilet facilities shall be based on total number of workers and shall be in accordance with CAL/OSHA standards.

B. Portable chemical toilet facilities shall be maintained with adequate supplies and in a clean and sanitary condition and shall be removed from the Project site upon Substantial Completion of the Work. CONTRACTOR shall keep both OWNER chemical toilet facilities and OWNER trailer restroom clean and operational at all times.

C. CONTRACTOR employees shall not use school toilet facilities.

D. At CONTRACTOR’S expense and without limitation remove and/or relocate portable chemical toilet facilities as rapidly as required in order to provide for progress of the Work.

E. CONTRACTOR will contain their breaks and lunch periods to the areas designated by OAR or any public area outside the Project site. CONTRACTOR shall provide a suitable container within the break/lunch area for the placement of trash. Areas used for break/lunch must be maintained clean and orderly. Once finish flooring has been installed in a particular area, no food or beverages will be permitted in that area.

1.10 TEMPORARY SECURITY FENCE / BARRICADE

A. CONTRACTOR shall install temporary Project site security barricade(s) indicated on Drawings or as required for safety and as specified herein. New or used material may be furnished. Security of Project site and contents is a continuous obligation of CONTRACTOR.

B. Unless otherwise indicated or specified, security fence shall be constructed of 8-foot high chain link fencing with an 8-foot high windscreen. Space posts not to exceed ten feet on centers. Posts shall be of following nominal pipe dimensions: terminal, corner, and gatepost 2 ½-inch, line posts 2-inch. Chain link fence shall be not less than #13 gauge, 2-inch mesh, and in one width. Posts, fence and accessories shall be galvanized and as follows:

1. Shall be set in the earth a depth of 24-inch with soil firmly compacted around post, unless required otherwise in writing by OAR.

2. Fence fabric shall be attached to posts with #14 gauge tie wire at 16 inches on center. A #6 gauge steel tension wire with turnbuckles shall be installed at top and bottom of barricade fencing. Wire tie fabric to tension wires at 18" centers.

3. Windscreen shall be attached to fence fabric and steel tension wires at 18-inch centers with a minimum of #14 gauge tie wire. Windscreen shall be maintained and all rips, tears, missing sections shall be corrected upon notification by OAR.

4. Chain link fencing shall be free from barbs, icicles or other projections resulting from galvanizing process. Fence having such defects will be replaced even if it has been installed.

5. Gates shall be fabricated of steel pipe with welded corners and bracing as required. Fence and fabric to be attached to frame at 12-inch centers. Provide all gate hardware of a strength and quality to perform satisfactorily until barricade is removed upon Substantial Completion of the Work. Each gate shall have a chain and padlock. Provide two gate keys to OAR. At Substantial Completion of the Work, remove barricade from Project site, backfill and compact fence footing holes. Existing surface paving that is cut into or removed shall be patched and sealed to match surrounding areas.

6. At CONTRACTOR'S expense and without limitation remove or relocate fencing, fabric and barricades or other security and protection facilities as rapidly as required in order to provide for progress of the Work.

1.11 OTHER TEMPORARY ENCLOSURES AND BARRICADES

A. Provide lockable, temporary weather-tight enclosures at openings in exterior walls to create acceptable working conditions, to allow for temporary heating and for security.

B. Provide protective barriers around trees, plants and other improvements designated to remain.

C. Temporary partitions shall be installed at all openings where additions connect to existing buildings, and where to protect areas, spaces, property, personnel, students and faculty and to separate and control dust, debris, noise, access, sight, fire areas, safety and security. Temporary partitions shall be as designated on the Drawings or as specified by ARCHITECT. At CONTRACTOR'S expense and without limitation remove and/or relocate enclosures, barriers and temporary partitions as rapidly as required in order to provide for progress of the Work.

D. Since the Work of this Project may be immediately adjacent to existing occupied structures and vehicular and pedestrian right of ways, CONTRACTOR shall, in his sole judgment and in accordance with applicable safety standards, provide temporary facilities, additional barricades, protection and care to protect existing structures, occupants, property, pedestrians and vehicular traffic. CONTRACTOR is responsible for any damage, which may occur to the property and occupants of the property of OWNER or adjacent private or public properties which in any way results from the acts or neglect of CONTRACTOR.

E. CONTRACTOR shall be responsible for cleaning up all areas adjacent to the construction site which have been affected by the construction; and for restoring them to at least their original condition- including landscaping; planting of trees, sod, and shrubs damaged by construction; and raking and disposal of debris such as roofing shingles, paper, nails, glass sheet metal, bricks, and waste concrete. Construction debris shall be removed and properly disposed of. Culverts and drainage ditches with sediment from the construction area shall be cleared routinely to maintain proper drainage and re-cleaned prior to completion of the contract.

F. CONTRACTOR shall ensure sediment does not block storm drains. CONTRACTOR shall be responsible for cleaning storm drains blocked due to erosion or sediment from the work area.

1.12 TEMPORARY STORAGE YARDS

A. CONTRACTOR shall fence and maintain storage yards in an orderly manner.

B. Provide storage units for materials that cannot be stored outside.

C. At CONTRACTOR'S expense and without limitation remove and/or relocate storage yards and units as rapidly as required in order to provide for progress of the Work.

1.13 TEMPORARY DE-WATERING FACILITIES AND DRAINAGE – NOT USED

1.14 TEMPORARY PROTECTION FACILITIES INSTALLATION

A. CONTRACTOR shall not change over from using temporary facilities and controls to permanent facilities until Substantial Completion, except as permitted by OAR.

B. Until permanent fire protection needs are supplied and approved by authorities having jurisdiction, CONTRACTOR shall provide, install and maintain temporary fire protection facilities of the types needed in order to adequately protect against fire loss. CONTRACTOR shall adequately supervise welding operations, combustion type temporary heating and similar sources of fire ignition.

C. CONTRACTOR shall provide, install and maintain substantial temporary enclosures of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security. Where materials, tools and equipment are stored within the Work area, CONTRACTOR shall provide secure lock up to protect against vandalism, theft and similar violations of security. OWNER accepts no financial responsibility for loss, damage, vandalism or theft.

D. CONTRACTOR operations shall not block, hinder, impede or otherwise inhibit the use of required exits and/or emergency exits to the public way, except as approved by OAR. CONTACTOR shall maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for firefighting equipment and/or personnel.

E. With approval of OAR and at the earliest feasible date in each area of the Work, complete installation of the permanent fire protection facilities including connected services and place into operation and use. Instruct OWNER personnel in use of permanent fire protection facilities.

F. In the event of an emergency drill or an actual emergency, designated by the sounding of the fire alarm and/or other sounding device, all construction activities must cease. CONTRACTOR shall evacuate the Work area and remain outside the Work area until permitted to return. No Work shall be conducted during the evacuation of a building or during an emergency.

1.15 TEMPORARY SECURITY AND SAFETY MEASURES

A. During performance of the Work in existing facilities and/or on a Project Site occupied by students, CONTRACTOR shall provide, install and maintain substantial temporary barriers and/or partitions separating all Work areas from areas occupied by students, faculty and/or administrative staff.

B. During performance of the Work in existing facilities or on a Project site occupied by students and where temporary barriers or partitions are not physically feasible, CONTRACTOR shall provide an employee meeting the requirements of Education Code Section 45125.2.(2) to continually supervise and monitor all employees of CONTRACTOR and Subcontractor. For the purposes of this Section, CONTRACTOR employee shall be someone whom the Department of Justice has ascertained has not been convicted of a violent or serious felony as listed in Penal Code Section 667.5(c) and/or Penal Code Section 1192.7(c). To comply with this Section, CONTRACTOR shall have his employee submit his or her fingerprints to the Department of Justice pursuant to Education Code Section 45125.1(a).

C. Penal Code Sections 290 and 290.4 commonly known as "Megan's Law", require, among other things, individuals convicted of sexually oriented crimes, to register with the chief of police where the convicted individual resides or with a county sheriff or other law enforcement officials. CONTRACTOR shall check its own employees and require each Subcontractor to check its employees and report to CONTRACTOR if any such employees are registered sex offenders. CONTRACTOR shall check monthly during the life of the Contract to ascertain this information and report same to OAR. Before starting the Work, and monthly thereafter during the life of Contract, CONTRACTOR shall notify OWNER in writing if any of its employees and/or if any Subcontractor's employees is a registered sex offender. If so, CONTRACTOR shall proceed in accordance with paragraph B above.

D. CONTRACTOR shall employ and maintain sufficient security and safety measures to effectively prevent vandalism, vagrancy, theft, arson, and all other such negative impacts to the Work. Any impacts to the progress of the Work of CONTRACTOR, OWNER, or OWNER'S forces, due to loss from inadequate security, will be the responsibility of CONTRACTOR.

E. Until Substantial Completion of the Work, CONTRACTOR shall employ appropriate means to remove all graffiti from buildings, equipment, fences and all other temporary and/or permanent improvements on the Project site within twenty-four (24) hours from the date of report or forty-eight (48) hours of each occurrence.

1.16 TEMPORARY ACCESS ROADS AND STAGING AREAS

A. Due to the limited amount of on and off Project site space for the parking of staff and school visitor's vehicles there will be no parking of CONTRACTOR vehicles in areas designated for school use only. CONTRACTOR shall provide legal

access to and maintain CONTRACTOR designated areas for the legal parking, loading, off-loading and delivery of all vehicles associated with the Work. CONTRACTOR shall be solely responsible for providing and maintaining these requirements whether on or off the Project site. CONTRACTOR shall provide and maintain ample on-site parking spaces designated for the exclusive use of OWNER. CONTRACTOR shall erect signs as required by OWNER each of these spaces and prevent all unauthorized vehicles from parking in the OWNER-reserved spaces.

B. Temporary access roads are to be installed and maintained by CONTRACTOR to all areas of the Project site.

C. CONTRACTOR will be permitted to utilize existing facility campus roads as designated by OAR. CONTRACTOR shall only utilize those entrances and exits as designated by OAR and CONTRACTOR shall observe all traffic regulations of OWNER.

D. CONTRACTOR shall maintain roads and walkways in a clean condition including removal of debris and/or other deleterious material on a daily basis.

1.17 DIRECTIONAL SIGNAGE AND ADVERTISEMENT POSTING

A. CONTRACTOR shall provide and install signage to provide directional, identification, and contact information to construction personnel and visitors as follows and as reviewed by OAR.

1. For construction traffic control/flow at entrances/exits, and as designated by OAR.

2. To direct visitors.

3. For construction parking.

4. To direct deliveries.

5. For Warning Signs as required.

6. In accordance with CAL/OSHA standards as necessary.

7. For trailer identification and Project site address.

8. For “No Smoking” safe work site at designated locations.

9. Emergency contact information and phone number of CONTRACTOR.

10. Emergency contact information and phone number of local police, fire, and emergency personnel.

11. For Labor Compliance Program (LCP) as required under the General Conditions (Prevailing wage rates and Notice of LCP)

12. Employee benefits payments paid to trust funds are required under the General Conditions.

B. OWNER has established a program authorizing vendors to post advertisements and billboards along the perimeter of project site. CONTRACTOR shall provide access and shall allow advertising signage to be placed on top of temporary, perimeter, security barricade and/or fences.

1.18 TRENCHES

A. Open trenches for installation of utility lines (water, gas, electrical and similar utilities) and open pits outside barricaded working areas shall be barricaded at all times in a legal manner determined by CONTRACTOR. Trenches shall be backfilled and patch-paved within twenty-four (24) hours after approval of installation by authorities having jurisdiction or shall have "trench plates" installed when trenches cannot be backfilled or patch-paved due to progress of the work. Required access to buildings shall be provided and maintained. CONTRACTOR shall comply with all applicable statutes, codes and regulations regarding trenching and trenching operations. Open trenches deeper than 3'-6", and not located within a public street access, shall be enclosed within an 8'-0" high chain-link fence.

1.19 DUST CONTROL

A. CONTRACTOR is responsible for dust control on and off the Project site. When Work operations produce dust the Project site and/or streets shall be sprinkled with water to minimize the generation of dust. CONTRACTOR shall clean all soils and debris from construction vehicles and cover both earth and debris loads prior to leaving the Project site. CONTRACTOR shall, on a daily basis, clean all streets and/or public improvements within the right of way of any and all debris, dirt, mud and/or other materials attributable to operations of CONTRACTOR.

1.20 WASH OUT

A. CONTRACTOR shall provide and maintain a minimum of one (1) wash out boxes of sufficient size and strength to provide for concrete mixer wash out. CONTRACTOR shall locate and relocate both the wash out boxes and wash out areas in order to accommodate the progression of the Work. The wash out area shall be located as to minimize the amount of potential run off onto adjacent private and/or public property. CONTRACTOR shall legally dispose of the contents of the wash out boxes and area on an as needed basis or as required by OAR.

1.21 WASTE DISPOSAL

A. CONTRACTOR shall provide and maintain trash bins on the Project site. Trash bins shall be serviced on an as needed basis and CONTRACTOR is responsible for the transportation of and the legal disposal of all contents.

1.22 ADVERSE WEATHER CONDITIONS

A. Should warnings of adverse weather conditions such as heavy rain and/or high winds be forecasted, CONTRACTOR shall provide every practical precaution to prevent damage to the Work, Project site and adjacent property. CONTRACTOR precautions shall include, but not be limited to, enclosing all openings, removing and/or securing loose materials, tools, equipment and scaffolding.

B. CONTRACTOR shall provide and maintain drainage away from buildings and structures.

C. CONTRACTOR shall implement all required storm water mitigation measures as required under related Division 01 Sections.

1.23 DAILY AND MONTHLY REPORTS

A. CONTRACTOR shall provide and maintain in the Project site office of CONTRACTOR, a daily sign in sheet for use by all employees of CONTRACTOR and all Subcontractors at whatever tier. At the beginning of each workday, the foreman, project manager, superintendent of CONTRACTOR and/or Subcontractors shall visit the site office of CONTRACTOR and shall enter onto the daily sign in sheet: all employee names; trade classification; and represented company. The completed sign in sheet shall serve as the basis of and shall be submitted with the daily construction report as set forth in Paragraph B below.

B. By the end of each workday, CONTRACTOR shall submit to OAR and IOR a daily construction report denoting the daily manpower counts and a brief description/location of the workday activities. Manpower shall be broken down by trade classification such as foreman, journeyman or apprentice. The report shall also note the date, day of the week, weather conditions, deliveries, equipment on the Project site whether active and/or idle, visitors, inspections, accidents and unusual events, meetings, stoppages, losses, delays, shortages, strikes, orders and requests of governing agencies, Construction Directive and/or Change Orders received and implemented, services disconnected and/or connected, equipment start up or tests and partial use and/or occupancies. CONTRACTOR shall also include on the daily construction report the above information for all Subcontractors at whatever tier.

C. CONTRACTOR shall submit on a monthly basis the forms found in Sections 01 3229.

1.24 FIELD OFFICE SUPPLIES – NOT USED

PART 2 – PRODUCTS – Not Used

PART 3 – EXUTION – Not Used

END OF SECTION

SECTION 01 5639

TEMPORARY TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included: All labor, materials, equipment, services, and miscellaneous incidental work to provide tree protection as indicated on the Contract Drawings, including:

1. Protecting the health and general wellbeing of existing trees and understory plants within Contract limits that are noted to remain.

2. Trimming, cabling, and repairs of existing trees and understory plants that interfere with, or are affected by, execution of the Work.

3. Maintenance of existing protected trees and understory plants during all project phases.

B. Related Sections:

1. Division 01 - General Requirements.

2. Section 01 3119 – Project Meetings.

3. Section 01 5000 – Construction Facilities and Temporary Controls.

4. Section 31 1000 - Site Clearing.

5. Section 31 2200 - Grading.

6. Section 32 9000 - Planting.

1.02 REFERENCES

A. Reference Standards: Published specifications, standards, tests, or recommended methods of trade, industry, or governmental organization apply to requirements of this Section.

B. International Society of Arboriculture (ISA) “Guide for Establishing Values of Trees and Other Plants,” prepared by the Council of Tree and Landscape Appraisers (CTLA).

C. Tree Pruning Standards: Comply with ANSI A300, “Trees, Shrubs, and Other Woody Plant Maintenance-Standard Practices,” unless more stringent requirements are indicated.

1.03 DEFINITIONS

A. Soil Compaction: pressure applied to soil particles caused by manual and/or mechanical forces, reducing the amount of air and water space between them, increasing soil density and hardness. It is a serious form of soil degradation that makes it hard for plant roots to grow, hinders water infiltration (causing runoff), reduces air exchange, and negatively affects soil organisms like earthworms.

B. Diameter at Breast Height (DBH): A standard method of measuring the size of a tree. This measurement is taken, in inches, at 4.5-feet above the ground.

C. Drip Line: Outermost limits of the tree canopy.

D. Root Zone: The ground area surrounding each tree containing its root system, defined by a radius equal to the trunk diameter at breast height (DBH) in inches multiplied by 1.5 feet per inch. For example, a 10-inch DBH tree would have a root zone extending 15 feet from the trunk in all directions.

E. Protected Root Zone (PRZ): The part of the Root Zone of a Protected Tree which must be protected from construction damage. The Protected Root Zone for other existing plants will be indicated on the Tree Disposition Plan.

F. Protected Tree: Existing trees to remain in place.

G. Tree Disposition Plan: Produced by the ARCHITECT's Landscape Architect consultant, containing information based on the Arborist Report.

H. Damage: Adverse impacts to a Protected Tree, including any of the Prohibited Practices listed in paragraph below.

I. Prohibited practices within, and immediately adjacent to, Protected Root Zones include, but are not limited to:

1. Breaking branches.

2. Scraping, skinning or bruising of bark.

3. Unauthorized cutting of branches, roots, or any other living tissue. Cutting of tree roots by utility trenching, foundation digging, placement of curbs and trenches, and other miscellaneous excavation shall not be performed without prior written approval by OAR.

4. Use of trees as support posts, power poles, or signposts, nailing or bolting into trees or using trees as temporary support in any way, including cabling around any part of the tree.

5. Unauthorized filling, excavating, trenching, or use of augers.

6. Operation and parking of vehicles or grading machinery.

7. Storage of materials, tools, and equipment.

8. Dumping or stockpiling construction waste, refuse, or excavated materials.

9. Disposal of liquid waste or contaminants on trees or in an area that drains toward trees. Such prohibited substances include but are not limited to paint, petroleum products, wastewater, concrete slurry, and other deleterious materials.

10. Burning trash or green waste, and other activities that produce excessive heat.

11. Activities and operations that produce excessive water.

12. Unauthorized removal or relocation of trees or understory plants that have been noted to remain.

13. Unauthorized removal of tree protection fencing or barricades prior to completion of the Project.

14. Any other prohibited practices that have been noted on the Tree Disposition Plan.

1.04 QUALITY ASSURANCE

A. General Responsibility: The CONTRACTOR shall be directly responsible for protection and welfare of the existing trees and understory plants within the Contract limits, which are noted to remain. This responsibility shall continue throughout all project phases until the entire project has achieved Substantial Completion.

B. Work covered by this Section shall be performed under the supervision of an Arborist, certified by the International Society of Arboriculture and licensed in the jurisdiction where the project is located. The Arborist will be retained and paid by the CONTRACTOR. The Arborist shall monitor Project demolition and construction activities and shall be present at the site to direct tree protection and trimming operations.

C. Pre-Installation Conference:

1. Prior to performing any work of the Contract, the CONTRACTOR shall call for a site meeting with the OAR. The purpose of the meeting shall be to field-verify the condition of all existing trees to be protected by the CONTRACTOR.

2. Prior to the meeting, the CONTRACTOR shall mark trees and understory plants to be removed, as indicated on the Contract Drawings. The CONTRACTOR will then field-verify with the ARCHITECT that marked trees and plants scheduled for removal are correct.

3. The CONTRACTOR shall coordinate and conduct the pre-installation conference in conformance to Section 01 3119, Project Meetings, prior to performing any work of this Section.

4. Failure of the CONTRACTOR to call for a Pre-Installation Conference implies acceptance of trees to be protected in their existing condition.

1.05 SUBMITTALS

A. Submit manufacturer product data and literature describing each type of product required by this Section.

B. Tree Certification prepared by the Arborist stating trees indicated to remain have been:

1. Protected during all project phases according to recognized standards.

2. Promptly and properly treated and repaired when damaged.

3. Certification shall be submitted to the OAR at Substantial Completion.

1.06 WARRANTY

A. CONTRACTOR shall guarantee that trees covered by the provisions of this Section shall be healthy and in flourishing condition of active growth one year from the date of final completion. Refer to Article 3.06 for damage and repair compensation.

B. During the warranty period the CONTRACTOR shall be liable for damages to all trees covered by the provisions of this Section and shall pay compensation to the OWNER.

1. The CONTRACTOR shall reimburse the OWNER for the loss of trees due to damage or lack of care.

2. For trees injured but not a complete loss, the amount of penalty shall be determined by the OAR.

C. CONTRACTOR will not be held responsible for tree losses due to neglect by the OWNER, vandalism, natural disasters, etc., during the warranty period. Report on such conditions promptly to the OAR.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Temporary Tree Protection Fencing:

1. Where indicated on the Drawings, or as necessary for construction logistics, install heavy-duty orange plastic mesh fencing fabric 48-inches tall. Fencing

shall be attached to metal “U” or “T” post driven into the ground of sufficient depth to hold the fabric solidly in place without sagging. Fabric shall be attached to posts using attachment ties of sufficient number and strength to hold up the fabric without sagging. OAR may request additional posts, deeper post depths, and/or additional fabric attachments if the fabric begins to sag, lean, or otherwise not present a sufficient barrier to access.

2. Where indicated on the Contract Drawings, install metal chain link fence in conformance with Section 01 5000, Construction Facilities and Temporary Controls. Fence shall be six feet in height, unless it is also part of a temporary security fence / barricade per Section 01 5000, in which case, the fence height shall be eight feet.

3. Fencing posts located on asphalt or concrete paving that will not be demolished may be supported on grade level concrete bases.

B. Organic Mulch: Shredded hardwood bark, free of deleterious materials.

PART 3 – EXECUTION

3.01 TREE PROTECTION

A. Temporary Fencing: Install temporary fencing around trees to be preserved at their dripline or at a minimum of 15’ from the tree’s trunk. Stands of trees may be fenced as a group. OAR may inspect fence locations to determine if fence is installed as noted on plans. CONTRACTOR shall move, add, or remove fencing if not installed per Contract Drawings, or as directed in writing by the OAR.

B. Avoid injury to tree roots when driving posts into the ground. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials or washing equipment. Keep Protected Root Zones free of ponding, eroding, or excessive wetting caused by dewatering operations.

C. Apply 3-inch average thickness of organic mulch over Protected Root Zones where indicated on plans to minimize compaction. Do not place organic mulch within 6-inches of tree trunks.

D. During the course of the project, relocation of the fence may be required to facilitate work. The CONTRACTOR shall do so only as directed by the OAR in writing.

E. Maintain fence enclosed Protected Root Zones in pre-construction condition and free of weeds and trash.

3.02 EXCAVATION AROUND PROTECTED TREES

A. Do not excavate within Protected Root Zones, unless otherwise indicated. Excavation or

fill within driplines of trees shall be done only where necessary and only under the supervision and direction of the Arborist. Install shoring or other protective support systems to minimize sloping or benching of excavations adjacent to Protected Root Zones.

B. Where trenching for utilities is required within driplines, work shall be performed under the supervision and direction of the Arborist. Tunnel under or around roots by drilling, auger boring, pipe jacking, or digging by hand. Use an air spade, if feasible.

C. Root Pruning

1. Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities.

2. Cut roots with sharp pruning instruments; do not break or chop.

3. Damaged roots or roots requiring removal that are larger than 2-inch diameter shall be cleanly cut by a hand saw. Cuts shall be made back to healthy root tissue.

4. Exposed roots and soil areas shall not be allowed to dry out before permanent backfill is placed. Temporary earth cover or organic mulch shall be provided, or roots shall be packed with wet peat moss or four layers of wet, untreated burlap. Provide temporary support and protect roots from damage until permanently covered with backfill. Temporary cover over the roots shall be wetted daily to the point of runoff.

5. If branch thinning is required to balance loss of roots, thinning shall not exceed 30 percent of existing foliage and work shall be supervised and directed by the OAR.

3.03 REGRADING

A. Grade Changes: Where new finish grade is indicated below or above existing grade around trees, slope grade beyond Protected Root Zones. Maintain existing grades within Protected Root Zones, and within 5-feet beyond.

3.04 TREE PRUNING

A. Trees that require pruning shall be inspected by the Arborist, OAR, and the CONTRACTOR before commencing work. All pruning shall be in accordance with the standards of the International Society of Arboriculture or as directed in writing by the OAR.

B. Tree pruning, unless indicated otherwise, shall be performed under the supervision and direction of the Arborist.

C. Branches that interfere with project work may be tied back or pruned only to the extent necessary for the work to be performed and completed. Tying back or trimming of branches shall be in accordance with accepted arboricultural practices.

D. Dead and damaged trees that are determined by the OAR and the Arborist to be incapable of restoration to normal growth pattern shall be removed.

E. Prune all dead or hazardous branches larger than 2 inches in diameter from all trees to remain. Cut evenly, using proper tools and skilled workmen to achieve neat severance with the least possible damage to the tree.

F. Implement pruning recommendations found in the Tree Disposition Plan and Arborist Report'. It is the CONTRACTOR's responsibility to follow pruning recommendations found in the Arborist Report.

3.05 TREE REMOVAL

A. Trees designated for removal shall be removed to a point at least one foot or more below subgrade.

B. Trees shall not be felled. Removal shall be in sections and lowered to the ground to minimize damage to other trees and planting, and to protect against injury to anyone in the vicinity.

C. Tree removal shall include cleanup of all wood parts, grinding of the stump to a depth sufficient to plant replacement trees or plants, removal of all wood chips from the stump site and filling the resulting hole with topsoil.

3.06 DAMAGE AND REPAIR COMPENSATION

A. Damage to existing tree trunks, branches, or roots over 2-inches in diameter shall be immediately reported to the OAR in writing. Repairs shall be performed promptly, as determined by the OAR at the CONTRACTOR's expense. All repair work shall be performed by skilled workmen under the supervision and direction of an approved, certified Arborist.

B. The OAR shall determine what repairs are appropriate for trees and protected understory plants damaged by project work. Repairs shall be made promptly after damage occurs to prevent progressive deterioration.

C. Any understory plant or tree to remain that is damaged, destroyed, or removed owing to the CONTRACTOR's negligence or failure to provide adequate protection shall be compensated for in accordance with "The Guide for Establishing Values of Trees and Other Plants", published by the International Society of Arboriculture, at no cost to the OWNER.

D. Damaged trees and understory plants that die as a result of injury caused by project

work shall remain the property of the OWNER and shall remain or be removed by the CONTRACTOR as determined and directed by the OAR, at no cost to the OWNER.

E. Replacements shall be installed in accordance with the provisions outlined in Section 32 9000, Planting.

3.07 MAINTENANCE

A. CONTRACTOR shall be responsible for performing periodic inspections of existing trees and understory plants to be preserved.

B. CONTRACTOR shall notify the OAR when additional specialists may be required to perform periodic inspection work or additional maintenance services to ensure the health and general wellbeing of the trees and understory plants to be preserved.

C. Throughout all project phases, the CONTRACTOR shall provide potable water irrigation to all trees and understory plants to be preserved. Soil moisture shall be maintained to ensure the health and general wellbeing of the trees and understory plants.

D. CONTRACTOR shall adjust the automatic irrigation system and/or manually apply water using hoses or water tanks as required. Adjust the frequency and duration of watering according to climatic conditions, terrain, soil properties, and the horticultural needs of the plants.

E. CONTRACTOR shall periodically test the moisture content of the soil within protected root zone areas.

F. Periodically remove weeds, rubbish, debris, and all other waste materials from protected root zones. Legally dispose of off Project site.

END OF SECTION

SECTION 01 6000

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. This Section includes administrative and procedural requirements governing selection of products for incorporation into the Work.

1.02 RELATED REQUIREMENTS

A. Section 01 2513 - Product Procedures for Substitutions "orEqual".

B. Section 01 3113 - Project Coordination.

C. Section 01 3216 - Construction Schedule for Small Projects.

D. Section 01 3229 - Project Forms.

E. Section 01 3300 - Submittal Procedures.

F. Section 01 4523 - Testing and Inspection.

G. Section 01 7836 - Warranties.

1.03 DEFINITIONS

A. Definitions used in this Section are not intended to change the meaning of other terms used in the Contract Documents, such as “specialties,” “systems,” “structure,” “finishes,” “accessories,” and other similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.

1. “Products” are items purchased for incorporation into the Work, whether purchased for the Work or taken from previously purchased stock. The term “product” includes the terms “material” and “equipment” and terms of similar intent.

a. “Named Products,” are items identified by the manufacturer’s product name, including make, model number or other designation, shown or listed in the manufacturer’s published product literature, current as of the date of the Contract.

b. “Foreign Products,” as distinguished from “domestic products,” are items substantially manufactured (50 percent or more of value) outside the United States and its possessions. Products produced

or supplied by entities substantially owned (more than 50 percent) by persons who are not citizens of, nor living within, the United States and its possessions are also considered to be foreign products.

2. "Materials," are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.

3. "Equipment," is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

4. Basis of Design as required by the latest LAUSD School Design Guide requirements.

1.04 SUBMITTALS

A. Material list: Prepare a list in tabular form acceptable to ARCHITECT and/or OAR showing proposed products. Include generic names. Include the manufacturer's name and proprietary names for each item listed.

1. Coordinate material list with the Construction Schedule and the submittal schedule.

2. Form: Prepare material list with information on each item tabulated under the following column headings.

a. Related Specification Section number.

b. Generic name used in Contract Documents.

c. Proprietary name, model number, and similar designations.

d. Manufacturer's name and address.

e. Supplier's name and address.

f. Installer's name and address.

g. Projected delivery date or time span of delivery period.

3. Initial Submittal: Within ten days after execution of each subcontract agreement, as set forth in General Conditions Article 6.23, submit three copies of an initial material list to the ARCHITECT with a copy to the OAR. Provide a written explanation for omissions of data and for known variations from the Contract Documents.

4. ARCHITECT Action: ARCHITECT will respond in writing to OAR within fourteen (14) days and OAR will forward response to CONTRACTOR within sixteen days of receipt of the completed material list. No response outside this period constitutes no objection to listed items but does not constitute a waiver of the requirement that selected items comply with the Contract Documents. ARCHITECT response will include a list of unacceptable item selections, containing a brief explanation of reasons for this action.

1.05 QUALITY ASSURANCE

A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.

1. CONTRACTOR is to verify necessary lead times for all materials; however, when specified products are available only from sources that do not, or cannot, produce a quality adequate to complete Work in a timely manner, consult with the ARCHITECT to determine the most important product qualities before proceeding. Qualities may include attributes, such as visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources producing these qualities, to the fullest extent possible.

B. Compatibility of Options: When the CONTRACTOR is given the option of selecting between two or more products for use in the Work, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

C. Foreign Product Limitations: Except under one or more of the following conditions, provide domestic products, not foreign products, for inclusion into the Work:

1. No available domestic product complies with the Contract Documents.

2. Domestic products that comply with the Contract Documents are available only at prices or terms substantially higher than foreign products that comply with the Contract Documents.

D. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturers or producer's nameplates or trademarks on exposed surfaces of products that will be exposed in view in occupied spaces or on the exterior.

1. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.

2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface that is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:

   a. Name of product and manufacturer.

   b. Model and serial number.

   c. Capacity.

   d. Speed.

   e. Ratings.

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.

1. Schedule delivery to minimize long-term storage at the Project site and to prevent overcrowding of Work spaces.

2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.

3. Deliver products to the Project site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

5. Store products at the Project site in a manner that will facilitate inspection and measurement of quantity or counting of units.

6. Store heavy materials away from structures in a manner that will not endanger the structure's supporting construction.

7. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 - PRODUCTS

2.01 MATERIAL SELECTION

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation.

1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.

2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other Projects.

B. Product Selection Procedures: The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:

1. Proprietary Specification Requirements: Where Specifications name only a single material or manufacturer, provide the product indicated. No substitutions will be permitted.

2. Semi-proprietary Specification Requirements: Where Specifications name two or more products or manufacturers, provide one of the products indicated. No substitutions will be permitted.

a. Where Specifications specify products or manufacturers by name, accompanied by the term “or equal” comply with General Conditions Article 6.14 to obtain approval for use of an unnamed product.

3. Descriptive Specification Requirements: Where Specifications describe a product or assembly, list exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with the Contract Documents.

4. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated.

a. Manufacturer’s recommendations may be contained in published material literature or by the manufacturer’s certification of performance.

5. Compliance with Basis of Design requirements for comparison of comparable products.

6. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes, or regulations specified.

7. Visual Matching: Where Specifications require matching an established Sample, decision of the ARCHITECT will be final on whether a proposed product matches satisfactorily.

8. Visual Selection: Where specified product requirements include the phrase "… as selected from manufacturer's standard or premium colors, patterns, textures…" or a similar phrase, select a product and manufacturer that complies with other specified requirements. The ARCHITECT will select the color, pattern, and texture from the product line selected.

9. "Or Equal" / Comparable Products: Product comparison shall be based on the District's approved Basis of Design that includes the architectural design descriptions and the proposed engineering systems, construction types, and materials, including the following:

    a. Significant qualities including attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.

    b. Warranty requirements.

    c. List of similar installations for completed projects.

    d. Samples, as specified.

PART 3 - EXECUTION

3.01 INSTALLATION OF PRODUCTS

A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located, and aligned with other Work.

B. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration until Substantial Completion.

END OF SECTION

SECTION 01 7123

FIELD ENGINEERING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Layout of the work

2. Verification of work

a. OWNER reserves the right to verify any work that INSPECTOR deems necessary.

b. Other sections that require Surveyor to verify or measure installed work and related item. Surveyor shall perform such verifications or measurements at CONTRACTOR'S expense. CONTRACTOR shall furnish a certification, signed by both Surveyor and CONTRACTOR, to INSPECTOR.

B. Related Requirements:

1. Section 01 1100 - Summary of Work.

2. Section 01 3113 - Project Coordination.

3. Section 01 3216 - Construction Schedule for Small Projects.

4. Section 01 3300 - Submittal Procedures.

5. Section 01 7700 - Contract Closeout.

1.02 SURVEY CONTROLS

A. Vertical Control shall use same benchmark used in the preparation of topographic survey. When Work consists of both on-site and off-site and benchmarks differ, an equation shall be indicated on Drawings.

B. Horizontal control for existing structures shall be the property line.

1.03 LAYOUT OF WORK

A. All work related to staking shall be by a Land Surveyor, or Civil engineer, registered with the State of California to perform land surveying and employed by CONTRACTOR.

B. Before commencement of Work, surveyor shall locate all reference points and benchmarks to be used for vertical and horizontal control.

C. Surveyor shall lay out entire Work, set grades, lines, levels, control points, elevations, grids and positions.

1.04 RECORD DOCUMENTS

A. Maintain complete and accurate log of all control and survey documentation as work progresses.

B. Record, by coordinates, all utilities onsite with top of pipe elevations, at major grade and alignment changes, rim, grate or top of curb and flow line elevations of all drainage structures and sewer manholes.

C. Indicate reference and control points on record drawings. The basis of elevation shall be one of the established benchmarks.

D. Upon Substantial Completion, obtain and pay for reproducible plans. Deliver plans to OAR. Clearly indicate all differences between original drawings and completed work within specified tolerances.

1.05 SUBMITTALS

A. Surveyor: Shall submit name, address and license number to OWNER, including any changes as they occur.

B. Field notes: Upon request by OAR, submit copies of cut sheets, coordinate plots, data collector printouts, marked-up construction staking plans and other documentation as available to verify accuracy of field engineering work during and at completion of project. Submittals to OWNER must be signed and sealed by Surveyor and counter-signed by CONTRACTOR

C. Statement of Compliance: CONTRACTOR shall submit a statement of certification signed and sealed by Surveyor, counter-signed by CONTRACTOR indicating compliance with grades and alignment of construction plans at rough grade, fine grade and top of rock stages. INSPECTOR shall approve survey submittals for each stage of construction prior to proceeding with work

D. Upon Substantial Completion, CONTRACTOR shall obtain and pay for reproducible survey drawings (or “As Built”).

E. Completed record drawings shall be signed and certified as correct and within specified tolerances by licensed surveyor. Originals and two sets of blueprints shall be submitted to OWNER.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.01 PREPARATION

A. Pre-mark areas of excavation in accordance with the requirements of "Dig-Alert". Request locators 2 days before commencing excavation.

B. Before commencing Work, establish all horizontal and vertical reference points used in Contract Documents according to existing field conditions.

C. Preserve established reference lines and benchmarks.

D. Differentiate school and city datum as applicable.

E. Relocate bench marks that may interfere with Work.

F. Reset and re-establish reference marks damaged or lost during construction.

3.02 SURVEY REQUIREMENTS GENERAL

A. Establish a minimum of two permanent horizontal and vertical control points on Project site, remote from construction area, referenced to data established by control points.

B. Indicate reference points, relative to benchmark elevation, on record drawings.

C. Provide grade stakes and elevations to construct over excavation and re-compaction, rough and final grades, paved areas, curbs, gutters, sidewalks, building pads, landscaped areas, and other areas as required.

D. Calculate and layout proposed finished elevations and intermediate controls as required to provide smooth transitions between spot elevations indicated on Drawings.

E. Provide stakes and elevations for grading, fill, and topsoil placement.

F. Provide adequate horizontal and vertical control to locate utility lines, including but not limited to, storm, sewers, water mains, gas, electric and signal and provide vertical control in proportion to the slope of the line as required for accurate construction. Dry utilities will be based upon adequate horizontal and vertical control layout. Prior to trench closure, survey and record invert and flow line elevations. Survey and record

top of curb and flow line elevations on finished concrete or asphaltic concrete (AC) surfaces at key locations such as beginning-of-curve (BC), end-of-curve (EC), grade breaks, corners or angle points in sufficient number to demonstrate the Work complies with the intent of the Contract Documents.

G. Provide horizontal and vertical control for batter boards for drainage, utility, and other on-site structures as required.

H. Furnish building corner offsets as required to adequately locate building pads. Provide cut and fill stakes within the building pad perimeter adequate to control both over excavation and re-compaction and the final sub-grade elevation of the building pad.

I. Submit a certification signed by the surveyor confirming the elevations and locations of improvements are in conformance with the Contract Documents. The statement shall include survey notes for the finish floor and building pad, showing the actual measured elevations on the completed sub-grade, recorded to the nearest 0.01 of a foot. Building pad tolerance will be plus or minus 0.1 of a foot.

J. Establish a minimum of two permanent horizontal and vertical control points on Project site, remote from building area, referenced to data established by survey control points.

K. Mark boundaries for rights-of-way dedications and easements for utilities prior to making location of buildings and utilities.

L. Layout all lines, elevations and measurements needed for construction or installation of buildings, grading, paving utilities according to the following:

1. Identify site boundary, property lines.

2. Provide working benchmarks.

3. Set stakes for Bottom of Excavated Plane (B.E.P.).

4. Set gridlines, radii, working points etcetera, for foundation.

5. Set and verify building pad elevations.

6. Set finish floor elevations.

7. Stake location and elevations for exterior ramps and stairs.

8. Set gridlines, radii, working points, etcetera, for all floors of multi-story buildings.

9. Set storm drain and sanitary sewer inverts and other utilities as needed at 5-foot off-set from building lines.

10. For new facilities, establish permanent onsite Benchmark with 2-inch diameter brass disk. Location of Benchmark to be determined by OWNER.

3.03 SURVEY REQUIREMENTS FOR GRADING

A. Provide grade stakes and elevations as follows:

1. Removal limits (cut lines).

2. Rough grade staking: 60-foot maximum grid plus additional stakes at grade changes and pertinent locations. Flag all grade changes including ridges, flow lines and grade breaks.

3. Fine grade for top of dirt: 30-foot maximum grid plus additional stakes at grade changes and pertinent locations. Flag all grade changes including ridges, flow lines and grade breaks.

4. Verify fine grade for top of rock: 30-foot maximum grid plus additional stakes at grade changes and pertinent locations. Flag all grade changes including ridges, flow lines and grade breaks.

5. Finish grade marks on all buildings, structures and at pertinent locations

6. Finish grades and offsets for all concrete work, utilities, landscape areas, and structures.

7. Provide controls and baselines for playground striping.

8. Offsite improvements: set grades and provide grade sheets as required by local authorities.

B. Provide a minimum of two permanent horizontal and vertical control points onsite, remote from building area, referenced to data established by survey control points.

3.04 SURVEY REQUIREMENTS FOR UTILITIES

A. Locate “wet” utility lines and provide vertical control proportionate to slope of line as required for accurate construction. “Dry” utilities shall have adequate horizontal and vertical control layout supplied by others.

B. Prior to back-filling trench, survey and record invert and flow line elevations. Survey and record top of curb and flow line elevations on finished surfaces at key locations (such as Back of Curbs, grade breaks, corners or angle points) in sufficient number to demonstrate Work complies with intent of Contract Documents.

C. Provide horizontal and vertical control for batter boards for drainage, utility, and other on-site structures as required.

1. Set grades for vaults one inch higher than adjacent surrounding design grades, unless noted otherwise.

D. Leave all trenches open until required inspection is completed.

3.05 SURVEY REQUIREMENTS FOR STRUCTURES

A. Furnish building corner offsets as required to adequately locate building pads. Provide cut and fill stakes within building pad perimeter adequate to control both over excavation and re-compaction and final sub-grade elevation of building pad.

B. Submit a certification signed by surveyor confirming elevations and locations of improvements are in conformance with Contract Documents. Statement shall include survey notes for finish floor and building pad, showing actual measured elevations on completed sub-grade, recorded to nearest 0.01 of a foot. Building pad tolerance will be plus or minus 0.1 of a foot.

END OF SECTION

SECTION 01 7329

CUTTING AND PATCHING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. This Section specifies procedural requirements for cutting and patching.

1.02 RELATED REQUIREMENTS

A. Section 01 2973 - Schedule of Values.

B. Section 01 3113 - Project Coordination.

C. Section 01 3119 - Project Meetings.

D. Section 01 3216 - Construction Schedule for Small Projects.

E. Section 01 3300 - Submittal Procedures.

F. Section 01 7123 - Field Engineering.

G. Section 01 7419 – Construction and Demolition Waste Management

H. Section 01 7836 - Warranties.

1.03 DEFINITIONS

A. Cutting. The word “cutting” as used in the Contract Documents includes, but is not limited to, cutting, drilling, chopping, and other similar operations and the word “patching” includes, but is not limited to, patching, rebuilding, reinforcing, repairing, refurbishing, restoring, replacing, or other similar operations.

1.04 SUBMITTALS

A. Cutting and Patching Proposal: CONTRACTOR shall submit a proposal to DSA as is required, describing procedures well in advance of the time cutting and patching will be performed if the Contract Documents requires approval of these procedures before proceeding. Include the following information, as applicable, in the proposal:

1. Describe the extent of cutting and patching required. Denote how it will be performed and indicate why it cannot be avoided.

2. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the building's appearance or other significant visual elements.

3. List products to be used and firms or entities that will perform this Work.

4. Indicate dates when cutting and patching will be performed.

5. Utilities: List utilities that cutting and patching operations will disturb or affect. List utilities to be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.

6. Where cutting and patching involves adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with the original structure.

7. Review by ARCHITECT and DSA prior to proceeding with cutting and patching does not waive ARCHITECT right to later require complete removal and replacement of defective Work. Cutting and patching shall be reviewed by the ARCHITECT and DSA if a structural elements are to remain.

1.05 QUALITY ASSURANCE

A. Requirements for structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio. If the load carrying member is meant to be supported as part of the new Work, then the supporting members should be part of the DSA approved design. If shoring of a structural element is required to be cut and patched, then the CONTRACTOR is required to provide a DSA approved design.

1. Obtain approval from ARCHITECT and DSA of the cutting and patching proposal before cutting and patching the following structural elements:

a. Foundation construction.

b. Bearing and retaining walls.

c. Structural concrete.

d. Structural steel.

e. Lintels.

f. Timber and primary wood framing.

g. Structural decking.

h. Stair systems.

i. Miscellaneous structural metals.

j. Exterior curtain-wall construction.

k. Equipment supports.

l. Structural systems of special construction in Division 13 Sections.

B. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safely.

1. Obtain review of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:

a. Primary operational systems and equipment.

b. Air or smoke barriers.

c. Water, moisture, or vapor barriers.

d. Membranes and flashings.

e. Fire protection systems.

f. Noise and vibration control elements and systems.

g. Control systems.

h. Communication and/or data systems.

i. Conveying systems.

j. Electrical wiring systems.

k. Operating systems of special construction in Division 13 Sections.

C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the opinion of ARCHITECT, reduce the building's aesthetic qualities. Do not cut and patch construction in a

manner that would result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

1.06 WARRANTY

A. Existing Warranties: Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION

3.01 INSPECTION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.

1. Before proceeding, meet at the Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.02 PREPARATION

A. Temporary support: Provide adequate temporary support of existing improvements or Work to be cut.

B. Protection: Protect existing improvements and Work during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of existing improvements or Work that might be exposed during cutting and patching operations.

C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Where the Work requires sandblasting of existing surfaces in order to receive new materials secured by cementitious, adhesive or chemical bond, completely remove existing finishes, stains, oil, grease, bitumen, mastic and adhesives or other substances deleterious to the new bonding or fastening of new Work. Utilize wet sand blasting for interior surfaces and for exterior surfaces where necessary to prevent objectionable production of dust.

3.03 PERFORMANCE

A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay. Carefully remove existing Work to be salvaged and/or reinstalled. Protect and store for reuse into the Work. Verify compatibility and suitability of existing substrates before starting the Work.

B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining Work. Where possible, review proposed procedures with the original installer; comply with the original installer's recommendations.

1. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.

3. Cut through concrete and masonry using a cutting machine, such as a carborundum saw or a diamond-core drill. Saw cut reinforcing bars and paint ends with bituminous paint except where bonded into new concrete or masonry.

4. Comply with requirements of applicable Sections of Divisions 31, 32, and 33 where cutting and patching requires excavating, backfill, and recompaction.

5. Woodwork: Cut and or remove to a panel or joint line.

6. Sheet Metal: Remove back to joint, lap, or connection. Secure loose or unfastened ends or edges and seal watertight.

C. Patching: Patch with durable seams that are as invisible as possible. Comply with required tolerances.

1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation. Verify conditions of existing substrates prior to executing Work.

2. Restore exposed finishes of patched areas and extend finish restoration into retaining adjoining construction in a manner that will eliminate all evidence of patching and refinishing.

3. Concrete: Maintain cut edges in a moist condition for twenty-four hours prior to the placement of new concrete. In lieu of this an epoxy adhesive may be provided. Finish placed concrete to match existing unless noted otherwise. Concrete shall have a compressive strength of 3,000 psi where

installed to repair and match existing improvements, unless noted otherwise.

4. Metal Fabrications: Items to remain exposed shall have their edges cut and ground smooth and rounded.

5. Sheet Metal: Replace removed or damaged sheet metal items for new Work.

6. Painting: Prepare areas to be patched, patch and paint as specified under related sections of the Contract Documents.

3.04 CLEANING

A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged coverings to their original condition.

B. Comply with waste disposal requirements in Section 01 7419 “Construction and Demolition Waste Management.

END OF SECTION

SECTION 01 7419

CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Preparation and implementation, including reporting and documentation, of a Waste Management Plan for reusing, recycling, salvage or disposal of non-hazardous waste materials generated during demolition and new construction (Construction and Demolition (C&D) Waste), to foster material recovery and re-use and to minimize disposal in land fills.

B. Related Requirements

1. Section 01 3300 - Submittal Procedures.

2. Section 01 5000 - Construction Facilities and Temporary Controls.

3. Section 01 7700 - Contract Closeout.

1.02 REFERENCES

A. California Integrated Waste Management Act of 1989 (AB 939).

B. California Code of Regulations Title 14, Section 18700 et seq.

C. California Green Building Standards Code.

1.03 SYSTEM DESCRIPTION

A. Collection and separation of all C&D waste materials generated on-site, reuse or recycling on-site, transportation to approved recyclers or reuse organizations, or transportation to legally designated landfills, for the purpose of recycling salvaging and reusing a minimum of 75 percent of the C&D waste generated.

1.04 SUBMITTALS

A. C&D Waste Management Plan (Exhibit 1): Within 10 calendar days after the Notice to Proceed and prior to any waste removal, submit the following to the OAR for review and approval. Update quarterly. Include:

1. Materials to be recycled, reused, or salvaged, either onsite or offsite.

2. Estimates of C&D waste quantity (in tons) by type of material. (If waste is measured by volume, give factors for conversion to weight in tons.)

3. Procedures for recycling and reuse program.

4. Permit or license and location of Project waste-disposal areas.

5. Site plan for placement of waste containers.

B. C&D Waste Management Monthly Progress Report (Exhibit 2): Summary of waste generated by Project, monthly with Application for Payment. Include:

1. Firms accepting the recovered or waste materials.

2. Type and location of accepting facilities (landfill, recovery facility, used materials yard, etcetera). If materials are reused or recycled on the Project site, location should be designated as “on-site reuse and recycling”.

3. Type of materials and net weight (tons) of each.

4. Value of the materials or disposal fee paid.

5. Attach weigh bills and other documentation confirming amount and disposal location of waste materials.

C. C&D Waste Management Final Compliance Report: Final update of Waste Management Plan to provide summary of total waste generated by Project.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 IMPLEMENTATION

A. Implement approved Waste Management Plan including collecting, segregating, storing, transporting and documenting each type of waste material generated, recycled or reused, or disposed in landfills.

B. Designate an on-site person to be responsible for instructing workers and overseeing the sorting and recording of waste/ recyclable materials.

C. Include waste management and recycling in worker orientation and as an agenda item for regular Project meetings.

D. Recyclable and waste bin areas shall be limited to areas approved on the Waste Management Plan. Keep recycling and waste bins neat and clearly marked to avoid contamination of materials.

3.02 ATTACHMENTS

A. Exhibit 1: Waste Management Plan

B. Exhibit 2: Waste Management Monthly Progress Report.

EXHIBIT 1

WASTE MANAGEMENT PLAN
CONSTRUCTION/ MAINTENANCE/ALTERATION & DEMOLITION PROJECTS

PROJECT NAME: **«PROJECTTITLE» «CONTRACTTITLE»**
PROJECT NO: **«Project Number»**
NAME OF COMPANY:
CONTACT PERSON:
TELEPHONE:
PROJECT SITE LOCATION:
PROJECT TYPE: ☐ NEW CONSTRUCTION ☐ DEMOLITION
☐ MAINTENANCE/ALTERATION PROJECTS
PROJECT SIZE (SQ. FT.):
DATE & ESTIMATED PERIOD

(1) Material Type	(2) Tons Estimated Recycle	(3) Tons Estimated Reuse	(4) Tons Estimated Salvage	(5) Tons Estimated Landfill	(6) Proposed Disposal or Recycling Facility (e.g., Onsite, Name of Facility)
Total					
Diversion Rate: Columns [(2)+(3)+(4)] / [(2)+(3)+(4)+(5)]					=

Signature	Title	Date

Column 1 "Material Types" – Enter type of materials targeted for recycling, reuse, and/or salvage, either on- or off-site, and include a category for waste materials requiring disposal.

Columns 2 thru 4 "Estimated Generation" - Enter estimated quantities (tons) of recyclable, reusable, or salvageable waste materials anticipated to be generated and state number of salvageable items.

Column 5 "Estimated Landfill" - Enter quantities (tons) of materials to be disposed in landfill.

Column 4 "Disposal Location" - Enter end-destination of recycled, salvaged, and disposed materials.

General : (1) Attach proposed Recycling and Waste Bin Location Plan.

(2) Attach name and contact data for each recycling or disposal destination to be used.

EXHIBIT 2

WASTE MANAGEMENT PROGRESS REPORT
CONSTRUCTION/ MAINTENANCE/ALTERATION & DEMOLITION PROJECTS

PROJECT NAME: **«PROJECTTITLE» «CONTRACTTITLE»**
PROJECT NO: **«Project Number»**
NAME OF COMPANY:
CONTACT PERSON:
TELEPHONE:
PROJECT SITE LOCATION:
PROJECT TYPE: ☐ NEW CONSTRUCTION ☐ DEMOLITION
☐ MAINTENANCE/ALTERATION PROJECTS
PROJECT SIZE (SQ. FT.):
PERIOD to

(1) Material Type	(2) Tons Actual Recycle	(3) Tons Actual Reuse	(4) Tons Actual Salvage	(5) Tons Actual Landfill	(6) Disposal or Recycling Facility (e.g., Onsite, Name of Facility)
Total					
Diversion Rate: Columns [(2)+(3)+(4)] / [(2)+(3)+(4)+(5)]					=

Signature	Title	Date

Column 1 "Material Types" – Enter type of materials targeted for recycling, reuse, and/or salvage, either on- or off-site, and include a category for waste materials requiring disposal.

Columns 2 thru 4 "Estimated Generation" - Enter estimated quantities (tons) of recyclable, reusable, or salvageable waste materials anticipated to be generated and state number of salvageable items.

Column 5 "Estimated Landfill" - Enter quantities (tons) of materials disposed.

Column 4 "Disposal Location" - Enter end-destination of recycled, salvaged, and disposed materials.

General : (1) Attach proposed Recycling and Waste Bin Location Plan.

(2) Attach name and contact data for each recycling or disposal destination to be used.

END OF SECTION

SECTION 01 7700

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. This Section includes administrative and procedural requirements for Contract Closeout, including but not limited to, the following:

1. Inspection procedures.
2. Project record documents submittal.
3. Operation and maintenance manual submittal.
4. OWNER orientation and instruction.
5. Final cleaning.

1.02 RELATED REQUIREMENTS:

1. Section 01 2976 - Progress Payment Procedures.
2. Section 01 3216 - Construction Schedule for Small Projects.
3. Section 01 3229 - Project Forms.
4. Section 01 3300 - Submittal Procedures.
5. Section 01 5000 - Construction Facilities and Temporary Controls.
6. Section 01 7836 - Warranties.
7. Section 01 7900 – Maintenance and Operations Staff Demonstration and Training

PART 2 – PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 SUBSTANTIAL COMPLETION

A. Inspection Procedures: On receipt of the Request For Certificate of Substantial Completion, OAR will authorize commencement of inspection. INSPECTOR, OAR, CONTRACTOR and ARCHITECT will inspect the Work.

1. If after inspection of the Work, OAR does not consider the Work substantially complete, OAR will notify CONTRACTOR.

2. If after inspection, OAR considers the Work substantially complete, INSPECTOR shall prepare a comprehensive Punch List of items to be corrected.

a. INSPECTOR may repeat inspection to assure the Work is corrected.

b. Results of the completed inspection will form a partial basis of the requirements for Release of Retention.

3.02 ADMINISTRATIVE CLOSEOUT

A. Re-inspection Procedures: INSPECTOR, OAR, CONTRACTOR and ARCHITECT may inspect the Work upon notice, including final inspection of Punch List items from earlier inspections, which have been corrected, except for items whose completion is delayed under circumstances acceptable to OAR.

1. OWNER has the right to preclude CONTRACTOR from Punch List correction and documents submittals after the Contract Completion date; unless OWNER elects to authorize CONTRACTOR to extend Administrative Contract duration. CONTRACTOR will be assessed actual cost for the unsettled items. Withholds amounts exceeding actual costs to correct or to obtain deliverable will be released.

2. If allowed by the OAR, re-inspection will be repeated, but may be assessed against CONTRACTOR if OWNER is subject to additional professional service and additional costs of inspection.

3.03 PROJECT RECORD DOCUMENT SUBMITTAL

A. General: Do not use project record documents for construction purposes. Provide access to record documents for ARCHITECT, INSPECTOR and OAR reference during normal working hours. Project record documents shall be updated on a weekly basis. Prior to submitting each application for payment, secure INSPECTOR and ARCHITECT approval of project record documents.

B. Record Drawings: Maintain a clean, undamaged set in the native format (CADD or REVIT) and PDF. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark the Drawing that is most capable of showing conditions fully and accurately. Where

Shop Drawings are used, record a cross-reference at the corresponding location on the Drawings. Provide detailed and accurate field dimensions for concealed elements that would be difficult to measure and record at a later date.

1. A shared file location with a direct link to both As-builts PDFs and complete As-Built CADD files is acceptable (Dropbox or Onedrive)

2. Refer to Exhibit A for the Final As-built Record Submittal (FA-BRS) for the authorized signatures that can be digitized.

3. Mark record sets with red lines using the CADD or REVIT application. PDF formats shall use redlines. Use other colors to distinguish between variations in separate categories of the Work. Date and number entries in the same format as submitted. Call attention to entry by a “cloud” around the affected areas.

4. Mark new information important to OWNER but was not shown on Drawings or Shop Drawings.

5. Utility location and depth below finished grade and above ceilings and attic spaces shall be fully dimensioned and indicated on record drawings. Dimensions shall be measured from building lines or permanent landmarks and shall be triangulated to those features.

6. Note related Change Order or Construction Directive numbers where applicable. RFC submissions shall be referenced on each affected sheet, Drawing and Shop Drawing.

7. Organize record drawing sheets into manageable sets with cover sheets; suitable titles, dates, and other identification on the cover of each set.

8. Prior to Contract Completion of the Work, review of the project record drawings by ARCHITECT; the native electronic format either CAD or REVIT and one set of pdfs.

C. Record Specifications: Maintain two complete electronic copies of the Specifications, including Addenda. Include with the Specifications electronic two copies of other written Contract Documents, such as Change Orders or Construction Directives issued during construction.

1. Mark these record documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.

2. Give particular attention to substitutions and selection of options and information on concealed Work that cannot otherwise be readily discerned later by direct observation.

3. Note related record document information with Product Data.

4. Prior to Contract Completion of the Work, submit record Specifications to ARCHITECT for review and approval prior to submittal for OWNER records.

D. Record Product Data: Maintain electronic copies of each Product Data submittal. Note related Change Orders and Construction Directives and mark-up of record drawings and Specifications.

1. Mark these documents to illustrate significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the Project site and from the manufacturer's installation instructions and recommendations.

2. Provide detailed and accurate information regarding concealed products and portions of Work that cannot otherwise be readily discerned later by direct observation.

3. Prior to Contract Completion, submit complete annotated PDF electronic set of record Product Data to ARCHITECT for OWNER records.

E. Record Samples: Immediately prior to Substantial Completion, CONTRACTOR shall meet with ARCHITECT and OAR at the Project site to determine which Samples are to be transmitted to OWNER for record purposes. Comply with OAR instructions regarding delivery to OWNER storage area.

F. Miscellaneous Records: Refer to other Specification sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Prior to the date of Contract Completion, complete and compile miscellaneous records and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit annotated PDF electronic files to Architect for review and approval prior to submittal to the OWNER.

G. Operation and Maintenance Manuals: Prior to Substantial Completion, organize electronic document tree of the operation and maintenance documents based on CSI specification breakdown. Submit to ARCHITECT for review and approval prior to submittal to the OWNER for the record. Include the following types of information.

1. Emergency instructions.

2. Spare parts list.

3. Copies of warranties.

4. Wiring diagrams.

5. Recommended “turn-around” cycles.

6. Inspection procedures.

7. Shop Drawings and Product Data.

8. Fixture lamping schedule.

H. Verified Reports: Construction progress of the Work shall be reported to DSA via a duly verified report as per Title 24, Part 1, Sections 4-336 and 4-343.c of the California Building Standards Commission’s, California Administrative Code.

3.04 OPERATION AND MAINTENANCE INSTRUCTIONS:

A. Operation and Maintenance Instructions: Prior to Substantial Completion, arrange for each installer of equipment that requires regular operation and maintenance to meet with designated OWNER personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer’s representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:

1. Maintenance manuals.

2. Spare parts and materials.

3. Tools.

4. Lubricants.

5. Fuels.

6. Identification systems.

7. Control sequences.

8. Hazards.

9. Cleaning.

10. Warranties and bonds.

11. Maintenance agreements and similar continuing commitments.

B. As part of instruction for operating equipment, demonstrate the following procedures:

1. Start-up.

2. Shutdown.

3. Emergency operations.

4. Noise and vibration adjustments.

5. Safety procedures.

6. Economy and efficiency adjustments.

7. Effective energy utilization.

C. Notice Of Termination: Refer to Section 01 7900 Maintenance Demonstration and Training.

3.05 FINAL CLEANING

A. General: Related sections of the Contract Documents specify general cleaning during performance of the Work. General cleaning is included in Division 01 Section “Construction Facilities and Temporary Controls”.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer’s instructions.

1. Complete the following cleaning operations before requesting inspection for a certificate of Substantial Completion.

a. Remove labels that are not permanent labels.

b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.

c. Clean exposed exterior and interior hard-surfaced finished to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.

d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.

e. Clean the Project site, including landscape development areas, of rubbish, litter, and other foreign substances. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.

END OF SECTION

SECTION 01 7836

WARRANTIES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. This Section includes administrative and procedural requirements for warranties, including manufacturers and installer's standard warranties on products and special product warranties.

1. Refer to the General Conditions for terms of the guarantee period for the Work.

1.02 RELATED REQUIREMENTS

A. Section 01 6000 - Product Requirements.

B. Section 01 7329 - Cutting and Patching.

C. Section 01 7700 - Contract Closeout.

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION

3.01 WARRANTY REQUIREMENTS

A. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties shall not relieve CONTACTOR of the warranty of the Work incorporating such materials, products, and equipment. Manufacturer's disclaimers and limitations on warranties do not relieve suppliers, manufacturers, installers, and Subcontractors of the requirement to countersign special warranties with CONTRACTOR.

B. Standard warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to OWNER.

C. Special warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for OWNER.

D. Related Damages and Losses: When correcting failed or defective warranted Work, remove and replace Work that has been damaged as a result of such failure or which must be removed and replaced to provide access for correction of warranted Work.

E. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement with the reinstated warranty equal to the original warranty.

F. Replacement Cost: Upon determination the Work covered by a warranty has failed and/or is defective, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. CONTRACTOR is responsible for the cost of replacing or rebuilding defective Work regardless of whether OWNER has benefited from use of the Work through a portion of its anticipated useful service life.

G. OWNER Recourse: Expressed warranties made to OWNER are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which OWNER can enforce such other duties, obligations, rights, or remedies.

H. Rejection of Warranties: OAR reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

I. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, OAR reserves the right to refuse to accept the Work until CONTRACTOR presents evidence the entities required to countersign such commitments have done so.

3.02 SUBMITTALS

A. Submit written preliminary warranties prior to Substantial Completion and final warranties prior to Contract Completion. If the certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, submit written warranties as set forth in the certificate of Substantial Completion.

1. When a designated portion of the Work is partially used and/or occupied by OWNER, submit properly executed warranties to ARCHITECT within fifteen days of the Partial Use or Occupancy of the designated portion of the Work.

B. When the Contract Documents require CONTRACTOR, or CONTRACTOR and a Subcontractor, installer, supplier or manufacturer to execute a special warranty,

prepare a written document containing appropriate terms and identification, ready for execution by the required parties. Submit a draft to OAR, through the ARCHITECT, for approval prior to final execution.

1. Refer to Divisions 02 through 49 for specific content requirements and particular requirements for submitting special warranties.

C. Form of Submittal: Prior to Contract Completion, compile two copies of each required final warranty properly executed by CONTRACTOR, or by CONTRACTOR and Subcontractor, installer, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the Specifications.

D. Bind warranties and bonds in heavy-duty, commercial-quality, durable three ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8½ by 11 paper.

1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the item or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the installer.

2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title and/or name, and name of CONTRACTOR.

3. When warranted Work requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

END OF SECTION

SECTION 01 7900

MAINTENANCE AND OPERATIONS STAFF DEMONSTRATION AND TRAINING

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Administrative and procedural requirements for training OWNER's personnel.

1. Demonstration of operations of systems, subsystems and equipment.

2. Training in operation and maintenance of systems, subsystems, and equipment.

1.02 RELATED REQUIREMENTS

A. Project Commissioning Plan (CxP).

B. CHPS Best Practices Manual.

C. CAL/OSHA Minimum Ventilation Standard, Title 8, Section 5142.

D. California Building Code, Chapter 12.

E. Division 01 - General Requirements.

F. Division 26 - Electrical.

1.03 SUBMITTALS

A. Submittals, including training modules, require the Commissioning Services Provider's (CxSP) review and OAR acceptance prior to implementation.

B. Instruction Program:

1. Ninety days prior to Startup and Testing, submit a draft outline of the instructional program for demonstration and training, including the training module objectives and outline for each training module, schedule of proposed training dates, training times, length of instruction time and instructors' names for each training module. Submittal(s) shall be on a CD-ROM in a MS Word current verision format file. CxSP, OAR and Project Inspector will review and OAR accept, based on their recommendation, CONTRACTOR's proposed Instruction Program or comment and return to CONTRACTOR for revision and incorporation of comments within 30 days of receipt.

2. Revise and resubmit finalized Instruction Program 45 days prior to Startup and Testing. CxSP, OAR and Project Inspector will review CONTRACTOR's revised Instruction Program and OAR, based on their recommendation, accept or return for further revision and incorporation of unaddressed revisions and/or comments or unacceptable revisions within five days of receipt.

3. Revise and incorporate comments and resubmit to OAR within five days of receipt. CxSP, OAR and Project Inspector will review CONTRACTOR's revised Instruction Program and OAR, based on their recommendation, accept the revised Instruction Program within five days of receipt or require CONTRACTOR to meet with OAR and CxSP within five days of receipt to revise and incorporate unaddressed revisions and/or comments. CONTRACTOR shall be assessed reasonable fees and expenses incurred by CxSP for these meetings.

C. Upon completion of training, submit two complete training manuals for OWNER's use and one CD-ROM including materials in the complete training manual in the Adobe PDF format. Each manual shall contain specific training and instruction manuals and hand-outs for the following designated end-users:

1. School Faculty and Administration.

2. School Plant Manager.

3. OWNER Maintenance and Operations (M&O) Personnel.

D. Qualification Data: Three weeks prior to start of training, CONTRACTOR shall submit Letters of Qualifications and Project Lists for persons and firms providing instruction including:

1. Training Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel and end-users in training program similar to that required for this Project, and who has a record of successful training performance.

2. Training Instructor Qualifications: Instructor shall be factory-authorized service representative, experienced in operation and maintenance procedures and training for each system, subsystem or piece of equipment.

3. References: The name of owner and the name and telephone number of the plant manager and maintenance supervisor on three similar projects for reference.

E. Attendance Record: For each training module, submit the proposed list of participants, sign in sheets and length of instruction time a minimum of 15 days prior to start of training of the module.

F. Evaluations: For each participant and for each training module, submit results and documentation of performance-based tests a minimum of seven days following completion of training of each module.

G. Demonstration and Training Video: CONTRACTOR shall video record each classroom training and demonstration session and submit a copy on CD-ROM or DVD in a format compatible with MS Windows Media Player at end of each training module. CONTRACTOR shall include a copy of manufacturer training video materials presented during training and demonstration session.

1.04 COORDINATION

A. Coordinate instruction schedule with the OAR, CxSP, and OWNER's M&O personnel. Adjust schedule as required to reasonably accommodate the schedules of participants and to minimize disrupting OWNER operations.

B. Coordinate with instructors, including providing notification of scheduled dates, times, length of instruction time and course content.

C. Coordinate content of training modules with content of approved Emergency Manual and Operations and Maintenance Manual. Do not submit instruction program until manual has been reviewed and accepted by the OAR.

1.05 INSTRUCTION PROGRAM

A. Program Structure: Develop instruction program that includes individual demonstration and training modules for the operation, maintenance, minor repair (completion in under two hours) and calibration of systems and components in the system as required by Section 01 9113, Divisions 22, 23 and Division 26 and as specified in Part 3 of this Section, "DEMONSTRATION AND TRAINING".

B. Training Modules: Develop learning objective and teaching outline for each module, specific and as applicable, for the following OWNER personnel:

1. School Faculty and Administration.

2. School Plant Manager.

3. Operations and Maintenance.

C. Include description of specific skills and knowledge that participant is expected to master.

D. For each module, include instruction for the following:

1. Basis of System Design (for OWNER Operations and Maintenance Personnel), Operational Requirements and Criteria, including, but not limited to:

a. System, subsystem and equipment descriptions.

b. Performance and design criteria if CONTRACTOR is delegated design responsibility.

c. Operating standards.

d. Regulatory requirements.

e. Equipment function.

f. Operating characteristics.

g. Limiting conditions.

h. Performance curves.

2. Documentation (for OWNER Operations and Maintenance Personnel and School Plant Manager): Review in detail the following documentation:

a. Operations manuals.

b. Maintenance manuals.

c. Project Record Documents.

d. Identification systems.

e. Warranties.

f. Maintenance service agreements and similar continuing commitments.

3. Emergencies (for OWNER Operations and Maintenance Personnel and School Plant Manager): Review, without limitation, the following, as applicable:

a. Instructions on meaning of warnings, trouble indications, and error messages.

b. Instructions on stopping.

c. Shutdown instructions for each type of emergency.

d. Operating instructions for conditions outside of normal operating limits.

e. Sequences for electric or electronic systems.

f. Special operating instructions and procedures.

4. Operations (for OWNER Operations and Maintenance Personnel and School Plant Manager): Review, without limitation, the following as applicable:

    a. Startup procedures.

    b. Equipment or system break-in procedures.

    c. Routine and normal operating instructions.

    d. Regulation and control procedures.

    e. Control sequences.

    f. Safety procedures.

    g. Instructions on stopping.

    h. Normal shutdown instructions.

    i. Operating procedures for system, subsystem or equipment failure.

    j. Seasonal and weekend operating instructions.

    k. Required sequences for electric or electronic systems.

    l. Special operating instructions and procedures.

5. Adjustments (for OWNER M&O Personnel): Review, without limitation, the following as applicable:

    a. Alignments.

    b. Checking adjustments.

    c. Noise and vibration adjustments.

    d. Economy and efficiency adjustments.

6. Troubleshooting (for OWNER M&O Personnel): Review, without limitation, the following as applicable:

    a. Diagnostic instructions.

    b. Test and inspection procedures.

7. Maintenance (for OWNER M&O Personnel and Plant Manager): Review, without limitation, the following, as applicable:

    a. Inspection procedures.

b. Types of cleaning agents to be used and methods of cleaning.

c. List of cleaning agents and methods of cleaning detrimental to product.

d. Procedures for routine cleaning.

e. Procedures for preventative maintenance.

f. Procedures for routine maintenance.

g. Instruction on use of special tools.

8. Repairs (for OWNER M&O Personnel): Review, without limitation, the following as applicable:

a. Diagnostic instructions.

b. Repair instructions.

c. Disassembly; component removal, repair and replacement and reassembly instructions.

d. Instructions for identifying parts and components.

e. Review of parts needed for operation and maintenance.

9. Faculty Member Training:

a. Organizational chart structure, to be completed by OWNER, for repair or emergency requests for the systems including contact information of the Plant Manager.

1.06 PREPARATION

A. Training Facilitator: Engage qualified training facilitator no later than 120 days prior to start of training to prepare instruction program and training modules, to coordinate instructors, and to coordinate between CONTRACTOR, OAR and CxSP for number of participants, instruction times and location.

B. Training Instructor: Engage qualified training instructors to instruct OWNER's personnel to adjust, operate and maintain systems, subsystems and equipment not part of a system no later than 30 days prior to start of training of assigned modules.

C. Scheduling: Provide instruction at mutually agreed on times.

1. Schedule training with OWNER, through OAR, with at least two weeks advance notice.

2. Schedule training to conform to personnel availability at Site.

3. Conduct training(s) after the execution of commissioning Pre-functional and Functional Tests are completed.

4. Base duration of training on hours specified in the applicable specifications or minimums defined in Article 1.08.

D. Demonstration and Training Video: Record each training module separately. Include classroom instructions and demonstrations, board diagrams and other visual aids, excluding attendee practice or testing.

1. Make demonstration and testing videos at Site to ensure video is representative of installed system. As part of training, devote one lesson plan to reviewing of video to allow new employees to view the video recordings at their own convenience and be able to operate the video system without need for instructor attendance.

E. Familiarize OWNER staff regarding CAL/OSHA Title 8, section 5142 Requirements.

F. Cleanup: Collect excess copies of educational materials and give to OAR. Remove instruction equipment. Restore systems and equipment to condition existing just before commencing training.

1.07 OPERATIONS AND MAINTENANCE MANUALS

A. CONTRACTOR shall direct Subcontractors to compile and prepare O&M Manuals and other required documentation for the equipment and systems that are provided and/or installed per their scope of work for submittal to OAR prior to project closeout.

B. The OAR shall receive a copy of the Operations and Maintenance manuals prior to initiation of demonstration and training for review. and acceptance or rejection.

1. Operations and Maintenance manuals shall meet the respective requirements of Division 26, and Section 01 7700; and organize electronic document tree of the operation and maintenance data documents based on the CSI specification breakdown.

2. Contents: There shall be a title page and table of contents at the beginning of each folder. The table of contents shall be an outline that identifies the equipment or systems documentation included in the folder and references the specification sections relating to the equipment and systems that are being included in each part of the folder. Each part of the folder shall contain the information described below, in the following order.

a. The first page shall contain the name, address, and telephone number of the manufacturer and installing CONTRACTOR, as well as the 24-hour number for emergency service for each piece of equipment identified in this section.

b. Preventive Maintenance Instructions. This section shall list the location of preventative maintenance instructions. The list shall show the piece of equipment, the Operations and Maintenance document name, and the O&M document page number that contains the instructions.

c. Submittal and Product Data. This section shall include product data not covered by manufacturer's Operations and Maintenance instructions and associated shop drawings.

d. Warranty and Service Contracts. This section shall include the following for each piece of equipment, as applicable:

1) Copy of the equipment warranty information provided as part of Section 01 7836.

2) Additional Warranties in accordance with Warranty requirements in DIVISIONS 02 to 49, as applicable. Equipment Warranties shall clearly list requirements to maintain the Warranty in effect, conditions or acts that would invalidate or void the Warranty, and Warranty expiration date.

3) Service contracts issued. Contracts shall clearly indicate contract dates and scope of work included.

e. Operation and Maintenance Instructions. These shall be the written manufacturer's maintenance and operating instructions with the model number and features of the installed equipment or system clearly identified. This section shall include applicable data on the following:

1) Installation, startup, and break-in instructions.

2) Starting, normal shutdown, emergency shutdown, manual operation, seasonal changeover and normal operating procedures and data, including any special limitations.

3) Operations and Maintenance and installation instructions that were shipped with the unit.

4) Preventative maintenance and service procedures and schedules.

5) Troubleshooting procedures.

6) A parts list, edited to omit reference to items which do not apply to this installation.

7) A list of any special tools required to service or maintain the equipment.

8) Performance data, ratings, and curves.

f. Control Drawings. This section contains controls drawings and the final sequence of operations, set points, and schedules as set during the Commissioning Process. If shop drawings, portions of the project manual, or record drawings clearly show this information, a copy of this information may be inserted. Otherwise, original drawings shall be generated and included in this section.

g. Electronic pdf file of same documents noted above.

PART 2 – PRODUCTS – N/A

PART 3 – EXECUTION – N/A

END OF SECTION

SECTION 01 9113

GENERAL COMMISSIONING REQUIREMENTS

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. This Section defines the Contractor's responsibilities with respect to Commissioning. The Contractor shall include this scope in the bid. This includes administrative and procedural requirements as well as a detailed execution of Commissioning. This Section supplements Section 01 4523 – Testing and Inspection and Division 26 – Electrical sections which specify testing procedures. This Section also defines the systems and equipment to be commissioned. For projects that have Specification Section 01 4516 or 01 4519, Contractor Construction Quality Control, the Commissioning schedule and activities as defined in the approved Commissioning Plan shall be incorporated by Contractor into the Construction Quality Control (CQC) plan. The Commissioning Services Provider will be part of the Owner's Quality Assurance (QA) Team and participate in the review and execution of the Project Construction Quality Control (CQC) plan, along with the Contractor, Owner's Authorized Representative (OAR), Project Inspector (PI), and Architect of Record (AOR).

1.02 DEFINITIONS

A. Commissioning (Cx): A systematic process which verifies that the building systems perform according to the Owner's Design Intent/Basis of Design (ODI/BOD). Commissioning includes system documentation, equipment startup, control system calibration, Testing, Adjusting and Balancing (TAB) verification, performance testing, and training.

B. Commissioning Services Provider (CxSP): A District appointed entity that plans and coordinates all activities which implement Commissioning as outlined by the Owner's Design Intent/Basis of Design (ODI/BOD). The CxSP has overall responsibility for planning and coordinating Commissioning. Commissioning activities that take place during construction shall be based on the Contractor's construction schedule.

C. Commissioning Plan (CxP): A contract document that identifies the project Commissioning goals, Owner's Design Intent/Basis of Design, commissioning milestones, coordination requirements, and project specific Pre-functional Equipment Checklists and Functional Performance Test Checklists. The CxP shall be incorporated by Contractor into the Construction Quality Control Plan.

D. Pre-functional Equipment Checklist (PEC): A form for each piece of equipment referenced in '1.08 SYSTEMS TO BE COMMISSIONED' that must be completed by the Contractor as a prerequisite to the equipment's Functional Performance Test

(FPT). Sample checklists and PEC forms are included in the CxP. The checklists and forms are completed by the Contractor and verified by the CxSP.

E. Functional Performance Test (FPT): A documented test designed by the Commissioning Services Provider to verifies the dynamic functioning and operation of equipment and systems with the goal of verifying that the Owners' Design Intent, Owner's Project Requirements, and Basis of Design (BOD) are met. Sample testing requirements and forms are included in the CxP. Test procedures are performed by the Contractor and witnessed by the INSPECTOR and CxSP.

F. Acceptance - A formal action, taken by a person with appropriate authorization, to declare that some aspect of the project meets defined requirements – thereby permitting subsequent activities to proceed.

G. Checklists - Documents that are developed and used during all phases of commissioning to verify that the Owner's intent is being achieved. This includes checklists for general verification, testing, training, and other specific requirements. Various checklists are prepared by the CxSP and the contractor to document completion of testing and/or commissioning of equipment and systems.

I. Coordination Drawings - Drawings showing the work of all trades to illustrate that equipment can be installed in the space allocated without compromising equipment function or access for maintenance and replacement. These drawings graphically illustrate and dimension manufacturers' recommended maintenance clearances.

K. Control system – A component of an environmental, HVAC, electrical, lighting, or energy management system for the reporting, monitoring and/or issuing of commands to and/or from field devices.

L. Data logging -The monitoring and recording of flows, currents, status, pressures, etc., of equipment using stand-alone data recorders separate from the installed control system or the trending capabilities of those control systems.

M. Deficiency - A condition that is not in compliance with the contract documents relative to the installation or function of a component, piece of equipment, or system.

N. Factory Testing - Testing of equipment at the factory or on-site by factory personnel with, or without, an owner's representative present.

O. Issues Log - A formal and ongoing record of problems or concerns – and their resolution – that have been raised by members of the commissioning team during the course of commissioning.

P. Seasonal Performance Tests - Tests that are performed when weather conditions are comparable to the design conditions based or the design conditions can be simulated.

R. Simulated Condition - Condition that is created for the purpose of testing the response of a system (for example: raising/lowering the set point of a thermostat to see the response in a VAV box).

S. Startup - The initial starting or activating of dynamic equipment.

T. Systems Manual - A system-focused composite document that includes the operation manual, maintenance manual, manufacturer's technical diagrams and additional information of use to the owner during facility occupancy and operation.

U. Test Procedure - A written protocol that defines methods, procedures, personnel, and expected outcomes for tests conducted on components, equipment, assemblies, systems, and interfaces among systems. The test procedures are specified in the Commissioning Plan and Technical Specifications sections of the contract documents and the CxP.

V. Training Plan - A written document that details the expectations, schedule, budget, and deliverables of commissioning activities related to the training of facility operating and maintenance personnel, users, and occupants.

X. Verification - The process by which specific documents, components, equipment, assemblies, systems, and interfaces among systems are confirmed to comply with the criteria described in the Owner's Design Intent/Basis of Design. Verification testing is performed per the prescribed test procedure(s) by the contractor and witnessed by the INSPECTOR and CxSP.

Y, Trending – The analysis of system performance gathered over a period of time by a building management system or other electronic data gathering equipment.

1.03 RELATED REQUIREMENTS

A. Section 00 7300 – Supplementary Conditions.

B. Section 01 1216 – Phasing of the Work.

C. Section 01 2513 – Product Substitution Procedures.

D. Section 01 3113 – Project Coordination.

E. Section 01 3119 – Project Meetings.

F. Section 01 3216 – Construction Schedule for Small Projects.

G. Section 01 3300 - Submittal Procedures.

H. Section 01 4523 - Testing and Inspection.

I. Section 01 5000 – Construction Facilities and Temporary Controls.

J. Section 01 7700 – Contract Close-Out.

K. Section 01 7836 – Warranties.

L. Section 01 7900 – Maintenance & Operation Staff Demonstration and Training.

1.04 REFERENCES

A. Associated Air Balance Council Commissioning Guidelines.

B. CHPS Best Practices Manual, Volume V: Commissioning.

C. Sample Commissioning Plan Documentation.

1.05 COORDINATION

A. Items listed below require coordination between the Contractor, OAR, INSPECTOR, and CxSP. Details regarding each item are provided through out this Section and/or Sections 01 7900.

1. Cx Schedule and Meeting Venue.

2. Commissioning Meeting Attendance.

3. Completion of Pre-functional Equipment Checklists (PEC).

4. Functional Performance Testing (FPT).

5. Operations & Maintenance Manual Submittal and Training.

6. Documentation of Pre-functional Equipment Checklists (PEC) & Functional Performance Testing (FPT) Inspections.

1.06 SUBMITTALS

A. Submittal documentation required for the commissioning work will be identified by the CxSP and integrated into the normal submittal process and protocol of the construction team. At minimum, the CxSP's documentation request will identify the manufacturer and model number, the manufacturer's printed installation and detailed startup procedures, full sequences of operation, O&M data, performance data, any performance test procedures, control drawings and details of owner contracted tests. In addition, the installation and checkout materials that are actually shipped inside the equipment and the actual field checkout sheet forms to be used by the factory or field technicians shall be submitted. All such documentation will be included by subcontractors in their O&M manual submittals.

B. The CxSP will review and recommend acceptance or any required revision to the OAR for all submittals related to the commissioned equipment for conformance with the contract documents as they relate to commissioning, performance of the equipment, and their adequacy of test procedures. This review is intended primarily to aid in the development of performance procedures and only secondarily to verify compliance with equipment specifications. The CxSP will notify the OAR of items missing or areas that are not in conformance with contract documents and which

require resubmission. Submittal of O&M manual documentation does not constitute compliance. The CxSP will review all such document submittals and recommend to OAR their acceptance or any required revisions.

1.07 CONTRACTOR RESPONSIBILITIES

A. The general responsibilities of Contractor and Subcontractors in commissioning are defined in this section. The specific responsibilities are in Division 26 Technical Specifications. All parties shall:

1. Follow the Commissioning Plan.

2. Attend commissioning meetings.

B. Contractor, its design team, subcontractors and vendors shall assign representatives with expertise and authority to act on their behalf and schedule them to participate in and perform required commissioning activities including, but not limited to, providing all tools, or the use of tools, to start, check-out and test equipment and systems, except for specified testing with portable data recorders which shall be supplied and installed by the CxSP. Contractor and subcontractors shall:

1. Facilitate coordination of Commissioning.

2. Incorporate Commissioning activities (the CxP) into the Project Schedule.

3. Coordinate and direct Commissioning activities in a logical, sequential and efficient manner using consistent protocols and forms, centralized documentation, clear and regular communications and consultations with all necessary parties, frequently updated timelines and schedules and technical expertise.

4. Participate in up to three meetings specifically for Commissioning-related items as scheduled by the OAR.

5. Review and accept construction checklists developed by the CxSP.

6. Provide information required to perform commissioning tasks, including O&M materials, contractor startup and checkout lists.

7. No later than 60 days prior to startup of the first piece of major equipment, meet with the CxSP and OAR to finalize the detailed commissioning procedures and schedule.

8. Before startup, provide detailed startup procedures including current control sequences and interlocks to comply with the detailed functional test plans.

9. Provide one additional copy of all submittals required in Section 01 3300 for all systems being commissioned for review of compliance with commissioning needs by the CxSP.

10. Develop and coordinate a startup and initial systems checkout plan with subcontractors and ensure that all subcontractors and vendors execute their commissioning responsibilities according to the contract documents.

11. Review TAB execution plan.

12. Oversee sufficient testing of the control system before TAB is executed.

13. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.

14. Coordinate retesting as necessary until satisfactory performance is achieved

15. Complete checklists as work is completed and provide to OAR on a weekly basis.

16. Review equipment warranties to ensure that the owner's responsibilities to keep warranties in force are clearly defined.

17. Oversee and coordinate the training of the owner's personnel.

18. Review and approve the preparation of the O&M manuals including clarifying and updating of original sequences of operation to as-built/as-tested conditions.

19. Coordinate development of a systems manual

1.08 SYSTEMS TO BE COMMISSIONED

A. Systems to be commissioned for this project include, but are not limited to, those for which Specifications are included in Contract Documents.

PART 2 – PRODUCTS

2.01 TEST EQUIPMENT

A. Standard testing equipment required to perform startup and initial checkout and required performance testing shall be provided by the contractor for the equipment being tested. This includes, but is not limited to, two-way radios and meters, etc. Testing specified as requiring portable data recorders will be performed with data recorders supplied and installed by the CxSP.

B. Testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance within the tolerances specified in the specifications. If not otherwise noted, the following minimum requirements apply: Temperature sensors and digital thermometers shall have a current certified calibration to an accuracy of 0.5 degree F and a resolution of plus or minus 0.1 degree F. Pressure sensors shall have an accuracy of plus or minus 2.0 percent of the value range being measured (not full

range of meter) and have been calibrated within the last year. All equipment shall be calibrated according to the manufacturer's recommended intervals and when dropped or damaged. Calibration tags shall be affixed or certificates readily available.

PART 3 – EXECUTION

3.01 MEETINGS

A. Commissioning Kick-off Meeting: Within 15 days following issuance of Notice-to-Proceed 1 (NTP 1), the OAR will schedule a Construction Quality Control kick-off meeting. The INSPECTOR, Cx team and Contractor Quality Control representative will be in attendance. CxSP shall prepare and distribute a list of commissioning topics to be placed on the meeting agenda. Attendance at this meeting and participation in the Commissioning topics is mandatory for the following Contractor personnel:

1. Contractor's Quality Control Engineer and Commissioning Representative.

2. Contractor's Project Scheduling personnel.

3. Electrical Subcontractors.

B. Other Commissioning Meetings. Other Cx meetings will routinely be scheduled and generally be conducted in conjunction with regularly scheduled site meetings as the Construction progresses. The Commissioning portion of meetings will cover upcoming implementation and coordination of the CxP, deficiency resolution, and planning issues with particular subcontractors.

3.02 STARTUP, CONSTRUCTION CHECKLISTS, AND INITIAL CHECKOUT

A. The following procedures apply to all equipment/systems to be commissioned:

1. General: Contractor shall use PECs to verify that the equipment and systems are fully connected and operational. PECs for a given system must be successfully completed and accepted prior to startup and formal performance testing of equipment or subsystems of the given system.

2. Startup and Checkout Plan: The CxSP will assist the project commissioning team members responsible for startup of any equipment. The primary role of the CxSP in this process is to ensure that there is written documentation and that each of the manufacturer-recommended procedures has been completed. The CxSP shall provide all the required pre-functional checklists and forms to be completed by Contractor in the CxP. The CxSP will ensure that the INSPECTOR and/or District Special Inspectors are informed as to the planned and scheduled startup and checkout procedures.

a. Sample Pre-Functional checklists are provided as an attachment to the CxP. These checklists indicate required procedures to be executed prior to equipment startup.

b. Contractor shall determine which trade is responsible for executing and documenting each of the line item tasks and transmit the checklists to the responsible subcontractors. Each form may have more than one trade responsible for its execution.

c. The contractor/subcontractor responsible for the purchase and/or installation of the equipment shall develop a comprehensive startup plan (with assistance from the CxSP) by combining the manufacturer's detailed startup and checkout procedures and the pre-functional checklists.

d. The contractor/subcontractor shall submit the full startup plan to the CxSP for review and approval.

e. INSPECTOR will review and accept, based on CxSP recommendation, the procedures and the documentation format for reporting. The CxSP will return the procedures and the documentation format to Contractor through the OAR.

f. Contractor shall transmit the full startup plan to the subcontractors for their review and use.

B. Execution of Construction Checklists and Startup:

1. Four weeks prior to the scheduled startup, Contractor shall coordinate startup and checkout with the INSPECTOR and CxSP. The execution and approval of the PECs, startup, and checkout shall be directed and performed by Contractor, subcontractor or vendor. Signatures are required of the applicable subcontractors for verification of completion of their work.

2. The INSPECTOR shall observe, as a minimum, the procedures performed for each piece of primary equipment, unless there are multiple units; in which case a sampling strategy may be used. The CxSP shall observe all testing.

3. For lower-level components of equipment, (e.g., sensors, controllers), the CxSP shall observe a sampling of the startup procedures.

4. Pre-functional checklist documentation, identified in the CxP, is to be used by the sub-contractor to document that equipment is ready for startup.

5. The subcontractors and vendors shall execute startup and provide the CxSP, through the OAR, with a signed and dated copy of the completed startup and construction checklists.

6. Only individuals of the contractor or sub-contractor (technicians, engineers, manufacturer's representatives/vendors, supervisors, etc.) who have direct knowledge and have witnessed that a line item task on the construction checklist was actually performed shall check off that item.

C. Deficiencies, Non-Conformance, and Approval in Checklists and Startup (Issues Log):

1. The contractor shall ensure that the subcontractors clearly list any outstanding items of the initial startup and construction checklist procedures that were not completed successfully, on an attached sheet. The form and any outstanding deficiencies shall be provided, through the INSPECTOR, to the CxSP within two days of test completion.

2. The CxSP will review the report and issue either a non-compliance report or acceptance form, through the INSPECTOR, to Contractor. The installing subcontractors or vendors shall correct all areas that are deficient or incomplete in the checklists and tests in a timely manner, shall notify the INSPECTOR as soon as outstanding items have been corrected, and resubmit an updated startup report with a Statement of Correction on the original non-compliance report. When satisfactorily completed, the CxSP will recommend approval of the execution of the checklists and startup of each system.

3. Items left incomplete, which later cause deficiencies or delays during performance testing, may result in assessments to Contractor. Refer to Paragraph 3.05, herein, for details.

3.03 GENERAL REQUIREMENTS FOR TESTING

A. Complete the following at least two weeks prior to Functional Performance Testing:

1. Arrange for Commissioning observations to be performed by the CxSP.

2. Completion and acceptance of the Start-up Plan by the CxSP.

3. Correction of deficiencies identified during start-up.

4. Recording of pretest set points.

3.04 FUNCTIONAL PERFORMANCE TESTING (FTP)

A. Undertake functional testing after the testing requirements listed in Paragraph 3.02 are completed.

B. Equipment: Refer to Part 2 of this Section for test equipment requirements.

C. Perform FPT under the observation of the CxSP who will verify the results of the functional test procedures documented by Contractor.

D. Perform all specified tests according to approved testing procedures / plan.

1. Verify and test performance using actual conditions whenever possible.

2. Simulate conditions when it is not practical to test under actual conditions or when required seasonal testing conditions are not present. The procedure to be used shall be submitted to the OAR for INSPECTOR and CxSP review and acceptance at least one week before simulated testing is to occur. After test, return settings to normal operating conditions.

3. Alter set points when simulating conditions is not practical and when written approval to do so is received from OAR.

4. Override sensor values with a signal generator when actual or simulated conditions and altering set points are not practical. Do not use the sensor to act as the signal generator to simulate conditions or override values.

E. Functional Performance Testing (FPT) Documentation: This Section specifies the general description of the minimum Division 26 Functional Performance Testing documentation requirements that the Contractor shall provide. The CxSP will develop testing procedures in accordance to the requirements of this Section and incorporate into the Cx Plan that Contractor must follow and document. The testing documentation must include the following information:

1. Test number.

2. Date and time of the test.

3. Indication of whether the record is for a first test or retest following correction of a problem or issue.

4. Identification of the system, subsystem, assembly, or equipment.

5. Conditions under which the test was conducted, including (as applicable) ambient conditions, set points, override conditions, and status and operating conditions that impact the results of the test.

6. Expected performance of the systems and assemblies at each step of the test.

7. Narrative description of observed performance of the system, equipment, or assembly.

8. Notation to indicate whether the observed performance at each step meets the expected results.

9. Issue number, if any, generated as the result of the test.

10. Dated signatures of the person performing the test and a witness.

F. The CxSP and INSPECTOR will review and OAR, if applicable, accept functional testing results. Deficiencies found during testing shall be submitted to the OAR and,

if required, based on the recommendation of INSPECTOR, by the OAR, corrected by the Contractor and retested. Where there is a dispute over a deficiency, OAR, based on the recommendation of ARCHITECT and INSPECTOR, shall be the final authority.

G. Problem Solving: The burden of responsibility to solve, correct and retest problems is with the Contractor and the design team with OAR, based on the recommendations of the ARCHITECT, CxSP and INSPECTOR, having final responsibility for acceptance of the Work.

H. Substantial Completion: All testing, retesting, and acceptance of Functional Performance Testing shall be completed prior to issuing the Certificate of Substantial Completion. FPT may be conducted following building occupancy; however, all associated and reasonable additional costs incurred by the CxSP shall be assessed against Contractor Retention or Withhold funds.

I. Deficiencies in the Cx Plan Functional Performance Test Checklist: If there is any Functional Performance Test Checklist missing for any particular piece of equipment, the Contractor shall inform the CxSP and ask for an updated Functional Performance Test Checklist.

3.05 RETESTING

A. Retesting shall be required when a specific Pre-functional Checklist or Start-up test item, reported to have been successfully completed by Contractor or determined during functional testing to be faulty or incomplete, is identified.

B. Contractor shall be provided one retest opportunity at no additional cost when Contractor can make corrections within two hours of identification of the need to retest. Costs for retesting beyond one retest, or when Contractor cannot make corrections within two hours of identification of the need to retest, will be assessed against Contractor funds if OAR determines, based upon the recommendation of the INSPECTOR and CxSP, that the Contractor is responsible for the deficiency. These costs shall include all reasonable expenses incurred by the CxSP.

C. For a deficiency identified during functional testing, but not included in the approved Start-up Plan, OAR will direct retesting of the equipment with no costs assessed against Contractor for this initial retesting. Costs for retesting, when Contractor cannot effect corrections within two hours of identification of the need to retest, will be assessed against Contractor funds if OAR determines, based upon the recommendation of the INSPECTOR and CxSP, that the Contractor is responsible for the deficiency. These costs shall include all reasonable expenses incurred by the CxSP.

D. Retesting shall not be considered a reason for a claim of delay or for a time extension by the Contractor.

3.06 DEFERRED TESTING

A Unforeseen Deferred Tests: Checks or tests not completed due to the incomplete Work, required occupancy conditions, or other conditions may be delayed upon approval of the OAR based upon the recommendation of the INSPECTOR and CxSP. These tests may be conducted in the same manner as the seasonal tests.

B. Seasonal Testing: Complete seasonal testing, when weather or other testing conditions do not emulate the system's design conditions, employing simulated conditions acceptable to OAR based upon the recommendation of the INSPECTOR and CxSP. The OAR will coordinate with Contractor, and CxSP validate, this activity. Tests shall be executed, documented and deficiencies corrected by the Contractor, with the INSPECTOR and the CxSP witnessing. The Contractor shall make adjustments to the Operations and Maintenance Data, as necessary.

3.07 DOCUMENT REVIEW

A. General: See paragraph 1.06 for submittal requirements.

B. Operations and Maintenance Manuals: Refer to Section 01 7900 for specific requirements.

3.08 OPERATOR TRAINING

A. The CxSP, under the direction of the OAR, coordinates and verifies training completion as shown in Section 01 7900. Forms and procedures are also described in the CxP.

END OF SECTION

BIDDING DOCUMENTS
FOR THE
LOS ANGELES UNIFIED SCHOOL DISTRICT

VOLUME 1 of 1

CONSTRUCTION OF SCOREBOARD

AT

VERDUGO HILLS HIGH SCHOOL
10625 Plainview Ave, Tujunga, CA 91042
In the Los Angeles Unified School District

Prepared by OWNER:

LOS ANGELES UNIFIED SCHOOL DISTRICT
FACILITIES SERVICES DIVISION
333 South Beaudry Avenue, 23rd Floor
Los Angeles, California 90017

For OWNER:

LOS ANGELES UNIFIED SCHOOL DISTRICT
Los Angeles, California
April 2026

OWNER PROJECT NO.: 10375279

LICENSED ARCHITECT HERRICK Y. AU No. C 26770 Ren. 1-31-27 STATE OF CALIFORNIA

Herrick Au, ARCHITECT

REGISTERED PROFESSIONAL ENGINEER YOUNG-KEUN NAM No. S4029 Exp. 9/30/26 Structural STATE OF CALIFORNIA

Young Nam, STRUCTURAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER JOEL R. MENDOZA No. E17040 EXP. 09-30-27 ELECTRICAL STATE OF CALIFORNIA

Joel Mendoza, ELECTRICAL ENGINEER

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-126041 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/24/2026

SECTION 02 2600

ABATEMENT OF HAZARDOUS MATERIALS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Abatement of hazardous materials identified in the Hazardous Materials Phase I Assessment Report, except for underground storage tanks, contaminated soil or groundwater. Furnish labor, materials, supplies, and incidentals required, protect Project site personnel and the surrounding public from exposure to potentially hazardous substances, and prevent the spread of potentially contaminated or hazardous substances.

2. The furnishing of labor, supervision, materials, equipment, tools, permits, manifesting, and services required in the characterization, transportation, and disposal of identified or suspected hazardous substances. The suspect substance may be in drums, containers, stockpiled, or may exist as debris piles on the Project site.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Section 02 4116 - Demolition

3. Section 02 8213 - Asbestos Abatement

C. Regulatory Requirements shall include, but not be limited to: Comply with laws, ordinances, codes, rules, and regulations of the Federal, State and local authorities having jurisdiction over any of the Work specified herein. Comply with federal EPA and state Department of Transportation regulations for shipping of hazardous substances to offsite disposal facilities. Comply with regulatory requirements imposed by the treatment, storage, and disposal facility. Regulations pertaining to the transport and disposal of hazardous substances/materials include, but are not limited to, the following:

1. Department of Transportation 49 CFR 172 through 179.

2. Department of Transportation 49 CFR 387 (46 FR 30974, 47073).

3. Department of Transportation DOT-E 8876.

4. Environmental Protection Agency 40 CFR 136 (41 FR 52779).

5. Environmental Protection Agency 40 CFR 261, 262 and 761.

6. Resource Conservation and Recovery Act (RCRA).

D. Any transporter of hazardous substances shall be licensed in the state in which handling and transportation will take place in accordance with applicable regulations.

E. Comply with OSHA (Occupational Safety and Health Administration) Standards and Regulations contained in Title 29 Code of Federal Regulations, Part 1910.120 "Hazardous Waste Operations and Emergency Response."

F. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.02 QUALITY ASSURANCE

A. The Work of this Section shall be performed by an entity possessing the following minimum qualifications:

1. Contractors License in the state where the Work is performed, supplemented by a Hazardous Waste specialty license, where applicable (i.e., California).

2. MCS 90 Endorsement on Liability Insurance.

3. Pollution Liability Insurance in the amount of $2,000,000 occurrence.

4. Forty-hour OSHA Training and site-specific health and safety plan for its employees proposed to work at the Project site as defined in 29 CFR 1910.120.

5. A Comprehensive Quality Assurance Plan on file with the California Environmental Protection Agency.

6. Project site personnel shall wear personal protective equipment and protective clothing consistent with the levels of protection required for this Work as specified by OSHA (29 CFR Part 1910.120).

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 ABATEMENT OF HAZARDOUS MATERIALS

A. Abate hazardous materials including hazardous materials identified in the Phase I Assessment Report.

B. The Work of this section does not include the removal of underground storage tanks, contaminated soil or groundwater, unless specifically authorized in writing by the OAR.

3.02 CONTAINMENT OF RELEASED SUBSTANCES

A. If a hazardous material appears to be leaking or otherwise spreading, contain the release of the material. Provide measures to prevent the release of the material to the environment and protect Project site personnel, adjacent properties and occupants, and the general public from potential exposure.

B. During the course of substance containment or evacuation of Project site personnel, protect personnel (onsite workers, non-workers, or the general public) from contact with or exposure to the released substances.

C. The abatement or evaluation of any suspected hazardous material shall only be performed by properly trained and/or certified personnel.

3.03 HEALTH AND SAFETY

A. In an emergency or imminent hazard situation the health and safety of personnel on or near the Project site are the responsibility of the Work of this section. Immediately notify the Owner office of Environmental Health and Safety (OEHS) and the OAR designated representative of the Owner Consultant. Owner representatives will notify Federal, State and Local regulatory authorities, if required.

B. Project site personnel or members of the general public who have been exposed to or have come in contact with any hazardous materials or chemicals shall be immediately transported to the nearest hospital.

3.04 TESTING, TRANSPORT, AND DISPOSAL OF HAZARDOUS SUBSTANCES

A. Collect one composite sample from each media type (solid, liquid, or sludge) of potentially hazardous substance stored in drums, stockpiled, or otherwise identified at the Project site for the purposes of obtaining approvals for proper transport and disposal of the suspect materials. Submit analytical results to a representative of the Owner Consultant, as designated by the OAR.

B. If required, overpack any leaking or deteriorated drums to prevent leaks or spills, and pack small 5-gallon containers into larger new 55-gallon drums. Cover solid waste materials and stockpiled soils with an HDPE liner to prevent storm water runoff from contaminating surrounding areas.

C. Prepare manifests, material profiles, and submit lab analysis for drums/containers and any other documentation required by the receiving facility for signature by a representative of the Owner Consultant and/or Owner, as designated by the OAR. Copies of waste profiles, manifests, and disposal documentation shall be submitted

to the OAR designated representative of the Owner, prior to disposal and/or transporting of hazardous substances.

D. Coordinate waste sampling and analysis requirements with the disposal facility and properly complete profiling and transport documents prior to loading and transport.

E. A State registered "Hazardous Waste Hauler" shall transport the waste to a lawfully permitted and Owner approved facility.

F. Prior to transport, a copy of the hazardous waste manifest shall be transmitted by facsimile, through the Project site Owner Consultant, to the Owner Office of Environmental Health and Safety (OEHS) for review and approval. The manifests shall list the generator's name as "Los Angeles Unified School District" and the mailing address as "1449 S. San Pedro Street, Los Angeles, CA 90015". The OAR designated representative of the Owner Consultant shall provide the Project site specific generator's EPA ID # which shall be included on the manifest. Attach the land disposal restriction (LDR) form to the manifest prior to submission to the Owner office of OEHS. The blue and yellow manifest copies and a copy of the LDR form shall be mailed to the Owner office of OEHS at 1449 S. San Pedro Street, Los Angeles CA 90015. Other copies of the manifest and LDR shall be submitted to the waste transporter.

G. Load, handle, and transport 55-gallon drums and other waste containers to the appropriate disposal facility in accordance with Federal and State regulations.

H. Transport documentation from the receiving facility verifying acceptance and receipt of drums/containers at the facility and sampling and associated test results shall be submitted to the representative of the Owner Consultant, as designated by the OAR, within fifteen days following receipt of hazardous substances to the disposal facility.

I. Materials identified as hazardous wastes under RCRA are not permitted to remain at the Project site more than 30 days after being deemed to be a hazardous waste. During this period of Project site storage, provide precautions to contain and prevent the release of hazardous or potentially hazardous materials to the environment.

END OF SECTION

SECTION 02 4116

DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Furnishing labor, materials and equipment necessary for demolition, dismantling, cutting and alterations as indicated, specified, or required for completion of the Work. Includes items such as the following:

1. Protection of existing improvements to remain.
2. Cleaning existing improvements to remain.
3. Disconnecting and capping utilities.
4. Removing debris, waste materials, and equipment.
5. Removal of items for performance of the Work.
6. Salvageable items to be retained by the Owner.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 01 1100 - Summary of Work.
3. Section 01 5000 - Construction Facilities and Temporary Controls.
4. Section 01 7329 - Cutting and Patching.
5. Section 01 7419 - Construction and Demolition Waste Management.
6. Division 26 –- Electrical.

1.02 SUBMITTALS

A. Shop Drawings: Submit Shop Drawings indicating the extent of items and systems to be removed. Indicate items to be salvaged or items to be protected during demolition. Indicate locations of utility terminations and the extent of abandoned lines to be removed. Include details indicating methods and location of utility terminations.

1.03 QUALITY ASSURANCE

A. Perform the Work of this section by workers skilled in the demolition of buildings and structures. Perform the Work of this section under direct superintendence at all times.

B. Prior to commencement of Work, schedule a walkthrough with the OAR, to confirm Owner property items have been removed from scheduled Work areas. Identify and mark remaining property items and schedule their removal.

C. Coordinate demolition for the correct sequence, limits, and methods. Schedule demolition Work to create least possible inconvenience to the public and facility operations.

D. Related Standard: ANSI/ASSE A10.6.

1.04 PROJECT CONDITIONS

A. Drawings may not indicate in detail all demolition Work to be performed. Examine existing conditions to determine the full extent of required demolition.

B. Repair damage to existing improvements or damage due to excessive demolition.

C. Provide all measures to avoid excessive damage from inadequate or improper means and methods, improper shoring, bracing or support.

D. If conditions are encountered that varies from those indicated, promptly notify the Architect for clarification before proceeding.

PART 2 - PRODUCTS

2.01 HANDLING OF MATERIALS

A. Items scheduled for salvage by the Owner shall be delivered to a location designated by the OAR. Items shall be cleaned, packaged and labeled for storage.

B. Items scheduled for reuse shall be stored on the Project site and protected from damage, theft and other deleterious conditions.

PART 3 - EXECUTION

3.01 GENERAL

A. Protection:

1. Do not commence demolition until safety partitions, barricades, warning signs and other forms of protection are installed. Refer to Section 01 5000 - Construction Facilities and Temporary Controls.

2. Provide safeguards, including warning signs, lights and barricades, for protection of workers, occupants, and the public.

B. If safety of existing construction appears to be endangered, take immediate measures to correct such conditions; cease operations and immediately notify the OAR.

3.02 DEMOLITION

A. Do not throw or drop materials. Furnish ramps or chutes as required by the Work.

B. Remove existing construction only to extent necessary for proper installation of Work and interfacing with existing construction. Cut back finished surfaces to straight, plumb or level lines as required for a smooth transition.

C. Where openings are cut oversize or in improper locations, replace or repair to required condition.

3.03 CUTTING EXISTING CONCRETE

A. Cutting of existing concrete shall be performed by skilled workers familiar with the requirements and space necessary for placing concrete. Perform concrete cutting with concrete cutting wheels and hand chisels. Do not damage concrete intended to remain.

B. Extent of cutting of structural concrete shall be as indicated on Drawings. Cutting of non-structural concrete shall be as indicated on Drawings or as reviewed by the Architect or structural engineer. Replace concrete demolished in excess of amounts indicated.

C. Prior to cutting or coring concrete, determine locations of hidden utilities or other existing improvements and provide necessary measures to protect them from damage.

3.04 REMOVAL OF EXISTING PLUMBING AND ELECTRICAL EQUIPMENT AND SERVICES

A. Remove existing plumbing and electrical equipment fixtures and services not indicated for reuse and not necessary for completion of the Work. Remove abandoned lines and cap unused portions of existing lines.

3.05 REMOVAL OF OTHER MATERIALS

A. Sheet Metal: Remove back to joint, lap, or connection. Secure loose and unfastened ends or edges and provide a watertight condition. Re-seal as required.

B. Remove existing improvements not specifically indicated or required but necessary to perform Work. Cut to clean lines, allowing for installation of Work.

3.06 PATCHING

A. Patch or repair materials to remain when damaged by the performance of the Work of this section. Finish material and appearance of patch and/or repair Work shall match existing.

3.07 CLEANING

A. Clean existing materials to remain with appropriate tools and equipment.

B. Protect existing improvements during cleaning operations.

C. Debris shall be dampened by fog water spray prior to transporting by truck.

D. Debris pick-up area shall be kept broom-clean and shall be washed daily with clean water.

E. Remove waste and debris, other than items to be salvaged. Turn over salvaged items to Owner, or store and protect for reuse where required. Continuously clean up and remove items as demolition Work progresses.

F. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 02 8213

ASBESTOS ABATEMENT AND ASBESTOS-RELATED DISTURBANCE

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Abatement of building and/or structure related Asbestos.

2. Removal of building and/or structure related Asbestos.

3. Disturbance of building and/or structure related Asbestos.

B. Related Requirements:

1. Division 01 - General Requirements.

2. U.S. Environmental Protection Agency Regulations for Asbestos (Title 40, Code of Federal Regulations, Part 61, Subparts A and B, and Part 763, Subpart E.)

3. Title 8, Article 4, California Code of Regulations Construction Industry Safety Orders, Section 1529 "Asbestos" or current revised California regulations.

4. South Coast Air Quality Management District (SCAQMD) Rule 1403.

1.02 SECTION DEFINITIONS AND ACRONYMS

A. Abatement – Procedures to control fiber release from Asbestos Containing Materials or Asbestos Containing Construction Materials. Includes Removal, Encapsulation, Enclosures, Repair, Demolition, and Renovation activities but does not include Asbestos Related Disturbance.

B. AHERA - Asbestos Hazard Emergency Response Act, 40 CFR, Part 763, Subpart E, and subsequent amendments.

C. Air Filtration and Ventilation System - A portable exhaust system, equipped with HEPA filtration, and capable of maintaining a constant air flow into a Regulated Area from adjacent areas and exhausted outside the Regulated Area.

D. Amended Water - Water to which a surfactant (wetting agent) has been added.

E. ANSI - American National Standards Institute.

F. Asbestos - Means the asbestiform varieties of chrysotile (Serpentine); crocidolite (Riebecktite); amosite (cummingtonitegrunerite); anthophyllite; tremolite; and actinolite.

G. Asbestos Containing Construction Material (ACCM) – Means any manufactured construction material which contains more than one tenth of one percent (0.1 percent) Asbestos by weight.

H. Asbestos Containing Material (ACM) – Means any material containing more than one-percent (1 percent) Asbestos.

I. Asbestos Containing Waste (Non-hazardous) – Non-Friable Asbestos Containing Material including, but not limited to, floor covering, roofing materials and cementitious materials requiring disposal.

J. Asbestos Containing Waste (Hazardous) – Friable Asbestos Containing Materials and Asbestos contaminated objects and debris requiring disposal.

K. Asbestos Related Disturbance – is the drilling, coring, removal or similar disturbance of ACCM or ACM not to exceed three square feet in any one opening and not to disturb 100 square feet or greater cumulatively on any one project (contract).

L. ASTM - American Society for Testing and Materials.

M. Building ID Number or Code - A six digit alphanumeric identification code assigned to each building on an Owner site, also referred to as the insurance code, ID number or similar terms.

N. Bulk Samples - Samples of building or other materials collected for analysis to determine the presence and quantities of Asbestos.

O. Class I, II, III, and IV asbestos work has the meaning as defined in California Code of Regulations Title 8, Section 1529.

P. Clean Room - An uncontaminated area or room, which is a part of the worker Decontamination Enclosure System with provisions for storage of worker's street clothes and clean protective equipment.

Q. Competent Person - Has the same meaning as defined in the California Code of Regulations Title 8, as it relates to, "Competent Person."

R. Controlled Disturbance – An activity by which a contractor disturbs an asbestos containing material or an asbestos containing construction material using the work practices allowed for in this specification and in compliance with regulatory limitations.

S. Curtained Doorway – A device to allow ingress and egress from one room to another while permitting minimal air movement between the rooms, typically constructed by placing two overlapping sheets of plastic over an exiting or temporarily framed doorway, securing each along the top of the doorway, securing the vertical edge of one sheet along one vertical side of the doorway and securing the vertical edge of the other sheet along the opposite vertical side of the doorway. Other effective designs may be submitted for review.

T. Decontamination – The process of eliminating Asbestos contamination from building surfaces, objects, and property, by cloths, mops, or other utensils dampened with water and disposed of afterwards as Asbestos contaminated waste.

U. Decontamination Enclosure System – Means an enclosed area, which is adjacent and connected to the Regulated Area, consisting of an Equipment Room, Shower Room, and Clean Room for the Decontamination of workers, materials, and equipment contaminated with Asbestos.

V. Demolition - The wrecking or taking out of any load supporting structural member of a facility together with any related handling operations.

W. DOSH - Division of Occupational Safety & Health or Cal/OSHA.

X. DOT – Department of Transportation.

Y. DTSC – Department of Toxic Substances Control.

Z. Encapsulating Material - A liquid material applied to Asbestos Containing Materials which controls the possible release of Asbestos fibers from the material either by creating a membrane over the surface (bridging agent) or by penetrating into the material and binding its components together (penetrating Encapsulating Material).

AA. Encapsulation - The application of an Encapsulating Material to Asbestos Containing Materials to prevent the release of Asbestos fibers into the air.

BB. Enclosure - The construction or application of an airtight, impermeable, permanent barrier around Asbestos Containing Material to control the release of Asbestos fibers into the air.

CC. Equipment Room - A room within the worker Decontamination Enclosure System with provisions for storage of used clothing and equipment and for controlled transfer of materials and equipment into and out of the regulated area.

DD. Facility Component – Means any part of a facility including equipment.

EE. FETU - Facilities Environmental Technical Unit.

FF. Fixed Object - A piece of equipment, furniture, or improvement in the Work area, which cannot be removed from the Work area.

GG. Friable Asbestos - Asbestos Containing Material which, when dry, can be crumbled, pulverized or reduced to a powder by hand pressure or as defined by current regulations.

HH. Glove Bag Technique - A method with limited applications for removing small amounts of Asbestos Containing Material from short piping runs, valves, joints, elbows, and other non-planar surfaces in a Work area. The glove bag assembly is a manufactured or fabricated device consisting of a glove bag (typically constructed of 6 mil transparent polyethylene or polyvinyl chloride plastic), two inward projecting long sleeves gloves, an

internal tool pouch, and labeled for Asbestos waste. The glove bag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains asbestos fibers released during the process. Workers who are permitted to perform the Glove Bag Technique shall be thoroughly trained, experienced, and skilled in this method.

II. Hazardous Waste - Means Friable Asbestos generated and prepared for waste disposal. Does not include non-friable material or materials containing one-percent or less of Asbestos as determined by PLM and/or the point counting method.

JJ. HEPA Filter - Means a filtering system capable of trapping and retaining at least 99.97 percent of mono-dispersed particles 0.3 microns in diameter or larger. For respirators this shall include NIOSH rated P-100 cartridges only.

KK. HEPA Vacuum - A vacuum system furnished with HEPA filtration.

LL. High Volume Vacuum - A vacuum system with the capacity to collect material through a four inch diameter hose a minimum distance of 150 feet. This system shall be furnished with HEPA Filter at the air exhaust port and water applicators within the hopper.

MM. HVAC – Heating, Ventilation, and Air Conditioning System.

NN. Location Code - Refers to a unique four digit numeric code assigned by the Owner to each of its Project sites.

OO. Lockdown Coat – A material applied to surfaces where Asbestos has been completely removed. The manufacturer shall determine the concentration of this material.

PP. Member – A component part of a structure complete in itself.

QQ. Movable Object - A portable piece of equipment or furniture in the Work area, which can be removed from the Work area.

RR. NESHAP - National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61).

SS. NIOSH - National Institute for Occupational Safety and Health.

TT. Outside Air - Air outside of buildings and structures.

UU. Owner Consultant (OC) - Refers to the firm, company or individual designated by the Owner.

VV. PCM - Phase Contrast Microscopy as it relates to clearance air, personnel exposure assessment, and ambient air monitoring. This procedure must follow the NIOSH Method 7400, Asbestos Fibers by PCM.

WW. PLM - Polarized Light Microscopy used for bulk sample analysis with dispersion staining for the determination and quantifying of Asbestos in Bulk Samples building materials.

XX. Regulated Area - Designated rooms, spaces or areas of the Project in which asbestos Abatement actions are to be performed or which may become contaminated as a result of Abatement activities. A contained Work area is a Work area, which has been sealed and furnished with a Decontamination Enclosure System. A non-contained Work area is an isolated or controlled access Work area, which has not been sealed or furnished with a Decontamination Enclosure System.

YY. Removal – Means operations where ACM and/or PACM is removed or stripped from structures or substrates including Demolition.

ZZ. Renovation – Means the modifying of any existing structure, facility, or portion thereof.

AAA. SCAQMD – South Coast Air Quality Management District.

BBB. Shower Room - A room between the Clean Room and the Equipment Room in the worker Decontamination Enclosure System furnished with hot and cold running water controllable at the tap, and suitably arranged for complete showering during Decontamination.

CCC. Small Scale Short Duration – Such work not to exceed amounts greater than those which can be contained in a single glove bag or may not exceed amounts which can be contained in a single prefabricated mini-enclosure. Such an enclosure shall conform spatially and geometrically to the localized work area, in order to perform its intended containment function, and as completely defined in 40CFR, 763, Subpart E, Appendix C.

DDD. Staging Area - Areas near the Waste Transfer Airlock where containerized Asbestos waste is temporarily placed prior to permanent removal from the Work area.

EEE. Surfactant - A chemical wetting agent added to water.

FFF. TEM - Transmission Electron Microscopy as defined for Asbestos clearance air monitoring within AHERA. This procedure must follow the NIOSH Method 7402, Asbestos Fibers by TEM.

GGG. TSI - Thermal System Insulation as defined in AHERA.

HHH. USEPA or EPA – United States Environmental Protection Agency.

III. Visible Emissions - Any emissions from a known or suspected Asbestos Containing Material that is visually discernible.

JJJ. Waste Transfer Airlock - A Decontamination system provided for transferring containerized waste from inside to outside of the Work area.

1.03 POLICIES AND PROCEDURES

A. The Owner has a zero tolerance policy for uncontrolled Asbestos releases during construction or Abatement Work. An Asbestos release requiring an emergency response

is any uncontrolled release of Asbestos Containing Construction Materials. The Owner shall be immediately notified of such uncontrolled releases.

B. Pre-qualified Asbestos Abatement Subcontractors are not permitted to subcontract any Abatement work to a lower tier Subcontractor without the prior written approval of the Owner.

C. Where ACM is damaged or disturbed, except during Controlled Disturbance or Abatement, Work in that room shall cease, the room be vacated immediately, the Owner Consultant notified of the disturbance with corrective action provided as required by the Owner Consultant.

1.04 ROLES AND RESPONSIBILITIES

A. Roles and Functions:

1. Coordinate the Work of this section directly with the Owner and/or Owner Consultant.

2. Work under this section shall be performed in strict accordance with applicable Federal, State, and Local regulations, standards, and codes governing asbestos Abatement and any other Work performed in conjunction with the Asbestos Abatement Work.

3. The most recent edition of any relevant regulation, standard, document, or code is in effect. Where conflict among the requirements or with this Specification exists, the most stringent requirement shall be provided.

1.05 SITE SECURITY

A. The Work area shall be restricted to authorized, trained, and protected personnel. A list of authorized personnel shall be established by the Owner Consultant prior to commencement of the Work and posted at the entrance of the Regulated Area.

B. Report to the Owner Consultant any unauthorized entry into the Regulated Area. Following notification, a written report of the incident shall be provided to the Owner Consultant.

C. A logbook shall be maintained at the entrance of the Regulated Area. Persons entering the Regulated area shall record their name, company affiliation, time in, and time out for each entry and exit.

D. Access to the contained area shall be through the worker Decontamination Enclosure System or other room established when worker Decontamination Enclosure System is not required. Other means of access shall be blocked or locked to prevent entry to or exit from the Work area. The only exceptions are the waste pass-out airlock, which shall be sealed except during the Removal of containerized Asbestos waste from the Work area,

and emergency exits in case of fire or accident. Emergency exits shall be operable from inside the Work area; however they shall be sealed with polyethylene sheeting and tape.

E. Maintain Regulated Area security during Abatement Work. Regulated Areas and ancillary equipment accessible to non-authorized personnel shall be protected from unauthorized access by constructing a minimum barrier of 3/8 inch CDX plywood supported by 2 by 4 studs, 16 inches on center. Height shall be as required to safely access Regulated Area. An access door shall be provided with hasp and padlock sufficient to prevent unauthorized entry. A key shall be provided to the Owner and Owner Consultant. Required barriers within an occupied building shall be furnished with sheathing as required by state and local fire protection regulations.

F. The protective barrier for a High Volume Vacuum shall be a minimum of eight feet in height. Barriers for these systems may be constructed of chain link type fencing instead of the specified barriers. Such fencing, if provided, shall be covered with an opaque covering resistant to environmental conditions. This barrier system shall be maintained at times while the enclosed equipment is on the Project site.

G. Unless otherwise specified, remove barriers upon completion of the Work of this section. Repair and/or replace to original condition, damage resulting from installation, use, and removal of the barriers.

1.06 EMERGENCY PLANNING

A. Emergency planning and procedures shall be developed, submitted, reviewed, and agreed to by the Owner prior to the commencement of Abatement Work.

B. Emergency procedures shall be provided in the written languages understood by employees working on the Project and shall be prominently posted at the entrance of the Decontamination Enclosure System. Prior to entering the Work area, parties must read and sign these procedures to acknowledge receipt and understanding of the Work site layout, location of emergency exits, and emergency procedures.

C. Emergency planning shall consider the effects of fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, confined spaces, and heat related injury. Develop and provide written procedures and training to employees.

D. Employees shall be trained in evacuation procedures in the event of workplace emergencies.

E. In the event of non-life threatening situations requiring medical treatment, injured or otherwise incapacitated employees shall decontaminate following normal procedures with assistance from fellow workers if necessary, before exiting the Work area.

F. In the event of life threatening injury or illness requiring immediate medical treatment, worker Decontamination shall be given minimum priority. Provide measures to stabilize the injured worker, remove them from the Work area and secure proper medical treatment.

G. Telephone numbers of emergency response personnel shall be prominently posted at the entrance of the Decontamination Enclosure System along with the location of the nearest telephone. In addition to the 911 emergency number, post the address and telephone number of the nearest emergency medical services provider.

H. Provide at least one employee on the Project site at times during progress of Abatement work that is trained and certified in first aid and cardiopulmonary resuscitation (CPR). This employee shall be identified by name and proof of training shall be provided to the Owner Consultant prior to the commencement of the Work of this section.

I. Provide at least one 4A/60BC dry chemical extinguisher in the Equipment Room and one at each corner of contained areas in excess of 1,000 square feet. Workers shall be trained in the proper operation of fire extinguishers.

J. Emergency exits shall be provided and clearly marked with arrows or other clearly visible markings to permit easy identification from anywhere within the Work area. Exits shall be secured to prevent access from uncontaminated areas while still permitting emergency egress. Exits shall be properly sealed with polyethylene sheeting, which can be cut to permit emergency egress. Emergency exits may lead through the worker Decontamination Enclosure, the waste removal airlock or other alternative exits as required by fire officials.

1.07 LICENSING

A. The Work of this section shall be performed by an entity duly licensed in the State of California in accordance with the provisions of Chapter 9 of Division 3 of the Business and Professions Code, as amended. The Abatement work of this section shall be performed by an entity holding a license with an "ABS" Asbestos Certification as issued by the Contractors State License Board.

B. The entity performing the Work of this section, other than Asbestos Related Disturbance involving less than 100 square feet shall be registered with the Department of Industrial Relations in accordance with the provisions of Section 6501.5 of the California Labor Code.

1.08 ASBESTOS RELATED REQUIREMENTS

A. Qualifications:

1. Comply with the provisions of the California Labor Code, Division 5, Part 1, as it pertains to safety in employment and the applicable provisions of Title 8, Chapter 4, Subchapters 1 through 21, California Code of Regulations (CCR) as it pertains to Occupational Safety and Health, and Subchapter 7, Section 5208 Article 4, and Section 1529, Asbestos regulations.

2. Where Electrical Work is required in a Regulated Area this work shall be performed as required in Division 16 and personnel who enter a Contained and Regulated Class I and II Asbestos work area are required to possess a current

EPA certification as an Asbestos worker. Personnel who enter a Class III Asbestos Related Disturbance work area shall require personnel trained in accordance with AHERA Operations and Maintenance training requirements.

B. Abatement Activities:

1. The Asbestos Abatement work shall be performed by persons who comply with applicable Federal, State, and local regulations including AHERA certified training.

2. Supply labor, materials, services, insurance, permits, and equipment necessary to perform the Work in accordance with applicable Federal, State, and Local regulations and this Specification.

3. For Class I asbestos work, collect pre-Abatement air samples. Results shall be submitted prior to commencement of the Work of this section. Include location of Samples, name of air sampling professional, equipment, and methods utilized for sampling and analysis.

4. Submit weekly job progress reports detailing Abatement activities for Projects with schedules that exceed thirty days of Abatement work. Include review of progress with respect to previously established Milestones and schedules, major problems and action taken, injury reports, equipment breakdown, and air sampling results.

5. Within five workdays of transport and/or disposal, submit copies of transport manifests, disposal receipts, and weight certificates for Asbestos waste removed from the Work area during the Abatement process. Weight certificates shall indicate in pounds the net weight of waste disposed from the Project site as indicated on the manifest.

6. Submit copies on a daily basis of the Work site entry logbooks.

7. Submit logs on a weekly basis documenting filter changes on respirators, HEPA Vacuums, HEPA Filtered ventilation units, water filtration units, and other approved engineering controls.

8. Submit results of materials testing conducted during Asbestos Abatement work for purposes of utilization during such activities. (i.e., depth test, substitution materials, etcetera).

9. Where Decontamination Enclosure System is required, post at the entrance a list containing the names, addresses, and telephone numbers of the entity performing the Work of this section, designated Competent Person, the Owner and/or Owner Consultant, the testing laboratory and any other personnel who may be required to access the Work area or perform services during the Abatement Work.

10. For employee review, post at the entry of the Work area a copy of the scope of Work, special conditions, the current standard Specifications, and the applicable prevailing wage.

C. Asbestos Related Disturbance:

1. The Asbestos Related Disturbance Work shall be performed by persons who comply with applicable Federal, State, and local regulations including AHERA certified training.

2. Within ten days of analysis, submit results of air sampling data collected for Cal/OSHA compliance air monitoring during the course of the Asbestos Related Disturbance (Class III asbestos work). If this data is used to discontinue use of employee protective equipment then the data shall be provided before discontinuing use of protective equipment.

3. Within five workdays of transport and/or disposal of Asbestos Containing Waste, submit copies of transport manifests and/or disposal receipts.

1.09 SUBMITTALS

A. Provide in accordance with Division 01 and this section.

B. Prior to commencement of the Asbestos Abatement work of this section, submit the following notices, documentation, Shop Drawings, and Product Data:

1. For Projects involving Asbestos Containing Materials 100 square feet or more, provide a typed written notification in accordance with Rule 1403 of SCAQMD and 40 CFR Part 61.146 of Subpart M to the SCAQMD, and to and in accordance with the Division of Occupational Safety and Health prior to start of the Work. For Projects within the geographical limits of Los Angeles City, provide an additional copy of the SCAQMD notice to the Los Angeles City Fire Department, marked "COURTESY COPY."

2. Submit to the Owner, satisfactory proof the required permits, site location, and arrangements for transport and disposal of Asbestos Containing Waste materials have been completed in accordance with California Health and Safety Code, Section 25143.7. Obtain and submit a copy of handling procedures and a list of protective equipment utilized for Asbestos disposal at the landfill.

3. Submit to the Owner satisfactory documentation that employees, including foremen, supervisors, and any other company personnel or agents who may be exposed to airborne Asbestos fibers or who may be responsible for any aspects of Asbestos Abatement work or Asbestos Related Disturbance have received adequate training that includes, at a minimum, information as described within this section and as required by AHERA.

4. Prior to commencement of Abatement Work, personnel required to construct and enter the Work area or handle containerized Asbestos Containing Materials shall have received adequate training, in accordance with the requirements of this Specification and by 40 CFR, Part 763, Subpart E (AHERA) and Title 8, Section 1529, of the California Code of Regulations applies.

5. Special Project site training for equipment and procedures unique to this Project site shall be provided as required.

6. Training in emergency response and evacuation procedures shall be provided to personnel performing Asbestos Abatement work of this section.

7. Submit documentation from a physician certifying that employees are medically monitored and are physically capable of working while wearing the required respiratory protection without suffering adverse health effects as required by California D.O.S.H regulations. Where such documentation is required, the certification shall state that the employee or agent is approved to work with Asbestos and wear a respiratory protection without restrictions. Provide information to the examining physician about unusual conditions in the workplace environment that may impact on the employee's ability to perform Abatement Work activities.

8. Submit Shop Drawings for layout and construction of Decontamination Enclosure Systems and barriers for isolation of the contained Asbestos Abatement work area as detailed in this Specification and required by applicable regulations.

9. When used, submit manufacturer's certification that HEPA Vacuums, air filtration units, and other local exhaust ventilation equipment complies with ANSI Z9.2.

10. Submit Product Data verifying that air filtration devices (i.e., air filtration units and vacuums) for use on this project have been registered or certified, as applicable, in compliance with the SCAQMD Rules.

11. If rental equipment is to be furnished in Abatement Work areas or to transport Asbestos contaminated waste, written notification concerning the intended use of the rental equipment shall be provided to the rental agency with a copy submitted to the Owner.

12. Document NIOSH approvals for respiratory protective devices furnished as required by the Work. Include manufacturer certification of HEPA filtration capabilities for cartridges and filters.

13. Submit documentation of respirator fit testing for employees and agents entering the Abatement work area or areas where respiratory protection is

required. This fit testing shall be performed in accordance with DOSH regulations.

14. Submit a Sample of forms to be used in documenting required items to be submitted and/or reviewed.

C. Provide other required submittals specified as part of the Work of this section.

1.10 PRE-ABATEMENT MEETING

A. Attend a meeting to be held prior to the commencement of Abatement Work. Attending this meeting shall be representatives of the Owner, the Owner Consultant if applicable, and the testing/monitoring personnel who shall actually participate in the testing/monitoring program. Secure the attendance of the individual who will be the Project site Competent Person for the Abatement Work.

B. Included in the general preconstruction meeting will be a discussion of requirements and submittals for Asbestos Related Disturbance, where such applies.

C. At this meeting provide required submittals except for those to be submitted during progress of the Work. In addition, provide detailed information concerning:

1. Preparation of Work area and Shop Drawings. (Abatement Only).

2. Personal protective equipment, including respiratory protection and protective clothing. (Abatement, and Asbestos Related Disturbance if required).

3. Employees who will participate in the Project, including delineation of experience, training, and assigned responsibilities during the Work. (Abatement and Asbestos Related Disturbance).

4. Decontamination procedures for personnel, Work area, and equipment. (Abatement and Asbestos Related Disturbance).

5. Abatement methods and procedures to be provided. (Abatement Only).

6. Required air monitoring procedures (pre-Abatement and SCAQMD requirement **[Abatement Only]**, and Cal/OSHA mandatory **[Abatement and Asbestos Related Disturbance]**).

7. Procedures for handling and disposing of waste materials, including disposal facility. (Abatement and Asbestos Related Disturbance).

8. Procedures for final Decontamination and cleanup. (Abatement Only).

9. A sequence of Work activities and performance schedule. (Abatement Only).

10. Procedures for dealing with heat stress. (Abatement Only).

11. Emergency procedures. (Abatement Only).

1.11 CLOSE OUT DOCUMENTATION

A. Provide the following close out documentation:

1. Filter change logs for air filtration units, water filtration units and respirators. (Abatement Only).

2. Foreman's daily job reports. (Abatement Only).

3. Employee entry/exit logs for containment. (Abatement Only).

4. Visitor entry/exit logs for containment. (Abatement Only).

5. Manometer printout reports for applicable containment. (Abatement Only).

6. Air sample results for personnel (Abatement and Asbestos Related Disturbance).

7. Air Samples for Abatement Work areas and air filtration units. (Abatement Only).

8. Copies of hazardous and non-Hazardous Waste manifests. (Abatement and Asbestos Related Disturbance).

9. Hazardous Waste weight tickets. (Abatement Only).

10. Signed Daily Personnel Report Forms. (Abatement Only).

11. Signed code of conduct form from each employee working on a Project. (Abatement Only).

12. Signed asbestos Abatement Project Personnel Logs. (Abatement Only).

B. Receipt of the last workday attendance log and the daily personal monitoring results shall be submitted within two days upon completion of the Abatement Work of this section.

PART 2 – PRODUCTS

2.01 Materials and Equipment:

A. Materials

1. Products: The following products have been specifically approved for use as encapsulants/lock-down or bridging agents for Owner asbestos abatement and asbestos related construction projects and lead abatement and lead related construction projects. Products not approved by the Owner shall not be used.

a. Asbestos Removal Encapsulant: Foster 32-60 blue by Foster Products Corporation; removal, lock down or penetrating with dilution.

b. Asbestos Bridging Encapsulant: Foster 32-80 by Foster Products Corporation; for pipe covering and boiler lagging.

c. A-B-C Fiberspray 6410 and 6422SP by Fiberlock Technologies, Inc.; for coring, small jobs and gloves bags.

d. A-B-C Asbestos Binding Compound 6421, 6422 and 6423 by Fiberlock Technologies, Inc.; for general use, removal, lock down, penetrating and bridging; good for soils.

e. Fiberset PM 7475 clear by Fiberlock Technologies, Inc.; compatible with flooring.

f. Fiberset PM 7470 white by Fiberlock Technologies, Inc.; compatible with flooring.

g. Lag-Kote by Fiberlock Technologies, Inc.; multi-use product including fireproofing and thermal system insulation.

h. Lag-Klothe by Fiberlock Technologies, Inc.;water activated repair cloth for pipes, boilers and breaching.

2. General:

a. Deliver materials in the original sealed packages, containers, or bundles bearing the name of the manufacturer and brand name.

b. Store materials subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient enough to prevent damage or contamination. Replacement materials shall be stored outside of the Abatement Work area until area is cleared for normal occupancy.

c. Damaged, deteriorating or previously used materials shall not be furnished and shall be removed from the Project site and legally disposed of.

d. A sufficient supply of disposable mops, rags, and sponges for Abatement Work area Decontamination shall be provided.

e. Unless otherwise specified, the Owner will provide water and power for construction purposes. Connect to existing system as required.

3. Asbestos Related:

a. Plastic, polyethylene sheeting or visqueen shall be a fire retardant type. Provide documentation from the manufacturer verifying compliance with this requirement.

b. Where a contained work area is required for Abatement Work, a minimum of two layers of 4-mil polyethylene sheeting shall be installed for walls.

For floors and other installations, polyethylene sheeting of at least 6-mil thickness shall be furnished in sufficient widths to minimize the frequency of joints.

c. Method of attaching polyethylene sheeting shall be reviewed prior to installation and/or commencement of Abatement Work. Method of attaching polyethylene sheeting shall not cause damage to equipment, finish surfaces, or other property.

d. Polyethylene sheeting furnished for the Decontamination Enclosure System shall be opaque white or black in color and shall be a minimum of 6-mil thick.

e. Disposal bags shall be of 6-mil polyethylene, with the outer bag pre-printed with labels as required by SCAQMD and applicable Cal/OSHA and DOT requirements at a minimum.

f. Apply labels as per SCAQMD, Cal/OSHA, and DOT requirements for disposal containers.

g. Provide warning signs as required by CAL/OSHA.

h. Surfactant (wetting agent) shall be a material that, when tested, demonstrates a surface tension of 29 dynes/cm as tested in its properly mixed concentration, using ASTM method D1331 - Surface and Interfacial Tension of Solutions of Surface Active Agents. Where Work area temperature may cause freezing of the Amended Water solution, the addition of approved antifreeze in a manufacturer recommended amount is permitted.

B. Equipment

1. General:

a. Equipment delivered to the Project site shall be free of Asbestos and/or fibrous debris. No equipment with Asbestos and/or fibrous debris in or on it is permitted on Owner properties.

b. Provide sufficient lighting to illuminate the Work area for safe visual working conditions and to clearly examine surfaces.

c. Provide a sufficient supply of scaffolds, ladders, lifts, and hand tools that meet applicable Federal, State, and local regulations.

d. Provide non-metallic dustpans, squeegees, and shovels for cleanup.

2. Asbestos Related:

a. A sufficient quantity of air filtration ventilation units furnished with HEPA filtration and operated in accordance with ANSI Z9.2-79 and EPA guidance documents shall be furnished to provide one workplace air change every 15 minutes creating -0.02 column inches of water pressure differential everywhere within the contained area when compared to the pressure outside the area. For small Enclosures and glove bags, a HEPA Filtered vacuum system may be furnished to provide the pressure differential. A log documenting the filter change history of each unit is required before use. Any unit without this log shall have filters changed and the unit decontaminated.

b. Provide a printable manometer for determining and recording the pressure differential within the isolated Work area as compared with the ambient environment. A printed record is required for the duration of the Project. The manometer shall operate 24 hours per day with a printed differential reading not to exceed fifteen minute intervals.

c. High volume vacuum equipment shall be provided during soil Removal operations unless otherwise specified.

d. Provide sprayers with pumps in a quantity capable of providing Amended Water in sufficient quantities to adequately wet materials during Asbestos Abatement activities. Provide spray bottles or adequate equipment necessary to keep materials impacted by Asbestos Related Disturbance adequately wet.

e. Non-skid footwear shall be worn by Abatement workers. Disposable clothing shall be adequately sealed to the footwear to prevent body contamination.

f. Provide other required safety equipment to workers and authorized visitors.

g. When roll-off disposal containers are delivered to a Project site, four wheels of each container shall be moved and rested upon a sheet of plywood no smaller than four-foot by four-foot by ¾ inch minimum.

2.02 EMPLOYEE PERSONAL PROTECTIVE EQUIPMENT

A. Respiratory Protection:

1. Where respirators are required these shall be provided for protection from particulate contaminants as required by the National Institute of Occupational Safety and Health.

2. The respirators provided shall furnish a protection factor as required by CCR Title 8, Section 1529 for the fiber concentration in the work area. When powered air purifying respirators are provided, a sufficient supply of charged replacement

batteries, filters, and a flow test meter shall be provided in the Clean Room area. Air purifying respirators with dual HEPA Filters may be provided during Work area preparation activities.

3. Provide spectacle kits and eyeglasses for employees who wear glasses and must wear full-face respirators.

B. Fit Testing:

1. Workers must perform positive and negative air pressure fit tests each time a respirator is donned, whenever the respirator design so permits. Powered air purifying respirators shall be tested for adequate flow as specified by the manufacturer.

2. Workers shall be undergo a qualitative fit test in accordance with procedures detailed in the D.O.S.H. requirements for respirators provided to comply with the requirements of this Project. An appropriately administered quantitative fit test may be substituted for the qualitative fit test.

3. Where respirators are required, documentation of adequate respirator fit must be provided to the Owner Consultant.

4. No one wearing a beard shall be permitted to don a respirator and enter the Work area.

5. Where respirators are required, a minimum of two additional respirators of each type and training on their donning and use must be provided at the Work site for authorized visitors required to enter the Work area.

C. Protective Clothing:

1. Where protective clothing is required, full body disposable protective clothing, including head, body, and foot coverings, shall be provided to workers and authorized visitors in sizes adequate to accommodate movement without tearing.

2. Disposable clothing including head, foot, and full body protection shall be provided in sufficient quantities and adequate sizes for workers and authorized visitors.

3. A new suit shall be donned upon each entry to the Abatement Work area or area where the permissible exposure level will be exceeded.

4. Hard hats, protective eye wear, gloves, rubber boots and/or other footwear shall be provided as required for workers and authorized visitors. Safety shoes may be required and shall be provided.

PART 3 - EXECUTION

3.01 ABATEMENT PROCEDURES AND WORK AREA PREPARATION

A. Work Area Preparation

1. For Class I and II asbestos work, shut down and lock out heating, cooling and air conditioning system (HVAC) components that are located in, supply, or pass through the Work area. Seal intakes and exhaust vents in the Work area with tape and 6-mil polyethylene. Seal seams in any system components that pass through the Work area.

2. Provide and post signs at locations and approaches to the Regulated Area. The signs shall comply with Cal/OSHA regulations.

3. In conjunction with the Owner, shut down and lock out/tag out electric power to Class I and II asbestos work areas. Provide equipment for temporary power with ground fault interrupters and lighting sources. Temporary power sources and equipment shall comply with applicable electrical code requirements and Cal/OSHA requirements for temporary electrical systems. The Owner shall perform electrical connections of electrical cable and equipment provided as part of the Work of this section to existing Owner systems. The Owner shall pay for the costs of electric power consumed during performance of the Work of this section, unless otherwise noted.

4. For Class I and II asbestos work, clean and seal off windows, doorways, elevator openings, corridor entrances, drains, ducts, grills, grates, diffusers, skylights, and any other openings between the Abatement Work area and areas outside of the Abatement Work area with 6-mil polyethylene sheeting and tape prior to proceeding with required cleaning.

5. Clean Movable Objects within the Abatement Work area with a HEPA Filtered vacuum and wet cleaning methods. After cleaning, these objects shall be removed from the Abatement work area and carefully stored in a location designated by the Owner.

6. Clean Fixed Objects in the Abatement Work area with a HEPA Filtered vacuums and wet cleaning methods. Careful attention shall be given to machinery behind grills or gratings where access may be difficult but contamination is present. Cleaning of walls, floors, and ceilings behind fixed items is required. After cleaning, enclose Fixed Objects in 6-mil polyethylene sheeting and seal securely in place with durable tape.

7. Clean surfaces in the Abatement Work area with a HEPA Filtered vacuums and wet cleaning methods. Do not utilize any methods, such as dry sweeping or vacuuming, with equipment not furnished with HEPA Filters thereby creating airborne dust and particulates. Do not disturb Asbestos Containing Materials during this cleaning phase.

8. For Class I and II asbestos work, floors shall be covered with two layers of 6-mil (minimum) polyethylene sheeting. Additional layers of sheeting may be furnished as drop cloths for cleanup of bulk materials.

9. Polyethylene sheeting shall be sized and installed to minimize seams. If the floor area to be covered requires seaming, seams on successive layers of polyethylene sheeting shall be staggered a minimum of six feet between each seam to reduce the potential for water penetration into the existing flooring. Do not install seams at the junction between a wall and floor.

10. Polyethylene sheeting installed on a floor shall extend at least 12 inches up the sidewalls of the Abatement Work area.

11. Polyethylene sheeting shall be installed so as to prevent slippage between successive layers of installed material.

12. For Class I and II asbestos work, walls shall be covered with two layers of 4-mil minimum thickness polyethylene sheeting.

13. Polyethylene sheeting installed on a wall shall overlap floor sheeting by at least 12 inches beyond the wall/floor joint to provide a seal against water damage.

14. Polyethylene sheeting installed on a wall shall be adequately fastened to prevent it from falling away from the walls. Provide additional support/attachment when air filtration ventilation systems are provided.

15. For Class I and II asbestos work with porous, dropped, or perforated ceilings, those ceilings shall be covered with one layer 4-mil minimum thickness polyethylene sheeting.

16. Polyethylene sheeting installed on ceilings shall be adequately fastened to prevent it from falling away from the ceiling.

17. Provide one layer of 3-mil maximum, polyethylene sheeting (non-fire retardant type) for isolation of fire sprinkler devices. Installed taping shall not impede the normal function of the fire sprinkler device. Approved wire sprinkler guards shall be furnished in conjunction with isolation.

18. Where required, install and operate air filtration equipment to provide one air change in the Abatement Work area every 15 minutes. Openings made in the Enclosure System to accommodate these units shall be made airtight with durable tape and/or caulking as needed. If more than one unit is installed, they shall be turned on one at a time, checking the integrity of barriers after each unit is started. Insure that adequate power supply is available to satisfy the requirements of the air filtration units. Exhaust from these units shall be directed to the outside of the building whenever feasible. They shall not be exhausted into occupied areas of the buildings. Exhaust duct shall be extended from the Abatement Work area to the

outside as required. Careful installation and daily inspections shall be performed to verify the exhaust ducts do not discharge into any areas of the building.

19. Once the Enclosure system is constructed and reinforced with air filtration units in operation as required, test the Enclosure for leakage utilizing smoke tubes. Repair, replace or reconstruct as required.

20. Following completion of the construction of polyethylene barriers and Decontamination Enclosure System, operate the air filtration units overnight to insure the barriers will remain intact and secured to walls and fixtures before beginning actual Abatement Work.

21. Commencement of the Work of this section shall not occur until:

    a. The entire containment system has been constructed and inspected by Owner Consultant in accordance with the required Shop Drawings.

    b. Air filtration units are functioning within the requirements of this section.

    c. Air filtration units are functioning within the requirements of this section.

    d. Pre-Abatement submittals, notifications, postings, and permits have been provided and reviewed by the Owner Consultant.

    e. Equipment for Abatement, Decontamination, and disposal are on the Project site.

    f. Worker training, respirator fit testing, and medical surveillance has been provided and reviewed by the Owner Consultant.

    g. A Notice to Proceed is transmitted by the Owner.

3.02 ASBESTOS RELATED DISTURBANCE WORK PRACTICES (Small-Scale, Short Duration – SSSD)

A. For Class III work, shut off air handling equipment to rooms work will occur in.

B. Provide and post signs at the entrance to the work area affected. The signs shall comply with Cal/OSHA regulations.

C. For Class III work clean the area immediately under the location to be disturbed.

D. For Class III work move any moveable furniture or objects from immediately beneath the area to be disturbed.

E. Provide an enclosure around the area of disturbance. This may include, but is not limited to:

1. Mini-enclosure where not more than two persons may occupy for the purpose cutting holes up to three square feet in walls or ceilings.

2. For drilling, coring, sawing or similar disturbance, an enclosure shall be placed over the area of disturbance of sufficient size to cover that area and contain the tools used. This can include drilling with a shroud, through a wet sponge, through a plastic enclosure, or similar designs which will ensure control of Asbestos fibers and other dust. Drilling or coring with the use of a vacuum collection device shall be equipped with a HEPA filtered vacuum.

F. Class III work performed without a HEPA vacuum collection device shall have surfaces of disturbance adequately wet to control fiber release.

G. Clean by wet method the surfaces disturbed, the enclosure device and/or materials used, and any tools used during the disturbance operation.

H. Clean up by wet method and/or HEPA vacuum any debris that may have escaped outside the enclosure required by this section.

3.03 DECONTAMINATION ENCLOSURE SYSTEM FOR ABATEMENT WORK

A. Decontamination Enclosure Systems shall be provided at locations where workers will enter or exit the Abatement Work area of Class I and II asbestos work prior to any other set up. Only one system at a single location for each Regulated Area is required. At least one individual shall be stationed at the entrance of each system at times Abatement Work is in progress.

B. These systems may consist of existing rooms outside of the Abatement Work area, if the layout permits, and that can be enclosed in polyethylene sheeting, and are accessible from the Abatement Work area. If this intended layout is not feasible, given existing site conditions, Enclosure systems may be constructed out of metal, wood, or plastic support as required.

C. Decontamination Enclosure Systems constructed at the Project site shall be furnished with 6-mil opaque white or black polyethylene sheeting or other approved materials for privacy. Detailed descriptions of portable, prefabricated units, if furnished, shall be submitted for review. Shop Drawings must include floor plan with dimensions, materials, size, thickness, plumbing, and electrical utilities.

D. Decontamination Enclosure System shall consist of at least a Clean Room, a Shower Room, and an equipment room, each separated from the other, from the Abatement Work area and from the non-Work area by "Z-flaps" at a minimum. The system shall be furnished with, at a minimum, two layers of 6-mil polyethylene sheeting on the floors, walls, and ceiling.

E. Clean room shall be of adequate size to accommodate the Abatement crew. Clean work clothes, clean disposable clothing, replacement filters for respirators, disposable towels, and other necessary items shall be provided for in adequate supply adjacent to the Clean

Room. A location for posting notices shall also be provided adjacent to this area. When required, a lockable door shall be furnished to control access into the Clean Room from outside the Abatement Work area. Comfort lighting, heat, and electricity shall be provided as required. The Clean Room shall not be used for storage of tools, equipment, materials, or as office space.

F. Shower room shall contain one or more showers as required to adequately accommodate workers. Each showerhead shall be supplied with hot and cold water adjustable at the tap. The shower Enclosure shall be constructed to ensure against any kind of leakage. Provide an adequate supply of soap, shampoo, and disposable towels, available at times. Shower water shall be drained, collected, and progressively filtered through a system achieving a maximum particle size of 1.0 microns.

G. The Equipment Room shall be used for storage of equipment and tools at the end of a shift. These shall have been cleaned using a HEPA Filtered vacuum and wet cleaning methods. A container lined with a labeled 6-mil polyethylene bag for collection of disposable clothing shall be located in this room. Reusable footwear shall be stored in this area after being cleaned.

3.04 WASTE CONTAINER REMOVAL AIRLOCK AND EMERGENCY EXITS

A. The waste container pass-out airlock shall be constructed away from the Decontamination Enclosure System. This airlock shall be in a location that provides direct access from Abatement Work area to the outside of the building if possible.

B. This system shall consist of an airlock, container Staging Area, and another airlock providing access to outside Abatement Work area.

C. The waste container airlock shall be constructed in similar fashion with similar materials as the Decontamination Enclosure System.

D. This airlock system shall not be used to enter or exit the Abatement Work area.

3.05 ALTERNATIVE PROCEDURES

A. Soil Removal

1. Required Asbestos Abatement shall be performed prior to soil Removal.

2. If soil Removal is specified, debris within or upon the soil shall be considered part of the soil and shall be removed as a contaminated waste. Debris includes, but is not limited to, fabric, paper, and other fibrous or porous materials.

3. It is not the intention of this section to require the Removal of large rocks, abandoned non-Asbestos-containing pipe, lumber, and similar debris. If these conditions are encountered, clean and encapsulate these materials instead of removing them as a contaminated waste, provided Asbestos contamination is not

ingrained within and/or affixed to them. Any such materials remaining shall be stacked to one side to allow for access to the soil below for removal purposes.

4. Unless otherwise specified, soil shall be removed with a High Volume Vacuum system. Soil shall be removed to the hard pan unless otherwise specified or required.

5. After soil Removal has been completed, the Owner Consultant shall inspect the Work. Approval of the Removal Work is required prior to lock down and Encapsulation.

6. Soil requires Encapsulation following Asbestos Removal, including but not limited to, High Volume Vacuum removal. Apply a continuous even coat of encapsulating material at the rate of no more than fifty square feet per gallon. Other structural surfaces shall receive an evenly applied coat of lock down material.

B. Other:

1. High Volume Vacuum systems shall be provided with an Enclosure constructed at the waste discharge port. This Enclosure shall be of sufficient size to accommodate the workers and disposal containers necessary for the Project. The Enclosure shall be constructed of one layer, 6-mil minimum, of polyethylene sheeting. An air filtration unit shall be furnished during operation of the High Volume Vacuum.

2. Where pipe insulation is to be removed in a crawl space and/or attic space a single layer of 6-mil polyethylene sheeting with a minimum width of four feet shall be placed centered under the Removal surfaces.

3. If specified procedures cannot be furnished, a written request shall be provided to the Owner outlining details of the problem encountered and recommended alternative solutions.

4. Alternative procedures shall provide equivalent or greater protection than the specified and/or required procedures.

5. Any alternative procedure requires the written approval of the Owner prior to implementation.

3.06 WORKPLACE ENTRY AND EXIT PROCEDURES

A. Before entering the Regulated Area personnel shall read and be familiar with posted regulations, personal protection requirements, and emergency procedures. A signature sheet shall be posted for signatory acknowledgement these have been reviewed and understood by personnel prior to entry.

B. Workers and other authorized personnel shall enter the Abatement Work area through the Decontamination Enclosure System or other room required when Decontamination Enclosure System is not required.

C. Personnel who enter or exit the Regulated Area shall sign the entry and exit log located adjacent to the Clean Room.

D. Personnel shall proceed first to the Clean Room, don respirator, and washable and/or disposable clothing.

E. General construction area equipment including, but not limited to, hard hats, eye protection, and gloves shall also be provided as required. Clean respirator and cartridges, and protective clothing shall be provided and utilized by each person for each separate entry into the Regulated Area.

F. Before leaving the Regulated Area for Class I and II asbestos work personnel shall remove gross contamination from the outside of respirators and protective clothing by vacuuming and/or wet wiping methods. Each person shall clean protective footwear just prior to entering the Equipment Room.

1. Personnel shall proceed to Equipment Room where they remove protective equipment except respirators. Deposit disposable clothing into appropriately labeled containers.

2. Still wearing respirator, personnel shall proceed to the shower area, clean the outside of the respirators and the exposed face area under running water prior to removal of respirator then shower and shampoo to remove residual Asbestos contamination. Various types of respirators will require slight modification of these procedures. A powered air purifying respirator face piece will have to be disconnected from the filter/power pack assembly when such is not waterproof, upon entering the shower. A dual cartridge respirator may be worn into the shower and cartridges shall be replaced for each new entry into the Work area.

3. After showering and drying off, proceed to the Clean Room and don clean clothing.

G. At no time shall any personnel exit an Abatement Work area into a space occupied by staff or students without being completely dressed. Any violation of this requirement will result in the permanent removal of the person from the Project site.

3.07 REMOVAL PROCEDURES

A. Brushes furnished for removing loose Asbestos Containing Material during detail cleaning of substrate shall be furnished with nylon or fiber bristles. Metal or wire brushes are not permitted. Brushes used during this process shall be disposed as contaminated waste when use of the brush for this work is completed.

B. A sufficient supply of HEPA Filtered vacuum systems shall be provided during cleanup of Abatement Work. Brush attachments are not permitted for use with vacuum systems.

C. Barriers constructed to isolate the Regulated Area from other areas shall be inspected at least three times per shift; prior to the start of Abatement activities; half way into the shift; and following the completion of the Abatement activities at the end of the shift. Inspect and document observations in the daily Project log.

D. Damage and defects in the Enclosure system shall be repaired immediately upon discovery.

E. At any time during Abatement Work, following barrier installation, if visible debris is observed outside of the Regulated Area or damage occurs to the barriers, stop Work immediately. Repairs shall be performed to the barriers and debris/residue shall be cleaned up with appropriate HEPA Vacuuming and wet wiping methods. These incidents shall be recorded in the daily Project log.

F. If air samples collected outside of the Work area during Abatement Work indicate airborne fiber concentrations greater than 0.01 f/cc or the pre-measured background levels (whichever is lower) Work shall stop immediately. An inspection and repair of barriers shall be performed as required. Surface cleaning with HEPA Vacuums and wet wiping methods of areas outside of the Work area may be required by the Owner. Findings, observations, and corrective actions shall be documented in the daily Project log.

3.08 ENCAPSULATION AND BRIDGING AGENTS

A. Clean and isolate the Work area in accordance with "Work Area Preparation" of this Section.

B. Repair damaged and missing areas of existing materials with non-Asbestos containing substitutes. Material shall adhere adequately to existing surfaces and provide an adequate base for application of Encapsulating Material. Filler material shall be installed in accordance with manufacturers recommended specifications.

C. Remove loose or hanging Asbestos Containing Materials in accordance with the requirements of "Removal Procedures" in this Section.

D. Lockdown and Encapsulating Material, and bridging agents shall be reviewed by the Owner Consultant prior to the commencement of the Work of this section.

E. Encapsulating Material shall be sprayed applied with airless spray equipment. Nozzle pressure shall be adjustable within a range of 400 to 1500 PSI.

F. Lock down coat shall be spray applied with low pressure providing a continuous even coat.

G. Bridging agents shall be a palm or brush grade.

H. Colorless lock down materials, Encapsulating Material, and bridging agents shall be furnished with a compatible color additive. A different color shall be furnished for each separate coat of applied material.

I. Install penetrating type Encapsulating Material to penetrate existing sprayed applied Asbestos Containing Materials to a depth as required.

J. During installation of the penetrating type Encapsulating Material; remove selected random core samples of the Asbestos Containing Materials in the presence of the Owner Consultant to verify depth of penetration.

K. Lock down coating and Encapsulating Material for installation on hot water, steam, or any other high temperature equipment shall be manufactured and recommended for installation on high temperature systems.

3.09 CLEAN UP PROCEDURES

A. Asbestos Clean Up Procedures:

1. Unless decontaminated daily, reusable footwear and kneepads shall be stored in the Equipment Room when not in the Work area. Upon completion of Abatement Work, these shall be disposed of as Asbestos contaminated waste or may be decontaminated at the completion of Abatement Work.

2. Remove and containerize visible accumulations of Asbestos Containing Material and Asbestos contaminated debris with rubber dustpans and rubber squeegees. Do not use metal shovels to pick up or move accumulated waste. Special care shall be taken to minimize damage to flooring materials.

3. Remove containerized waste from the Abatement Work area and the waste container airlock.

4. Wet wipe surfaces in the Regulated Area with clean rags, mops, and sponges as appropriate.

5. After cleaning remove the top layer of polyethylene sheeting from walls and floors.

6. Clean the second layer of polyethylene sheeting by wet wipe and HEPA Vacuuming. Windows, doors, HVAC system vents, and other critical seals shall remain sealed until the Abatement Work area passes final clearance. The air filtration units shall remain in continuous operation and the Decontamination Enclosure System shall remain in place and be utilized.

7. Decontaminate tools and equipment and remove at the appropriate time in the cleaning process.

8. Provide notification to the Owner at least one day in advance when Abatement Work will be completed and ready for final visual inspection. If, upon inspection, Abatement Work is not completed or the area does not pass final visual inspection, finish or correct the Abatement Work as required before notifying the Owner. Subsequent inspections shall commence not later than one day following notice.

9. The Owner Consultant shall inspect the Work area for visible residue. If residue is observed, it shall be deemed to contain Asbestos and the cleaning process shall be repeated. The lock down coat shall be applied only after inspection by the Owner Consultant and during non-school hours.

10. The second layer of isolation shall only be removed after the Owner Consultant inspects the lock down coat or installed Encapsulation, but in no case prior to overnight drying of lock down coat or Encapsulation.

11. Following completion of air clearance monitoring the remaining barriers shall be removed and properly disposed of. A final visual inspection by the Owner Consultant shall be performed to verify that no contamination remains in the Abatement Work area. Unsatisfactory conditions may require additional cleaning and air monitoring.

3.10 WASTE HANDLING AND TRANSPORTATION

A. Asbestos Waste Handling

1. As the Work progresses, to prevent exceeding available storage capacity on the Project site, sealed and labeled containers of Asbestos Containing Waste shall be removed and transported to the prearranged disposal location.

2. Waste disposal shall occur at an authorized site in accordance with regulatory requirements of NESHAP and applicable State and Local regulations.

3. Once the drums, bags, and/or wrapped components have been removed from the Work area, they shall be loaded into an enclosed truck for transportation.

4. Waste shall not be transported from the work are to the storage container or waste hauler’s vehicle while students or staff are present in the path of travel. Where a path of travel cannot be cordoned off the movement of waste must be completed prior to or after the presence on site of students and staff.

5. Personnel loading Asbestos waste shall be protected with disposable clothing and at a minimum half-face, air purifying, dual cartridge respirators furnished with HEPA Filters.

3.11 TRANSPORTATION OF NON HAZARDOUS WASTE

A. Waste shall be containerized, labeled, and transported in accordance with federal, state, and local regulations.

B. Waste shall be transported under cover a non-Hazardous Waste manifest.

C. Containers shall be enclosed during transportation.

3.12 TRANSPORTATION OF HAZARDOUS WASTE

A. Dump receipts; trip tickets, transportation manifests, weight certificates or other documentation of disposal shall be delivered to the Owner Consultant within 48 hours of disposal. As the material and responsibility for the material changes hands, the generator or designee, the transporter(s), and the Disposal Site Operator shall sign the Uniform Hazardous Waste Manifest. If a separate waste hauler is employed, the name, address, U.S.E.P.A. ID number, and signature of the transporter shall also be affixed onto the manifest.

B. The enclosed cargo area of trucks or containers shall be free of debris and lined with 6 mil polyethylene sheeting to prevent contamination from leaking or spilled containers. Floor sheeting shall be installed first and extend up the sidewalls. Wall sheeting shall be overlapped and taped into place.

C. Drums shall be placed on level surfaces in the cargo area and packed tightly together to prevent shifting and tipping. Large structural components shall be secured to prevent shifting, with bags placed on top.

D. Access openings on large metal containers, which are used for storing or transporting Asbestos waste, shall have doors and tops that can be closed and locked. Materials not properly bagged shall not be placed in these containers nor shall these containers be used for non-Asbestos waste or nonhazardous asbestos waste. Bags shall be placed, not thrown, into these containers to avoid damage.

3.13 MONITORING

A. Abatement Project Management and Inspection:

1. Owner has the right to perform air and performance monitoring at any time.

2. The Owner has unlimited access to the regulated and surrounding areas at times during progress of the Work, including, but not limited to, use of ladders, scaffolds, and other equipment required to gain access to the Work surfaces.

B. Work Area Monitoring:

1. Visual inspections and air testing may be performed at any time during the progress of the Abatement Work. Provide corrective measures as required to maintain the Work area in compliance with this Specification and regulatory requirements.

C. Contractor's Employee – Personal Air Monitoring:

1. Provide air monitoring as required California Code of Regulations, Title 8, Section 1529. Results shall be provided to the Owner Consultant within ten working days of sampling. Negative Exposure Assessments utilizing prior project monitoring require submittal of applicable data for approval before work proceeds.

D. Clearance Air Monitoring:

1. Following the completion of Abatement Work and clean up operations, lock down coat application, and visual inspection by the Owner, clearance air monitoring shall be performed by the Owner Consultant.

2. The Owner Consultant shall arrange for sampling of the air in the Abatement Work area for airborne fiber concentrations. Unauthorized interference or tampering with air sampling equipment may result in termination of the Contract and/or removal of the Abatement Contractor from the List of Prequalified Abatement Contractors.

3. If air-sampling results are within the limits of 40 CFR, Part 763, Subpart E (AHERA), the Abatement Work area shall be released for occupancy.

4. Areas failing clearance monitoring shall be cleaned as required in article 3.09, CLEAN UP PROCEDURES, and tested until satisfactory levels are provided in accordance with this Specification where required.

3.14 RE-ESTABLISHMENT OF THE WORK AREA AND SYSTEMS

A. Reestablishment of the Work area shall only occur following the completion of final inspection and clearance air monitoring.

B. Critical barriers shall be removed at this time.

C. Accompanied by the Owner Consultant, visually inspect the Abatement Work area for any remaining visible residue. Evidence of contamination will require additional cleaning requirements.

D. Install and secure Moveable Objects.

E. Relocate Moveable Objects that were removed to temporary locations back to their original positions.

F. Reestablish HVAC, mechanical, and electrical systems to the condition prior to commencement of the Work of this section.

G. Repair areas of damage deemed to be a result of the Abatement Work.

H. Restore the Work area and auxiliary areas utilized during the Abatement to conditions equal to or better than original. Any damage caused during the performance of Abatement Work, including, but not limited to, damage caused by tape, adhesive, staples, nails, water, Encapsulating Material, or any other material shall be repaired as required.

I. Prior to occupancy of a space following clearance monitoring, HVAC systems filters associated with the Work area shall be removed and disposed of as Asbestos waste. Decontaminate filter assembly and surrounding area with HEPA Vacuums and wet cleaning methods.

END OF SECTION

SECTION 03 1000

CONCRETE FORMING AND ACCESSORIES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Formwork for cast-in-place concrete as indicated.

2. Installation of items to be embedded in concrete, such as anchor bolts, inserts, embeds, and sleeves.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Section 03 2000: Concrete Reinforcing.

3. Section 03 3000: Cast-In-Place Concrete.

1.02 REFERENCES

A. American Concrete Institute (ACI) Publication:

1. ACI 117 – Guide for Tolerance Compatibility in Concrete Construction.

2. ACI 318 – Building Code Requirements for Structural Concrete, Chapter 6, Formwork, Embedded Pipes, and Construction Joints.

3. ACI 347 – Guide to Formwork for Concrete.

4. ACI SP-4 - Formwork for Concrete.

B. ASTM International:

1. ASTM D6817 – Standard Specification for Rigid Cellular Polystyrene Geofoam.

C. American Plywood Association (APA):

1. Form No. V345 - Concrete Forming Design/Construction Guide.

D. American Society for Testing and Materials (ASTM):

1. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.

E. American Architectural Manufacturers Association (AAMA):

1. AAMA 800 - Voluntary Specifications and Test Methods for Sealants.

F. National Institute of Standards and Technology (NIST):

1. NIST Voluntary Product Standard PS 1.

1.03 SUBMITTALS

A. Submit detailed structural calculations and drawings approved and signed by a California registered Civil Engineer where the height of the falsework or vertical shoring, as measured from the top of the sills to the soffit of the superstructure exceeds 14 feet, or where individual horizontal span lengths exceed 16 feet, or where provision for vehicular traffic through falsework or shoring occurs. For all other falsework and shoring and reshoring submit layout signed by California registered Civil Engineer, manufacturer's authorized representative or a licensed contractor experienced in the usage and erection of falsework and vertical shoring. A copy of the plans and calculation shall be available at the jobsite at all times.

B. Shop Drawings: Submit Shop Drawings indicating locations of forms, construction and expansion joints, embedded items, and accessories.

C. Product Data: Submit manufacturer's Product Data for form materials and accessories.

1.04 QUALITY ASSURANCE

A. Regulatory Requirements:

1. California Building Code (CBC), Chapter 19A.

2. California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 4, Construction Safety Orders, Article 6, Excavations, Sections 1713 and 1717.

B. Pre-Installation Meetings: Conform to requirements of Section 01 3119 Project Meetings, Article "Pre-Installation Conferences".

C. Mockup: Refer to Section 03 3300 Cast-in-Place Architectural Concrete.

D. Formwork and Falsework design:

1. CONTRACTOR shall design and construct all formwork. All forms, shores, backshores, reshores, falsework, bracing, and other temporary supports shall be engineered to support all loads imposed including the wet weight of concrete, construction equipment, live loads and lateral loads.

2. Design of formwork and falsework shall be in accordance with ACI 347 and ACI SP-4.

1.05 DELIVERY, STORAGE AND HANDLING

A. Storage shall prevent damage and shall permit access to materials for inspection and identification.

PART 2 - PRODUCTS

2.01 GENERAL FORMWORK

A. Except for formwork for architectural concrete, form materials may be reused during progress of the Work provided they are completely cleaned and reconditioned, recoated for each use, capable of producing formwork of required quality, and are structurally sound. For formwork for architectural concrete see Section 03 3300 Cast-in-Place Architectural Concrete.

B. Form Lumber: WCLIB Construction Grade or Better, WWPA No. 1 or Better.

C. Plywood: NIST Voluntary Product Standard PS 1, Group 1, Exterior Grade B-B Plyform or better, minimum 5-ply and 3/4 inch thick for exposed locations and at least 5/8 inch thick for unexposed locations, grade marked, not mill oiled. Furnished plywood with medium or high-density overlay is permitted.

D. Coated Form Plywood: For exposed painted concrete, plastic overlaid plywood of grade specified above, factory coated with a form coating and release agent Nox-crete, or equal.

E. Special Forms: For exposed integrally colored concrete, plywood as above with high density overlay, plywood with integral structural hardboard facing or fibrous glass reinforced plastic facing, providing specified finish.

F. Accessories:

1. Corners: Chamfered, rigid plastic or wood strip type, of maximum possible lengths.

2. Dovetail Anchor Slots: Galvanized steel, 22 gage thick, foam filled, release tape sealed slots, anchors for securing to concrete formwork.

3. Flashing Reglets: Galvanized steel, 22 gage thick, longest possible lengths, with alignment splines for joints, foam filled, release tape sealed slots, anchors for securing to concrete formwork.

4. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required, of sufficient strength and character to maintain formwork in place while placing concrete.

5. Embedded Anchor Shapes, Plates, Angles and Bars: As indicated on the Drawings.

PART 3 - EXECUTION

3.01 GENERAL

A. Forms shall be constructed so as to shape final concrete structure conforming to shape, lines and dimensions of members required by Contract Documents and shall be sufficiently tight to prevent leakage of concrete. Forms shall be properly braced or tied together to maintain position and shape. Forms and their supports shall be designed so that previously placed structures will not be damaged.

3.02 VOID FORMS INSTALLATION

A. Verify grades are at the elevations indicated on the Drawings. Install in accordance with manufacturer's instructions and tolerances. Use hot wire to cut geofoam blocks.

B. Void forms shall accurately fit relative to adjacent forms. Use manufacturer’s hardware to brace forms. Offset forms in adjacent rows.

C. Provide temporary weighting and as necessary until all the forms are secured in place.

D. Keep void forms dry prior to placement of concrete. Protect void forms from rain and on-site seepage. Do not install void forms on wet sub-grade or during inclement weather.

E. Top surfaces of corrugated paper void forms for slabs and grade beams shall be protected by a layer of 1/4” thick protection board to distribute loading, bridge small gaps, and protect void forms from puncture and other damage during construction.

F. Place pads under chairs or use chairs with runners to prevent puncturing.

3.03 TOLERANCES

A. Refer to ACI 117 for tolerances at the interface between concrete and other building systems.

3.04 ERECTION

A. Install accessories in accordance with manufacturer’s instructions, so they are straight, level, and plumb. Ensure items are not disturbed during concrete placement.

B. Openings for Cleaning: Provide temporary openings at points in formwork to facilitate cleaning and inspection. At base of walls and wide piers, bottom form board on one face for entire length shall be omitted until form has been cleaned and inspected.

C. Chamfers: Provide 3/4 inch by 3/4 inch chamfer strips for all exposed concrete corners and edges unless otherwise indicated.

D. Reglets and Rebates: As specified in Section 03 3000: Cast-In-Place Concrete.

3.05 REMOVAL OF FORMS

A. Forms shall not be removed until concrete has sufficiently hydrated to maintain its integrity and not be damaged by form removal operations. Shoring shall not be removed until member has acquired sufficient strength to support its weight, load upon it, and added load of construction.

B. Compressive strength of in-place concrete shall be determined by testing field-cured specimen representative of concrete location or members, as specified in Section 03 3000: Cast-In-Place Concrete.

3.06 SHORING AND RESHORING

A. Conform with ACI 347 requirements regarding shoring and reshoring in multistory construction.

B. Beams, joists and slabs required to support one or more subsequent levels of construction shall be reshored. Reshores shall be located in the same position on each floor so that they will be continuous in their support from floor to floor. No construction loads shall be permitted while reshoring is underway.

C. Install and remove reshores in such a way that excessive stresses and deflections are avoided.

3.07 PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.08 CLEAN UP

A. Remove rubbish, debris and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 03 2000

CONCRETE REINFORCING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Concrete steel reinforcement.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Section 03 1000: Concrete Forming.

3. Section 03 3000: Cast-In-Place Concrete.

1.02 REGULATORY REQUIREMENTS

A. Fabrication and placement of reinforcing shall be in accordance with requirements of CBC, Chapter 19A.

1.03 REFERENCES

A. ASTM International:

1. ASTM A184 - Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement.

2. ASTM A615 - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.

3. ASTM A706 - Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement.

4. ASTM A1064 - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.

B. American Concrete Institute (ACI) Publication:

1. ACI SP-66 – ACI Detailing Manual.

2. ACI 315 – Details and Detailing of Concrete Reinforcement.

3. ACI 315-R - Guide to Presenting Reinforcing Steel Design Details.

4. ACI 318 – Building Code Requirements for Structural Concrete, as modified by CBC.

5. ACI 117 – Specifications for Tolerance for Concrete Construction and Materials.

C. American Welding Society (AWS):

1. AWS D1.4 – Structural Welding Code – Reinforcing Steel.

D. Concrete Reinforcing Steel Institute (CRSI):

1. Manual of Standard Practice.

1.04 SUBMITTALS

A. Shop Drawings: Submit steel reinforcement Shop Drawings. Include assembly diagrams, schedule of reinforcement, stirrup spacing, bending charts and slab and framing plans. Indicate lengths and location of splices, laps of bars, size and lengths of reinforcing steel and concrete cover. Indicate steel type and grade of reinforcement.

B. Closeout Submittals: Record exact locations of reinforcing that vary from Contract Documents.

C. Manufacturer’s Mill Certificate: Submit, certifying that products meet or exceed specified requirements.

D. Bar Lock Coupler: Technical data sheets for each product used. Include material physical characteristics, storage and installation instructions, precautions and safety data, cleanup, and maintenance information.

E. Evaluation Reports: Submit International Code Council (ICC) current evaluation report for the proposed couplers.

1.05 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement:

1. Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice.

2. American Welding Society (AWS).

3. American Concrete Institute (ACI).

4. CBC, Chapter 19A, Concrete.

B. Sampling, testing and tagging of reinforcing bars shall conform with DSA IR 17. Testing laboratory retained by the OWNER and monitored by the Project Inspector shall select test Samples of bars, ties, and stirrups from the material at the Project Site or from the place of distribution, with each Sample consisting of not less than two 18-inch-long pieces of ASTM A615 and ASTM A706 reinforcing bars, as applicable:

1. Identified Bars: If Samples are obtained from bundles as delivered from the mill, identified as to heat number, accompanied by mill analyses and mill test reports, and properly tagged with the identification certificate so as to be readily identified, perform one tensile and one bend test for each 10 tons or fraction thereof of each size of bars. Submit mill reports when Samples are selected.

2. Unidentified Bars: When positive identification of reinforcing bars cannot be performed and when random Samples are obtained; perform tests for each 2.5 tons or fraction thereof, one tensile and one bend test from each size of bars.

3. Reinforcing bar testing may be waived with the approval of DSA in accordance with CBC Section 1910A.2.

C. Certification of Welders: Shop and Project site welding shall be performed by welding operators certified by AWS.

D. Pre-Installation Meetings:

1. Conform to requirements of Section 01 3119 Project Meetings, Article “Pre-Installation Conferences”.

2. Coordinate with the work of related Sections 03 1000, 03 3000 and 07 2600.

1.06 DELIVERY, STORAGE AND HANDLING

A. Store on the Project site to permit easy access for examination and identification of each shipment. Material of each shipment shall be separated for size and shape.

B. Store reinforcement of different sizes and shapes in separate piles or racks raised above the ground to avoid excessive rusting. Avoid exposure to dirt, moisture or conditions harmful to reinforcing.

PART 2 - PRODUCTS

2.01 GENERAL

A. Provide reinforcing of sizes, gages and lengths indicated, bent to indicated shapes.

2.02 MATERIALS

A. Steel Reinforcing Bars:

1. ASTM A615, deformed grade 60, 75, 80 or 100 billet steel as indicated on the drawings.

B. Bars or Rod Mats: ASTM A184.

C. Dowels: Conforming with ASTM A615 steel bars of same grade as slab reinforcing bars, cut to indicated length with ends free of burrs.

D. Tie Wire: ASTM A1064, fully annealed, copper-bearing steel wire, 16 gage minimum.

E. Chairs, Spacers, Supports, and Other Accessories: Standard manufacture conforming to ACI 315 and ACI 315-R fabricated from steel wire or plastic of required types and sizes. For reinforcement supported from grade, provide properly sized dense precast blocks of concrete.

2.03 FABRICATION OF REINFORCING BARS

A. Comply with CRSI Manual of Standard Practice for Reinforced Concrete Construction for fabrication of reinforcing steel.

B. Bending and Forming: Fabricate bars of the indicated sizes and bend and form to required shapes and lengths by methods not injurious to materials. Do not heat reinforcement for bending. Bend bars No. 6 size and larger in the shop only. Bars with unscheduled kinks or bends are not permitted. Provide only tested and permitted bar materials.

C. Welding: Provide only ASTM A706 steel where welding is indicated on the Drawings. Perform welding by the direct electric arc process in accordance with AWS D1.4 and specified low-hydrogen electrodes. Preheat 6 inches each side of joint. Protect joints from drafts during the cooling process;

accelerated cooling is not permitted. Do not tack weld bars. Clean metal surfaces to be welded of loose scale and foreign material. Clean welds each time electrode is changed and chip burned edges before placing welds. When wire brushed, the completed welds must exhibit uniform section, smooth welded metal, feather edges without undercuts or overlays, freedom from porosity and clinkers, and good fusion and penetration into the base metal. Cut out welds or parts of welds deemed defective, using chisel, and replace with proper welding. Prequalification of welds shall be in accordance with CBC requirements.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Comply with CRSI recommended practice for "Placing Reinforcing Bars".

B. Bars shall be bent cold. Bars partially embedded in concrete shall not be field bent except as indicated on reviewed Shop Drawings.

C. Before installation and just prior to placing concrete, clean reinforcing of loose scale, rust, oil, dirt and any coating that could reduce bond.

D. Verify installation of vapor barrier is complete before installation of rebar or welded wire fabric.

E. Accurately position, install, and secure reinforcing to prevent displacement during the placement of concrete.

F. Provide metal chairs to hold reinforcement the required distance above form bottoms. In beams and slab construction, provide chairs under top slab reinforcement as well as under bottom reinforcement. Space chairs so that reinforcement will not be displaced during installation. Provide metal spacers to secure proper spacing. Stirrups shall be accurately and securely wired to bars at both top and bottom. At slabs, footings, and beams in contact with earth, provide concrete blocks to support reinforcement at required distance above grade.

G. Install and secure reinforcement to maintain required clearance between parallel bars and between bars and forms. Splice reinforcing bars only at locations shown on the structural drawings and approved shop drawings. Lapped splices shall be installed wherever possible in a manner to provide required clearance between sets of bars. Stagger lapped splices.

H. Dowels and bars extending through construction joints shall be secured in position against displacement before concrete is installed and subsequently

cleaned of concrete encrustations while they are still soft. Lubricate or asphalt coat one-half of dowel length to prevent concrete bonding to one side of joint.

I. Do not install reinforcing in supported slabs and beams until walls and columns have been installed to underside of slabs and beams or until construction joints have been thoroughly cleaned. Reinforcing shall be inspected before placement of concrete and cleaned as required.

J. Use deformed bars unless otherwise indicated, except for spiral reinforcement.

K. Install welded wire reinforcement in as long lengths as practicable. Lap adjoining pieces at least one full mesh and lace splices with wire. Offset end laps in adjacent widths to prevent continuous laps in either direction.

3.02 CLEAN UP

A. Remove rubbish, debris and waste materials and legally dispose of off the Project site.

3.03 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 03 3000

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Cast-in-place normal weight and lightweight concrete, placement and finishing.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Section 03 1000: Concrete Forming and Accessories.

3. Section 03 2000: Concrete Reinforcing.

1.02 REFERENCES

A. American Concrete Institute (ACI) Publication:

1. ACI 117 – Specifications for Tolerances for Concrete Construction and Materials.

2. ACI 301 – Specifications for Structural Concrete.

3. ACI 302.1R – Guide for Concrete Floor and Slab Construction.

4. ACI 305R - Guide for Hot Weather Concreting.

5. ACI 306.1 – Standard Specification for Cold Weather Concreting.

6. ACI 308R – Guide to External Curing of Concrete.

7. ACI 318 - Building Code Requirements for Structural Concrete, as modified by CBC Sections 1903A and 1905A.

B. ASTM International (ASTM) Standards:

1. ASTM C31 – Standard Specification for Making and Curing Concrete Test Specimens in the Field.

2. ASTM C33 - Standard Specification for Concrete Aggregates.

3. ASTM C39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.

4. ASTM C42 - Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.

5. ASTM C88 – Standard Test Method for Soundness of Aggregates by use of Sodium Sulphate or Magnesium Sulphate.

6. ASTM C94 - Standard Specification for Ready-Mixed Concrete.

7. ASTM C143 - Standard Test Method for Slump of Hydraulic Cement Concrete.

8. ASTM C150 - Standard Specification for Portland Cement.

9. ASTM C156 – Standard Test Method for Water Loss (from a Mortar Specimen) Through Liquid Membrane-Forming Curing Compounds for Concrete.

10. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete.

11. ASTM C172 – Standard Practice for Sampling Freshly Mixed Concrete.

12. ASTM C173 – Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.

13. ASTM C260 – Standard Specification for Air-Entraining Admixtures for Concrete.

14. ASTM C289 - Standard Test Method for Potential Alkali-Silica Reactivity of Aggregates (Chemical Method).

15. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.

16. ASTM C330 - Standard Specification for Lightweight Aggregates for Structural Concrete.

17. ASTM C494 - Standard Specification for Chemical Admixtures for Concrete.

18. ASTM C567 - Standard Test Method for Determining Density of Structural Lightweight Concrete.

19. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.

20. ASTM C845 - Standard Specification for Expansive Hydraulic Cement.

21. ASTM C989 - Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars.

22. ASTM C1017 - Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete.

23. ASTM C1064 - Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete.

24. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures.

25. ASTM C1315 – Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.

26. ASTM D1308 – Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes.

27. ASTM C1567 – Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method).

28. ASTM D1751 - Standard Test Method for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).

29. ASTM D7234 – Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers.

30. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.

31. ASTM E1155 - Standard Test Method for Determining F_F Floor Flatness and F_L Floor Levelness Numbers.

32. ASTM E1643 – Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs.

33. ASTM E1745 – Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.

34. ASTM F710 – Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

35. ASTM F1869 – Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.

36. ASTM F2170 – Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using In Situ Probes.

37. ASTM F3010 – Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use under Resilient Floor Coverings.

1.03 SUBMITTALS

A. Shop Drawings: Submit Shop Drawings indicating locations of cast-in-place concrete Work and accessory items such as vapor barriers. Include details and locations of reinforcing, embedded items, and interfacing with other Work. Indicate dimensions and compressive strength.

B. Mix Design Data: Submit concrete mix designs as specified herein and in Part 2 Article "Concrete Mix".

1. Submit name, address and telephone number of the concrete production facility which the contractor intends to engage to design the concrete mixes. Submit name and qualifications of the proposed concrete technologist.

2. Mix Design: Submit a concrete mix design for each strength and type of concrete indicated in the drawings or specified. Include water/cement ratio, source, size and amount of coarse aggregate and admixtures. Predict minimum compressive strength, maximum slump and air content percentage. Clearly indicate locations where each mix design will be used.

a. Water/cement ration for concrete slabs on grade shall be 0.50 maximum.

3. Test Reports: Submit copies of test reports showing that the proposed mixes produce concrete with the strengths and properties specified. Include tests for cement, aggregates and admixtures. Provide gradation analysis.

C. Material Samples: Submit Samples illustrating concrete finishes and hardeners, minimum 12-inch by 12-inch.

D. Certificates: Submit certification that each of the following conforms to the standards indicated:

1. Portland cement: ASTM C150.

2. Normal weight concrete aggregates: ASTM C33.

3. Lightweight concrete aggregates: ASTM C330.

4. Aggregates: Submit evidence that the aggregate is not reactive in the presence of cement alkalis. In the absence of evidence, aggregate shall be tested by one of the methods in ASTM C33 Appendix XI, Methods for Evaluating Potential for Deleterious Expansion Due to Alkali Reactivity of an Aggregate. Aggregates deemed to be deleterious or potentially deleterious may be used with the addition of a material that has been shown to prevent harmful expansion in accordance

with Appendix XI of ASTM C33, when approved by the building official, in accordance to CBC Section 1903A5A.

5. Curing materials: ASTM C171.

E. Admixtures: Submit product data for proposed concrete admixtures.

1.04 QUALITY ASSURANCE

A. Continuous inspection shall be provided at the batch plant and for transit-mixed concrete to run check sieve analysis of aggregate, check moisture content of fine aggregate, check design of mix, check cement being used with test reports, check loading of mixer trucks, and certify to quantities of materials placed in each mixer truck.

B. Inspection shall be performed by a representative of a testing laboratory selected by the OWNER. OWNER will pay for inspection costs. Notify the laboratory 24 hours in advance of time concrete is to be mixed. Notify the laboratory of postponement or cancellation of mixing within at least 24 hours of scheduling time.

C. CONTRACTOR shall assist the testing laboratory in obtaining and handling samples at the project site and at the source of materials.

D. Continuous batch plant inspection requirement may be waived in accordance with CBC Section 1705A.3.3.1. Waiver shall be in writing, including DSA approval. When batch plant inspection is waived by DSA, the following requirements shall be met:

1. Approved inspector of the testing laboratory shall check the first batching at the start of work and furnish mix proportions to the licensed weightmaster.

2. Licensed weightmaster shall positively identify materials as to quantity and certify to each load by a ticket.

3. Tickets shall be transmitted to the Inspector by a truck driver with load identified thereon. The Inspector will not accept the load without a load ticket identifying the mix and will keep a daily record of placements, identifying each truck, its load and time of receipt and approximate location of deposit in the structure and will transmit a copy of the daily record to DSA.

4. At the end of the project, the weightmaster shall furnish an affidavit to DSA certifying that all concrete furnished conforms in every particular to proportions established by mix designs.

E. Special Inspections and Tests shall be in accordance with CBC Chapter 17A, Reinforcement and Anchor testing per CBC Section 1903A and Specification Section 01 4523.

1.05 DELIVERY, STORAGE AND HANDLING

A. Store cement and aggregate materials so as to prevent their deterioration or intrusion by foreign matter. Deteriorated or contaminated materials shall not be furnished.

B. Packaged materials shall bear the manufacturers and brand name label and shall be stored in their original unbroken package in a weather tight place until ready for use in the work.

1.06 PROJECT CONDITIONS

A. Cold Weather Requirements: Batching, mixing, delivering and placing of concrete in cold weather shall comply with the applicable requirements of ACI 306.1.

B. Hot Weather Requirements: Batching, mixing, delivering and placing of concrete in hot weather shall comply with the applicable requirements of ACI 305R.

C. Concrete temperature of freshly mixed concrete shall be determined per ASTM C1064.

PART 2 - PRODUCTS

2.01 CONCRETE MATERIALS

A. Cement: ASTM C150. Portland Cement.

B. Aggregates: Conform to the following standards:

1. Normal weight concrete: ASTM C33.

2. Lightweight concrete: ASTM C330, with fine aggregates per ASTM C33.

3. Aggregate shall be tested for Potential Alkali Reactivity of Cement-Aggregate Combinations per ASTM C289.

4. Nominal maximum size of coarse aggregate shall be no larger than:

a. 1/5 the narrowest dimension between sides of forms, nor

b. 1/3 the depth of slabs, nor

c. 3/4 the clear spacing between individual reinforcing bars or wires, bundles of bars, individual tendons, or ducts.

d. CONTRACTOR may request the ARCHITECT and DSA waiver of the above limitations reported per ACI 318, provided that the workability and methods of consolidation are such that the concrete can be placed without honeycombs or voids.

C. Water: Water for concrete mixes, curing and cleaning shall be potable and free from deleterious matter.

D. Admixtures: Shall be shown capable of maintaining essentially the same composition and performance throughout the work as the product used in establishing concrete proportions in accordance with ACI 318, Section 3.6.

1. Admixtures containing chlorides, sulfides or calcium chloride are not permitted.

2. Air-entraining admixtures shall comply with ASTM C260. Air-entrained admixtures shall not be used for floor slabs to receive steel trowel finish.

3. Admixtures for water reduction and shall conform to ASTM C494.

4. Admixtures for producing flowing concrete shall conform to ASTM C1017.

5. Fly ash, pozzolan and ground granulated blast-furnace slag: Modify ACI 318 Sections 3.6.6 and 3.6.7 as follows:

a. Fly ash or other pozzolan used as a partial substitution for ASTM C150 Portland cement shall meet the following requirements:

1) Shall conform to ASTM C618 for Class N or F materials (Class C is not permitted).

2) 15 percent by weight of fly ash or other pozzolans shall substitute for ASTM C150 Portland cement provided the mix design is proportioned per ACI 318, Section 318 5.3.

b. Ground-granulated blast-furnace slag used as a partial substitution for ASTM C150 Portland cement shall meet the following requirements:

1) Shall conform to ASTM C989.

2) 15 percent by weight of ground-granulated blast-furnace slag shall substitute for ASTM C150 Portland cement provided the mix design is proportioned per ACI 318, Section 5.3.

6. Admixtures containing ASTM C845 expansive cements shall be compatible with the cement and produce no deleterious effects.

7. Silica fumes used as an admixture shall conform to ASTM C1240.

E. Reinforcement Fibers: Chop strands of alkali-resistant polypropylene or nylon fibers added to the concrete mix for protection against shrinkage cracks.

F. Expansion Join Fillers: Preformed strips, non-extruding and resilient bituminous type, of thickness indicated, conforming to ASTM D1751.

G. Curing:

1. Curing Paper: Shall conform to ASTM C171 and consist of two sheets of kraft paper cemented together with a bituminous material in which are embedded cords or strands of fiber running in both directions. The paper shall be light in color, shall be free of visible defects, with uniform appearance.

2. Elevated slabs and slabs on grade may be cured at CONTRACTOR's option with curing and proactive water vapor emission and alkalinity control system. Products shall be approved by OWNER's Office of Environmental Health and Safety.

   a. VaporSeal 309, by Floor Seal Technology, Inc., or equal.

   1) ASTM C156: 0.39 kg/m².

   2) ASTM C309: Exceeds requirements.

   3) ASTM C1315: Exceeds requirements.

   4) ACI 308R-01 Compliant.

   b. Remedial Treatment: Water vapor emission and alkalinity control treatment, MES 100 by Floor Seal Technology, Inc. or equal.

   1) ASTM E96: <0.1 Perms.

   2) ASTM D1308: 14pH Resistant.

   3) ASTM D7234: 500+psi 100% concrete failure.

   4) ASTM F2170: 100%RH resistant.

   5) VOC Content: <100 g/L, meets SCAQMD Rule #1113.

   6) ASTM F3010: Meets Requirements.

   c. Self-leveling Compounds: Ardex Engineered Cements, K15, or V1200, Schonox ZM Rapid, US Self Leveler Armstrong, S-194, or equal.

H. Floor Hardener: Water soluble, inorganic, silicate-based curing, hardening, sealing and dustproofing compound. Aquaseal W20 by Monopole Inc., Kure-N-Harden by BASF, Chem Hard by L&M, Liqui-Hard by W.R. Meadows, or equal.

I. Underlayment: Two component latex underlayment for filling low spots in concrete for both interior and exterior applications, from featheredge to a maximum of 3/8 inch to thickness. Underlayment shall be non-shrink and suitable for repairing exposed concrete surfaces and for underlayment of carpet, resilient, tile and quarry floor

coverings. La-O-Tex by TexRite, Underlay C, RS by Mer-Krete Systems, Underlayment 962 by C-Cure, or equal.

J. Vapor Barrier: Refer to Section 07 2600, Vapor Barriers.

K. Stair Treads and Nosings: Two part stair tread and nosing with ribbed abrasive bars. Fabricated from 6063-T5 or 6063-T6 extruded aluminum, mill finish. Anti-slip abrasive filler consisting of aluminum oxide, silicon carbide, or a combination of both, in an epoxy-resign binder. Color shall extend uniformly throughout filler.

1. American Safety Tread: TP-311R.
2. Balco Inc.: DST-330
3. Nystrom: STTB-P3.375E.
4. Wooster Products Inc.: WP-RN3SG.
5. Equal.

L. Grout: ASTM C1107, non-shrink type, pre-mixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing additives, capable of developing a minimum compressive strength of 7,000 psi at 7 days; of consistency suitable for application and a 30-minute working time.

2.02 CONCRETE MIX

A. Mix shall be signed and sealed by a Civil or Structural Engineer currently registered in the State of California.

B. Strength of Concrete: Strengths and types of concretes shall be as indicated in the Drawings. Unless otherwise indicated or specified, concrete shall be provided with minimum 28-day strength of 3000 psi (f'c).

C. Concrete mix shall meet the durability requirements of ACI 318, Chapter 4.

D. Concrete proportioning shall be determined on the basis of field experience and/or trial mixtures shall in accordance with ACI 318, Section 5.3. Proportions of materials shall provide workability and consistency to permit concrete to be placed readily into forms and around reinforcement under conditions of placement to be employed, without segregation or excessive bleeding.

E. Ready-Mixed Concrete: Mix and deliver in accordance with requirements of ASTM C94.

PART 3 - EXECUTION

3.01 GENERAL

A. Surfaces to receive concrete shall be free of debris, standing water, and any other deleterious substances before start of concrete placing.

B. Time of Placing: Do not place concrete until reinforcement, conduits, outlet boxes, anchors, hangers, sleeves, bolts, and other embedded materials are securely fastened in place. Contact the Inspector at least 24 hours before placing concrete; do not place concrete until inspected by the Project Inspector.

C. Pouring Record: A record shall be kept on the Project site of time and date of placing concrete in each portion of structure. Such record shall be maintained on the Project site until Substantial Completion and shall be available for examination by the ARCHITECT and DSA.

3.02 TOLERANCES

A. Concrete construction tolerances shall be as specified in ACI 117 and as modified herein.

B.

B. Refer to ACI 302.1R, Tables 8.1 and 8.2 Slab on Ground and Suspended Flatness/Levelness Construction Guide, for recommended concrete placing and finishing methods. 3.03 PREPARATION

A. For installation of vapor barrier refer to Section 07 2600, Vapor Barriers.

B. Reglets and Rebates:

1. Form reglets and rebates in concrete to receive flashing, frames and other equipment as detailed and required. Coordinate dimensions and locations required with other related Work.

2. If concrete slabs on grade adjoin a wall or other perpendicular concrete surface, form a reglet in wall to receive and carry horizontal concrete Work. Reglet shall be full thickness of the slab and shall be 3/4 inch wide, unless otherwise indicated. Requirement does not apply to exterior walks, unless specifically indicated.

C. Screeds: Install screeds accurately and maintain at required grade or slab elevations after steel reinforcement has been installed, but before starting to place concrete. Install screeds adjacent to walls and in parallel rows not to exceed 8 feet on centers.

3.04 INSTALLATION

A. Conveying and Placing:

1. Concrete shall be placed only under direct observation of the Project Inspector. Do not place concrete outside of regular working hours unless the Inspector has been notified at least 48 hours in advance.

2. Concrete shall be conveyed from mixer to location of final placement by methods that will prevent separation or loss of materials.

3. Concrete shall be placed as nearly as practicable to its final position to avoid segregation due to re-handling or flowing. No concrete that has partially hydrated or has been contaminated by foreign materials shall be placed, nor shall re-tempered concrete or concrete which has been remixed after initial set be placed.

4 In placing concrete in columns, walls or thin sections, provide openings in forms, elephant trunks, tremies or other recognized devices, to prevent segregation and accumulation of partially hydrated concrete on forms or metal reinforcement above level of concrete being placed. Such devices shall be installed so that concrete will be dropped vertically. Unconfined vertical drop of concrete from end of such devices to final placement surface shall not exceed 6 feet.

5. Concrete shall be placed as a continuous operation until placing of panel or section is completed. Top surfaces of vertically formed lifts shall be level.

6. Concrete shall be thoroughly consolidated by suitable means during placement and shall be thoroughly worked around reinforcement and embedded fixtures and into corners of forms.

7. Where conditions make consolidation difficult or where reinforcement is congested, batches of mortar containing same proportions of cement, sand, and water as provided in the concrete, shall first be deposited in the forms to a depth of at least one inch.

B. Cold Weather:

1. Provide adequate equipment for heating concrete materials and protecting concrete during freezing or near-freezing weather. All ground with which concrete is to come in contact shall be free from frost. No frozen materials or materials containing ice shall be used.

2. The temperature of concrete at the time of placement shall not be below the minimum temperatures given in Table 3.1 of ACI 306.1.

3. Concrete shall be maintained at a temperature of at least 50° F. for not less than 72 hours after placing or until it has thoroughly hardened. Cover concrete and provide sufficient heat as required. When necessary, aggregates shall be heated before mixing. Special precautions shall be taken for protection of transit-mixed concrete.

C. Hot Weather:

1. Concrete to be placed during hot weather shall comply with the requirements of ACI 318, Section 5.13.

2. Maintain concrete temperatures indicated in Table 2.1.5 of ACI 305R to prevent the evaporation rate from exceeding 0.2 pound of water per square feet of exposed concrete per hour.

3. Cool concrete using methods indicated in ACI 305R Appendix B.

4. Place and cure concrete as specified in ACI 305R Chapter 4.

D. Compaction and Screeding:

1. Tamp freshly placed concrete with a heavy tamper until at least 3/8 inch of mortar is brought to surface. Concrete shall then be tamped with a light tamper and screeded with a heavy straightedge until depressions and irregularities are eliminated, and surface is true to finish grades or elevations. Remove excess water and debris.

2. Where slabs are to receive separate cement finish or mortar setting bed, continued tamping to raise mortar to surface is not performed. Laitance shall be removed by brushing with a stiff brush or by light sandblasting to expose clean top surface of coarse aggregate.

E. Floating and Troweling:

1. When concrete has hydrated sufficiently, it shall be floated to a compact and smooth surface. After floating, wait until concrete has reached proper consistency before troweling. Top surfaces shall receive at least 2 troweling operations with steel hand trowel. Prior to and during final troweling, apply a fine mist of water frequently with an atomizing type fog sprayer. Omit troweling for slabs to receive a separate cement finish.

2. For interior finish slabs, final troweling shall provide a hard, impervious, and non-slip surfaces, free from defects and blemishes. Finished surface shall be within tolerances indicated in Article 3.02. Avoid burnishing. Do not add cement or sand to absorb excess moisture.

a. Floor of Walk-In Refrigerator: Finish as specified above, to a smooth finish.

b. Floor of Gymnasium Locker Rooms: After floating, and while the surface is still plastic, provide a fine textured finish by drawing a fine fiber bristle broom uniformly over the surface in one direction only. Floors sloped for drainage should be brushed in the direction of flow.

3. Vertical concrete surfaces shall be finished smooth and free from marks or other surface defects.

3.05 CURING

A. Length of time, temperature and moisture conditions for curing concrete shall be in accordance with ACI 318, Section 5.11.

B. Forms containing concrete, top of concrete between forms, and exposed concrete surfaces after removal of forms shall be maintained in a thoroughly wet condition for at least 7 consecutive days after placing.

C. If weather is hot or surface has dried out, spray surface of concrete slabs and paving with fine mist of water, starting not later than 2 hours after final troweling and continuing until sunset. Surface of finish shall be kept continuously wet until curing medium has been installed.

D. Immediately after finishing, monolithic floor slabs shall be covered with curing paper. Paper shall be lapped 4 inches at joints and sealed with waterproof sealer. Edges shall be cemented to finish. Repair or replace paper damaged during construction operations.

E. When curing slabs with proactive water vapor emission and alkalinity control system:

1. Coordinate and schedule application of curing compound with concrete pour schedule, while conforming to manufacturer's application instructions.

2. When the surface of the concrete has hardened sufficiently to sustain foot traffic pre-cure slabs with liquefied product application following manufacturer's written instructions. Application shall be by trained applicators.

3. Monitor Environmental Conditions: Set up weather station 20 to 30 inches above freshly placed concrete. Record temperature, humidity and wind velocity measurements at 15-minute maximum intervals.

4. Calculate Evaporation Rate: Use recorded weather information in combination with nomograph per ACI 308R, Figure 4.1, Guide to Curing Concrete, to evaluate relevant evaporation rate.

5. When the bleed water rate of the concrete is approximately equal to the surface water evaporation rate, spray curing compound material throughout surface of slabs and decks, following manufacturer's written instructions. Application shall be by trained applicators.

6. Perform the following tests at least 28 days after placement of concrete and prior to floor covering installation. Submit to OAR test results indicating locations that do not comply with scheduled flooring installation requirements.

a. Calcium chloride testing per ASTM F1869.

b. Relative humidity testing per ASTM F2170.

c. Alkalinity testing per ASTM F710.

d. Perform concrete bond layer humidity meter testing to determine substrate surface acceptability.

7. Areas emitting moisture and alkalinity at rates exceeding floor covering manufacturer's published ASTM F1869 limits, shall receive a corrective coating, at no cost to the OWNER, as follows:

a. Mask and protect adjacent walls and floor surfaces from effects of scarification and application of remedial treatment.

b. Scarify slab surface in area of application by shot blasting or other method acceptable to corrective coating manufacturer.

c. Prepare and fill cracks, control joints and cold joints.

d. Apply two-component modified epoxy penetrant and coating with roller and squeegee over required treatment area; saturate surfaces to ensure a through mechanical bond.

e. Clean and fill divots, chips, voids and other surface irregularities with one hundred percent Portland cement-based patching compound or cementitious fill.

f. Apply cementitious surfacing over coating in areas to receive resilient and wood floor coverings to facilitate adhesion; apply to a thickness of 1/8 inch.

3.06 FILLING, LEVELING AND PATCHING

A. Concrete slabs exhibiting high or low spots and indicated to receive resilient floor covering or soft floor covering, shall have surfaces repaired. High spots shall be honed, or ground with power-driven machines to required tolerances. Low spots shall be filled with latex underlayment, installed in strict accordance with manufacturer's written recommendations.

B. Holes resulting from form ties or sleeve nuts shall be solidly packed, through exterior walls, by pressure grouting with cement grout, as specified. Grouted holes on exposed surfaces shall be screeded flush and finished to match adjoining surfaces.

C. Cement Base: Cement base shall be of the height, thickness, and shape detailed. Base shall be reinforced with one inch mesh, 18 gage, zinc-coated wire fabric. Base finish mixture shall be one part Portland cement, 2 parts of fine aggregate and one part pea gravel. Colored cement base shall include a chemically inert mineral oxide pigment in the mix.

3.07 FINISHING

A. Soda and Acid Wash: Concrete surfaces to receive plaster, paint or other finish, and which have been formed by oil coated forms, shall be scrubbed with a solution of 1-1/2 pounds of caustic soda to one gallon of water. Surfaces where smooth wood or waste molds have been furnished shall be scrubbed with a solution of 20 percent muriatic acid. Wash with clean water after scrubbing.

B. Sacking: Exposed concrete curbs, walls, and other surfaces shall be sacked by an application of Portland cement grout, floated, and rubbed. Sacking shall not be performed until patching and filling of holes has been completed. Entire sacking operation for any continuous area shall be started and completed within the same day.

1. Mix one part Portland cement and 1-1/2 parts fine sand with sufficient water to produce a grout having consistency of thick paint. Wet surface of concrete sufficiently to prevent absorption of water from grout. Apply grout uniformly with a brush or spray gun, then immediately float surface with a cork or other suitable float, scouring wall vigorously.

2. While grout is still plastic, finish surface with a sponge-rubber float, removing excess grout. Allow surface to dry thoroughly, then rub vigorously with dry burlap to completely remove dried grout. No visible film or grout shall remain after rubbing with burlap.

C. Sandblasting: Exterior concrete surfaces to receive stucco dash coat finish, where plywood or other smooth forms have been furnished, shall be uniformly sand blasted with sharp quartz sand under sufficient air pressure to remove dirt, form oil and other foreign materials, and roughen surface to provide a proper bond. Such surfaces shall be thoroughly washed with clean water after sandblasting.

D. Abrasive: Concrete stair treads, landings, ramps and steps on interior and exterior of buildings, and interior exposed concrete floors in shop buildings shall receive an abrasive finish.

E. Floor Hardener: Exposed interior concrete floors throughout shall be treated with floor hardener.

1. Protect adjacent surfaces. Clean surfaces to receive treatment in accordance with manufacturer's instructions, ensuring that all stains, oil, grease, form release agents, laitance, dust and dirt are removed prior to application.

2. Apply hardener in accordance with manufacturer’s instructions as soon as concrete is firm enough to work on after final troweling.

F. Cement Grout and Dry-Pack Concrete: Cement grout shall be mixed at the Project site and shall be composed of one volume of Portland cement and 2-1/2 volumes of fine aggregate. Materials shall be mixed dry with sufficient water added to make mixture flow under its own weight. When grout is used as a dry pack concrete, add sufficient water to provide a stiff mixture, which can be molded into a sphere.

G. Broom Finish: Exterior stair treads and landings shall be provided with a non-slip broom finish in addition to abrasive finish specified.

H. Abrasive Stair Nosing: Nosing shall be installed according to manufacturers written recommendations.

3.08 NOT USED.

3.09 TESTING

A. Molded Cylinder Tests:

1. Inspector or testing lab personnel will prepare cylinders and perform slump tests. Samples for concrete strength shall be taken in accordance with ASTM C172. Each cylinder shall be dated, given a number, point in structure from which sample was obtained, mix design number, mix design strength and result of accompanying slump test noted.

2. Separate tests of molded concrete cylinders obtained at same place and time shall be made at age of three days, seven days, and 28 days. A strength test shall be the average of the compressive strength of two cylinders, obtained from the same sample of concrete and tested at 28 days or at test age designated for determination of f'c.

3. Test cylinders shall be prepared at the Project site and stored in testing laboratory in accordance with ASTM C31, and tested in accordance with ASTM C39.

B. Core Test: At request of the ARCHITECT, cores of hardened concrete shall be cut from portions of hydrated structures for testing, in accordance with CBC and ASTM C42.

1. Provide 4-inch diameter cores at representative places throughout the structure as designated by the ARCHITECT.

2. In general, provide sufficient cores to represent concrete placed with at least one core for each 4,000 square feet of building area, and at least 3 cores total for each Project.

3. Where cores have been removed, fill voids with drypack, and patch the finish to match the adjacent existing surfaces.

C. Concrete Consistency: Measure consistency according to ASTM C143. Test twice each day or partial day's run of the mixer.

D. Adjustment of Mix: If the strength of any grade of concrete for any portion of Work, as indicated by molded test cylinders, falls below minimum 28 days compressive strength specified or indicated, adjust mix design for remaining portion of construction so that resulting concrete meets minimum strength requirements.

E. Air Content Testing: Measure in accordance with ASTM C173 or ASTM C231, for each composite sample taken in accordance to ASTM C172.

F. Defective Concrete:

1. Should strength of any grade of concrete, for any portion of Work indicated by tests of molded cylinders and core tests, fall below minimum 28 days strength specified or indicated, concrete will be deemed defective Work and shall be replaced or adequately strengthened in a manner acceptable to the ARCHITECT and DSA.

2. Concrete Work that is not formed as indicated, is not true within 1/250 of span, not true to intended alignment, not plumb or level where so intended, not true to intended grades and levels, contains sawdust shavings, wood or embedded debris, or does not fully conform to Contract provisions, shall be deemed to be defective Work and shall be removed and replaced.

G. Concrete for Equipment Pads, Mechanical and Electrical Work: Unless otherwise indicated, strength shall have a minimum $f'c$ = 3,000 psi. Exposed concrete shall be provided with a hand trowel finish with radius corners and edges. Form and place concrete where necessary as described in Section 03 1000 Concrete Forming and Accessories and reinforced as described in Section 03 2000 Concrete Reinforcing. Calcium chloride shall not be furnished in any concrete mix provided for the installation of underground electrical conduits. For concrete encasement of more than one conduit, furnish 3/4-inch maximum aggregate.

3.10 CLEAN UP

A. Remove rubbish, debris and waste materials and legally dispose of off the Project site.

3.11 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 05 0513

HOT-DIP GALVANIZING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Hot-dip galvanizing of structural steel articles.
2. Hot-dip galvanizing of steel stairs and railings.
3. Hot-dip galvanizing of fabricated steel assemblies.
4. Preparation of galvanized steel fabrications for painting.

B. Related Sections:

1. Division 01 - General Requirements.
2. Section 05 1200: Structural Steel Framing.
3. Section 09 9000: Painting and Coating.

1.02 REFERENCES

A. American Galvanizers Association (AGA):

1. Inspection of Products Hot-dip Galvanized after Fabrication.
2. The Design of Products to be Hot-dip Galvanized after Fabrication.
3. Recommended Details of Galvanized Structures.
4. Suggested Specifications for Paint Preparation Galvanized Structures.
5. Preparing Hot Dip Galvanizing for Paint.
6. Preparing Hot-Dip Galvanized Steel for Powder Coating.
7. Wet Storage Stain.

B. ASTM International (ASTM):

1. ASTM A123 – Standard Specification for Zinc (Hot-Dipped Galvanized) Coatings on Iron and Steel Products.

2. ASTM A143 – Standard Practice for Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement.

3. ASTM A153 – Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

4. ASTM A384 – Standard Practice for Safeguarding Against Warpage and Distortion during Hot-Dip Galvanizing of Steel Assemblies.

5. ASTM A385 – Standard Practice for Providing High-Quality Zinc Coatings (Hot-Dip).

6. ASTM A780 – Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.

7. ASTM B6 – Standard Specification for Zinc.

8. ASTM B201 – Standard Practice for Testing Chromate Coatings on Zinc and Cadmium Surfaces.

9. ASTM D6386 – Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting.

10. ASTM D7803 - Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Powder Coating.

11. ASTM E376 - Measuring Coating Thickness by Magnetic-Field or Eddy-Current (Electromagnetic) Test Methods.

C. The Society for Protective Coatings (SSPC):

1. SSPC-SP1 – Solvent Cleaning.

2. SSPC-SP2 – Hand Tool Cleaning.

3. SSPC-SP3 – Power Tool Cleaning, for surfaces to receive paint or powder coating.

4. SSPC-SP5 – White Metal Blast Cleaning.

5. SSPC-SP10 – Near White Blast Cleaning.

6. SSPC-SP16 - Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals.

1.03 COORDINATION WITH STEEL FABRICATOR

A. Prior to fabrication, steel fabricators shall submit approved fabrication shop drawings to the galvanizer. The Galvanizer shall review fabricator shop drawings for suitability of materials for galvanizing and coatings and coordinate required fabrication modifications.

B. Steel Fabricator shall notify the galvanizer of steel fabrications that exceed the ASTM A385 recommended percentages for carbon, phosphorus, manganese and silicon, so special galvanizing processing techniques are used. Galvanizer may request material test reports (MTRs) or metallurgical assays from fabricator.

C. Coordinate with steel fabricator appropriate marking and masking materials.

D. Coordinate modifications needed to the fabrications to accommodate lifting and handling during galvanizing.

1.04 QUALITY ASSURANCE

A. Coating Applicator: Company specializing in hot-dip galvanizing after fabrication following the procedures in the Quality Assurance Manual of the American Galvanizers Association.

B. Galvanizer shall have an in-plant inspection program designed to maintain the coating thickness, finish, and appearance within the requirements of this Section.

1.05 SUBMITTALS

A. Galvanizing Certificate of Compliance: Submit to OAR notarized Certificate of Compliance with ASTM standards and specifications herein listed, noting exception for intentional bare areas. The Certificate shall be signed by the galvanizer and contain a detailed description of the material processed.

B. When galvanizer prepares the surfaces of fabrications that will receive paint or powder coating over galvanizing provide statement indicating conformance with ASTM D6386 or D7803, as applicable.

1.06 DELIVERY, STORAGE AND HANDLING

A. Package and handle galvanized material in a manner which will avoid damage to the zinc coating.

B. Store in dry, well-ventilated conditions until shipping.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Steel for Galvanizing: As specified in Sections:

1. Section 05 1200: Structural Steel Framing.

2. Section 05 5000: Metal Fabrications.

B. Zinc for Galvanizing: Conform to ASTM B6, as specified in ASTM A123.

PART 3 – EXECUTION

3.01 PREPARATION

A. Remove welding slag, splatter, anti-splatter compounds and burrs remaining in steel articles. If anti-spatter sprays are utilized, they shall be water-soluble or solvent-based.

B. Provide drainage and venting holes in tubular assemblies. In thicker material drill holes in place of punching. Holes shall have a relatively uniform circumference. Punched holes or burned holes with a plasma torch shall be treated with a drill to even the diameter to appropriate size.

C. Masking installed by steel fabricator shall remain in place through galvanizing process completion.

D. Provide lifting holes or lugs to allow for handling during galvanizing. Avoid the use of chains or wires directly connected to steel articles to be duplexed or architecturally exposed.

E. Safeguard against warpage or distortion of steel members in accordance with ASTM A384.

F. Pre-clean steel work in accordance with accepted methods to produce an acceptable surface for quality hot-dip galvanizing. Remove surface contaminants and coatings that are not removable by the normal chemical cleaning process in the galvanizing operation by grit-blasting, sand-blasting, or other mechanical means.

G. Markings and stickers from fabrication or shipping that will interfere with galvanizing adhesion shall be removed prior to beginning the galvanizing process.

3.02 COATING APPLICATION

A. Galvanize steel articles, fabrications and assemblies by the hot-dip process in accordance with ASTM A123. The zinc used in the galvanizing bath shall conform to ASTM Specification B6. The molten metal in the working volume of the galvanizing bath shall contain at least 98.0 % zinc by weight.

B. Galvanize bolts, nuts, washers and iron and steel hardware components in accordance with ASTM A153.

C. Safeguard products against steel embrittlement in conformance with ASTM A143.

D. Surface preparation requirements shall be performed in accordance to ASTM D7803 or D6386 but also in accordance with the paint manufacturer's requirements and recommendations.

3.03 COATING REQUIREMENTS

A. Conform to paragraph 6.1 of ASTM A123, or Table 1 of ASTM A153, as applicable.

B. Surface Finish: Conform to paragraph 6.2 of ASTM A123, or Paragraph 5 of ASTM A153, as applicable.

C. Adhesion: Withstand normal handling consistent with the nature and thickness of the coating and normal use of the article.

2.04 TESTS

A. Inspection and testing of hot-dip galvanized coatings shall be done under the guidelines provided in the AGA publication Inspection of Products Hot-dip Galvanized after Fabrication.

B. Test in accordance with ASTM A123, or A153, as applicable, to determine the thickness of the zinc coating on the metal surface.

C. During the visual inspection, if adhesion concerns are suspected, such as peeling or flaking of the galvanized coating, then adhesion testing using the stout knife method shall be conducted. Embrittlement testing is required when there is evidence of embrittlement and shall be conducted per the requirements of ASTM A143.

D. Upon completion of tests furnish notarized Certificate of Compliance with ASTM standards and specifications as indicated in Article 1.05 Submittals.

3.05 REPAIR OF DAMAGED COATINGS

A. Smooth out icicles by hand filing or power sanding the area without removing any more zinc coating than necessary. Smooth out rough and bumpy surface of fabrications to be painted, powder coated or are indicated as architecturally exposed.

B. Remove lifting lugs and repair coating as indicated below.

C. Repair areas damaged at the galvanizing facility using zinc rich paints, zinc-based solders or metalizing methods in accordance with ASTM A780, and meeting the minimum repair thickness in accordance with ASTM A123 and ASTM A153.

3.06 PREPARATION FOR TOP COATING

A. Galvanized fabrications indicated on the drawings to be painted shall be prepared in accordance with ASTM D6386 and the American Galvanizers Association (AGA) Suggested Specifications for Paint Preparation Galvanized Structures. For field painting refer to Section 09 9000, Painting and Coating.

B. Galvanized fabrications indicated on the drawings to be powder coated shall be prepared in accordance with ASTM D7803.

C. Galvanizer shall ensure water quenching and chromate passivation are not performed. for fabrications scheduled for duplex coatings.

END OF SECTION

SECTION 05 1200

STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Structural steel.

2. Architecturally exposed structural steel.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Section 03 3000 - Cast-In-Place Concrete.

3. Section 05 0513 – Hot-Dip Galvanizing.

4. Section 09 9000 - Paints and Coatings.

1.02 REFERENCES

A. American Institute of Steel Construction (AISC):

1. AISC – Steel Construction Manual:

a. ANSI / AISC 360 - Specifications for Structural Steel Buildings.

b. ANSI / AISC 303 - Code of Standard Practice for Steel Buildings and Bridges.

c. RCSC Specification for Structural Joints Using High Strength Bolts.

2. ANSI / AISC 341 - Seismic Provisions for Structural Steel Buildings.

3. ANSI / AISC 358 - Prequalified Connections for Special and Intermediate Steel Moment Frames for Seismic Applications.

B. ASTM International (ASTM):

1. ASTM A36 – Standard Specification for Carbon Structural Steel.

2. ASTM A53 – Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.

3. ASTM A108 – Standard Specification for Steel Bar, Carbon and Alloy, Cold-Finished.

4. ASTM A123 – Standard Specification for Zinc (Hot-Dipped Galvanized) Coatings on Iron and Steel Products.

5. ASTM A153 – Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

6. ASTM A276 - Standard Specification for Stainless Steel Bars and Shapes.

7. ASTM A307 – Standard Specification for Carbon Steel Bolts and Studs, and Threaded Rod 60000 PSI Tensile Strength.

8. ASTM A435 - Standard Specification for Straight-Beam Ultrasonic Examination of Steel Plates.

9. ASTM A500 – Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes.

10. ASTM A501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.

11. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts.

12. ASTM A572 – Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel.

13. ASTM A653 – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

14. ASTM A673 - Standard Specification for Sampling Procedure for Impact Testing of Structural Steel.

15. ASTM A780 - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.

16. ASTM A992 – Standard Specification for Structural Steel Shapes.

17. ASTM A1085 - Standard Specification for Cold-Formed Welded Carbon Steel Hollow Structural Sections (HSS).

18. ASTM B695 - Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel.

19. ASTM C1107 – Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).

20. ASTM E23 - Standard Test Methods for Notched Bar Impact Testing of Metallic Materials.

21. ASTM F436 – Standard Specification for Hardened Steel Washers Inch and Metric Dimensions.

22. ASTM F844 - Standard Specification for Washers, Steel, Plain (Flat), Unhardened for General Use.

23. ASTM F959 - Standard Specification for Compressible-Washer-Type Direct Tension Indicators for Use with Structural Fasteners, Inch and Metric Series.

24. ASTM F1554 – Standard Specification for Anchor Bolts, Steel, 36, 55 and 105-Ksi Yield Strength.

25. ASTM F1852 – Standard Specification for Twist Off Type Tension Control Structural Bolt/Nut/Washer Assemblies, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.

26. ASTM F2329 - Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, and Special Threaded Fasteners.

27. ASTM F3125 - Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 120 ksi (830 MPa) and 150 ksi (1040 MPa) Minimum Tensile Strength, Inch and Metric Dimensions.

C. American Welding Society (AWS):

1. AWS D1.1 – Structural Welding Code – Steel, as amended by ANSI / AISC 360, J2, Welds.

2. AWS D1.8 – Structural Welding Code – Seismic Supplement.

3. AWS A2.4 – Standard Symbols for Welding, Brazing, and Nondestructive Examination.

4. AWS B2.1 – Base Metal Grouping for Welding Procedure and Performance Qualification.

D. SSPC – Steel Structures Painting Council:

1. SSPC-SP2 - Hand Tool Cleaning.

2. SSPC-PA-1 - Shop, Field and Maintenance Coating of Metals.

1.03 REGULATORY REQUIREMENTS

A. Structural steel shall conform to CBC Chapter 22A requirements, except that steel manufactured by acid Bessemer process is not permitted for structural purposes.

B. Sheet and strip steel other than those listed in CBC, if provided for structural purpose, shall comply with DSA requirements.

1.04 SUBMITTALS

A. Shop Drawings: Submit Shop Drawings, including complete details and schedules for fabrication and shop assembly of members, and details, schedules, procedures and diagrams showing the sequence of erection. Fully detail minor connections and fastenings not shown or specified in the Contract Documents to meet required conditions using similar detailing as shown in the Contract Documents. Include a fully detailed, well controlled sequence and technique plan for shop and field welding that minimizes locked in stresses and distortion; submit sequence and technique plan for review by the ARCHITECT.

1. Include details of cuts, connections, camber, and holes in accordance with AWS D1.1 or ANSI / AISC 360, Chapter J, weld position plan and other pertinent data. Indicate welds by standard AWS symbols, and show size, length and type of each weld.

2. Provide setting drawings, templates, and directions for installation of anchor bolts and other anchorages to be installed for Work specified in other sections.

3. Erection and Bracing Plan and Erection Procedure: Submit an erection and framing plan, including columns, beams, and girders, signed and sealed by a Structural or Civil Engineer registered in the State of California in accordance with Title 8 California Code of Regulations, Section 1710, Structural Steel Erection. Maintain a copy at the Project site as required by the California Division of Industrial Safety.

4. Submit a list of steel items to be galvanized.

5. Include identification and details of Architecturally Exposed Structural Steel (AESS) members where indicated on the Drawings.

B. Delegated Design Submittal: For structural steel connections indicated on the Drawings shall comply with the design loads; include analysis data signed and sealed by a California registered structural engineer responsible for their preparation. Delegated design shall conform with the requirements of DSA IR A-18

C. Product Data: Submit copies of fabricator’s specifications and installation instructions for the following products. Include laboratory test reports and other data required demonstrating compliance with these Specifications:

1. Structural steel, each type; including certified copies of mill reports covering chemical and physical properties.

2. Welding electrodes.

3. Welding gas.

4. Unfinished bolts and nuts.

5. Structural steel primer paint.

6. High-strength bolts, including nuts and washers.

D. Manufacturer's Mill Certificate: Submit, certifying that products meet or exceed specified requirements.

E.

E. Submit certified copies of tests by manufacturer for fine grain practice. Structural steel base material, as described above, shall be manufactured to be fully killed and fine-grained having grain size number 5 or better as determined by ASTM E112.

F. Welding Procedure Specifications (WPS): Submit weld procedures for all welding on project to OWNER's testing laboratory for approval. After approval by testing laboratory, submit to ARCHITECT for Record. Weld procedures shall be qualified as described in AWS D1.1, ANSI / AISC 341 and ANSI / AISC 358, as applicable. Weld procedures shall indicate joints details and tolerances, preheat and interpass temperature, post-heat treatment, single or multiple stringer passes, peening of stringer passes for groove welds except for the first and the last pass, electrode type and size, welding current, polarity and amperes and root treatment. The welding variables for each stringer pass shall be recorded and averaged; from these averages the weld heat input shall be calculated. Submit the manufacturer's product data sheet for all welding material used.

G. Welder's Certificates: Field welders shall be Project certified in accordance with AWS D1.1. Shop welders shall be Project certified for FCAW in accordance with AWS D1.1.

H. Test Reports: Submit reports of tests conducted on shop and field welded and bolted connections. Include data on type of test conducted and test results.

I. Welding Material Certification: Provide certificate that welding material complies with specifications. Submit to OWNER's testing laboratory.

J. Certified Survey: Submit a certified survey by a California Licensed Surveyor After showing the location of anchor rods and elevations of bearing plates for ensuring the precise placement of structural steel columns.

1.05 QUALITY ASSURANCE

A. Fabricator Qualifications:

1. The fabricator shall be certified by the AISC Quality Management Systems (QMS) certification program, and shall be engaged in the fabrication of similar installations for minimum five years.

2. The fabricator shall maintain a quality control program to ensure that the work is performed in accordance with the requirements of ANSI / AISC 303 and ANSI / AISC 360, and the Contract Documents.

B. Erector Qualifications:

1. The erector shall be certified by the AISC Quality Management Systems (QMS) certification program, and shall be engaged in the erection of similar installations for minimum five years.

2. The erector shall maintain a quality control program to ensure that the work is performed in accordance with the requirements of ANSI / AISC 303 and ANSI / AISC 360, and the Contract Documents.

C. Pre-installation Meetings:

1. Conform to requirements of Section 01 3119 Project Meetings.

2. Review the quality control and construction requirements and to determine the procedures for producing proper structural steel construction, review requirements for submittals, status of coordinating work and availability of materials.

D. Comply with the following as a minimum requirement, except as otherwise indicated:

1. ANSI / AISC 303 American Code of Standard Practice for Steel Buildings and Bridges.

2. Perform welding in accordance with AWS Standards, AWS D1.1, and California Building Code Section 2204A.1 and approved Weld Procedure Specifications (WPS).

E. Shop fabrication shall be inspected in accordance with CBC.

1.06 DELIVERY, STORAGE AND HANDLING

A. Store structural steel above grade on platforms, skids or other supports.

B. Protect steel from corrosion.

C. Store welding electrodes in accordance with AWS requirements.

D. Store other materials in a weather-tight and dry place until installed into the Work.

PART 2 - PRODUCTS

2.01 GENERAL

A. Stock Materials: Provide exact materials, sections, shapes, thickness, sizes, weights, and details of construction indicated on Drawings. Changes because of material stock or shop practices will be considered if net area of shape or section is not reduced thereby, if material and structural properties are at least equivalent, and if overall dimensions are not exceeded.

B. Shapes, bars, plates, tubes and pipes shall be made of materials with at least 16 percent recycled content if produced from Basic Oxygen Furnace (BOF) or at least 67 percent recycled content if produced from Electric Arc Furnace (EAF).

2.02 MATERIALS

A. Structural Steel: Wide flange shapes shall conform to ASTM A992.

B. Bolts, Nuts and Washers: Submit the certified manufacturer's mill reports which clearly show the applicable ASTM mechanical and chemical requirements together with the actual test results for the supplied fasteners.

1. Common Grade Bolts:

a. Bolts: ASTM A307. The bolt heads and the nuts of the supplied fasteners must be marked with the strength grade and type specified by ASTM specifications.

b. Nuts: ASTM A563, Grade A, heavy hex style.

c. Self-Locking Nuts: Provide nuts with a locking pin set in the nut.

d. Washers: ASTM F844.

C. Galvanizing:

1. ASTM A123 for structural steel members and ASTM A153 for structural steel hardware.

2. ASTM F2329 or B695 for threaded parts.

D. Primers: Lead-free metal primer:

1. SSPC-Paint 20, Zinc-Rich Coating Inorganic and Organic.

2. SSPC-Paint 23, Latex Primer for Steel Surfaces.

E. Grout: ASTM C1107, non-shrink type, pre-mixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing additives, capable of developing a minimum compressive strength of 7,000 psi at seven days; of consistency suitable for application.

2.03 FABRICATION

A. Fabricate in accordance with the applicable provisions of AISC – Steel Construction Manual.

B. Cleaning and Straightening Materials: Materials being fabricated shall be thoroughly cleaned of scale and rust and straightened before fabrication. Cleaning and straightening methods shall not damage material. After punching or fabrication of component parts of a member, twists or bends shall be removed before parts are assembled.

C. Cutting, Punching, Drilling and Tapping: Unless otherwise indicated or specified, structural steel fabricator shall perform the cutting, punching, drilling and tapping of Work so that Work of other trades will properly connect to steel Work.

D. Milling: Compression joints depending on contact bearing shall be furnished with bearing surfaces prepared to a common plane by milling.

E. Use of Burning Torch: Oxygen cutting of members shall be performed by machine. Gouges greater than 3/16 inch that remain from cutting shall be removed by grinding. Reentrant corners shall be shaped notch free to a radius of at least 1/2 inch. Gas cutting of holes for bolts or rivets is not permitted.

F. Galvanizing: After fabrication, items indicated or specified to be galvanized shall be galvanized per Section 05 5013, Hot-Dip Galvanizing.

G. Welding:

1. Type of steel furnished in welded structures shall provide chemical properties suitable for welding as determined by chemical analysis. Welds shall conform to the verification and inspection requirements of CBC Chapter 17A. Conform to AWS D1.1, and CBC Chapter 22A.

2. Materials and workmanship shall conform to the requirements specified herein and to CBC requirements, modified as follows:

a. No welded splices shall be permitted except those indicated on Drawings unless specifically reviewed by the ARCHITECT.

b. Drawings will designate joints in which it is important that welding sequence and technique be controlled to minimize shrinkage stresses and distortion.

3. Welding shall be performed in accordance with requirements of the AWS Structural Welding Code.

4. Architecturally Exposed Structural Steel: Verify that weld sizes, fabrication sequence, and equipment used for Architecturally Exposed Structural Steel will limit distortions to allowable tolerances. Prevent surface bleeding of back-side welding on exposed steel surfaces. Grind smooth exposed fillet welds ½ inch and larger. Grind flush butt welds. Dress exposed welds.

5. Remove erection bolts on welded, Architecturally Exposed Structural Steel; fill holes with plug welds; and grind smooth at exposed surfaces.

H. Shop Finish:

1. Notify the Project Inspector when Work is ready to receive shop prime coat. Work shall be inspected by the Project Inspector before installation of primer.

2. Structural steel and fittings shall receive a coat of primer, except:

a. Surfaces that will be galvanized.

b. Surfaces that will be fireproofed.

c. Surfaces that will be field welded.

d. Surfaces in contact with concrete.

e. Surfaces high strength bolted.

3. The primer specified shall be spray applied, filling joints and corners and covering surfaces with a smooth unbroken film. The minimum dry film thickness of the primer shall be 2.0 mils.

I. Comply with fabrication tolerance limits of AISC's "Code of Standard Practice for Steel Buildings and Bridges" for structural steel.

J. Fabricate Architecturally Exposed Structural Steel with exposed surfaces smooth, square, and free of surfaces blemishes, including pitting, rust and scale seam marks, roller marks, rolled trade names, and roughness.

1. Remove blemishes by filling, grinding, or by welding and grinding, prior to cleaning, treating and shop priming.

2. Comply with fabrication requirements, including tolerance limits of AISC's "Code of Standard Practice for Steel Buildings and Bridges" for Architecturally Exposed Structural Steel.

K. Shop Welded Shear Connectors: Weld shear connectors to supports units per AWS D1.1 and as required by Drawings; weld only on clean, dry surfaces.

L. Architecturally Exposed Structural Steel: use special care in unloading, handling and erecting the steel to avoid marking or distorting the steel members. Minimize damage to any shop paint when temporary braces or erection clips are used. Avoid unsightly surfaces upon removal. Grind smooth tack welds and holes filled with weld metal or body solder. Plan and execute all operations in such a manner that the close fit and neat appearance of the structure will not be impaired.

2.04 SHOP AND FIELD QUALITY CONTROL

A. A special inspector, approved by DSA to inspect the Work of this section, shall inspect high strength bolted connections. OWNER will provide a DSA approved independent testing laboratory to perform tests and prepare test reports in accordance with CBC 1704A. The Project Inspector shall be responsible for monitoring the work of the special inspector and testing laboratories to ensure that the testing program is satisfactorily completed.

B. An AWS certified welding inspector (CWI), approved by DSA to inspect the Work of this section, shall inspect welded connections in accordance with CBC 1705A.2.5. The OWNER will provide a DSA approved independent testing laboratory to perform tests and prepare test reports. The Project Inspector shall be responsible for monitoring the work of the special inspector and testing laboratories to ensure that the testing program is satisfactorily completed.

C. The independent testing laboratory shall conduct and interpret test and state in each report whether test specimens comply with requirements, and specifically state any deviations there from.

D. Provide access to all places where structural steel Work is being fabricated or produced so required inspection and testing can be performed.

E. The independent testing laboratory may inspect or test structural steel at plant before shipment; however, ARCHITECT reserves the right at any time before Contract Completion to deem materials not in compliance with the specified requirements as defective Work.

F. Correct defects in structural Work when inspections and laboratory test reports indicate noncompliance with specified requirements. Perform additional tests as may be required to reconfirm noncompliance of original Work, and as may be required to show demonstrate compliance of corrected Work.

G. Inspection of Structural Tube Steel/Hollow Structural Sections (HSS): Structural tube steel members (round, square, rectangular), disregarding steel origin, will be inspected during shop fabrication per DSA Bulletin 07-03. Inspector will perform a visual examination of the seam weld area for visible discontinuities. When defects are suspected, non-destructive testing will be considered.

H. Welding: Inspect and test during fabrication and erection of structural steel assemblies as follows:

1. Certify welders and conduct inspections and tests as required. Record types and locations of defects found in the Work. Record Work required and performed to correct deficiencies.

2. Inspect welds. Welds shall be visually inspected before performing any non-destructive testing. Groove weld shall be inspected by ultrasonic or other approved non-destructive test methods.

   a. Testing of gravity members shall be performed to AWS D1.1 Statically Loaded Nontubular Connections.

3. Ultrasonic testing shall be performed by a specially trained and qualified technician who shall operate the equipment, examine welds, and maintain a record of welds examined, defects found, and disposition of each defect. Repair and test defective welds.

4. Rate of Testing: Completed welds contained in joints and splices shall be tested 100 percent either by ultrasonic testing or by radiography.

5. Welds, when installed in column splices, shall be tested by either ultrasonic testing or radiography.

6. Base metal thicker than 1 ½-inch, when subjected to through-thickness weld shrinkage strains, shall be ultrasonically inspected by shear wave methods for discontinuities directly behind such welds. Tests shall be performed at least 48 hours after completed joint has cooled down to ambient air temperature.

7. Material discontinuities shall be reviewed based on the defect rating in accordance with the criteria of AWS D1.1 by the ARCHITECT and DSA.

8. Other method of non-destructive testing and inspection, for example, liquid dye penetrate testing, magnetic particle inspection or radiographic inspection may be performed on weld if required.

9. Lamellar Tearing: Lamellar tearing resulting from welding is a crack (with zero tolerance) and shall be repaired in accordance with AWS D1.1.

10. Lamination: The rejection criteria shall be based on ASTM A435.

11. Where testing reveals lamination or conditions of lamellar tearing in base metal, the steel fabricator shall submit a proposed method of repair for review by the ARCHITECT. Test repaired areas as required.

12. Magnetic Particle Testing: Magnetic particle testing when required shall be provided in accordance with AWS D1.1 for procedure and technique. The standards of acceptance shall be in accordance with AWS D1.1 Qualification.

I. Lamellar Tearing: Prior to welding plates 1 to 1-1/2 inch thick and greater and rolled shapes within the distance from 6 inches above the top of the joint to 6 inches below the bottom of the joint shall be checked by ultrasonic testing for laminations in base metal which may interfere with the inspection of the completed joint. Should these defects occur, members will be reviewed by the ARCHITECT and DSA. Welding procedure specifications in paragraph 1.04.G specify welding practices to minimize lamellar tearing.

J. Prior Testing of Base Material: Test material before fabrication.

K. Lines and levels of erected steel shall be certified by a State of California licensed surveyor as set forth in related Division 01 Sections.

L. Record Drawings: After steel has been erected, correct or revise Shop Drawings and erection diagrams to correspond with reviewed changes performed in the field.

PART 3 - EXECUTION

3.01 PREPARATION

A. Verify governing dimensions and conditions of the Work before commencing erection Work.

1. Report discrepancies between drawings and field dimensions to ARCHITECT before commencing work.

2. Beginning of installation means erector accepts existing conditions and surfaces underlying or adjacent to work of this section.

B. Provide temporary shoring and bracing, and other support during performance of the Work. Remove after steel is in place and connected, and after cast-in-place concrete has reached its design strength.

C. Coordinate prime coat repair and application with requirements of Section 09 9000.

3.02 ERECTION

A. Install structural steel accurately in locations, to elevations indicated, and according to AISC specifications and CBC requirements.

B. Clean surfaces of base plates and bearing plates.

1. Install base and bearing plates for structural members on wedges, shims, or setting nuts as required.

2. Tighten anchor bolts after supported members have been positioned and plumbed. Do not remove wedges or shims; cut off flush with edge of base or bearing plate before packing with grout.

C. Maintain erection tolerances of structural steel within AISC Code of Standard Practice for Steel Buildings and Bridges.

1. Architecturally Exposed Structural Steel members and components, plumbed, leveled and aligned to a tolerance not to exceed one-half the amount permitted for structural steel. CONTRACTOR to provide adjustable connections between Architecturally Exposed Structural Steel and the structural steel frame or the masonry or concrete supports, in order to provide the erector with means for adjustment.

D. Align and adjust various members forming part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact after assembly. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1. Level and plumb individual members of structure.

E. Do not permit thermal cutting during erection of structural steel.

F. Where indicated for field connections, provide standard bolts complying with ASTM A307.

G. Install high strength steel bolts at locations indicated. Assembly and installation shall be in accordance with CBC requirements and AISC specifications.

1. Allowable hole sizes: 1/16 inch larger than bolt size.

2. Use friction type connection with standard hardened steel circular, square or rectangular washer under bolt nut.

3. Thoroughly clean area under bolt head, nut and washer. Remove all paint, lacquer, oil or other coatings except organic zinc-rich paints in accordance with SSPC, SP-2.

4. Tighten bolts by power torque wrench or hand wrench until twist-off.

H. CONTRACTOR shall be responsible for correcting detailing and fabrication errors and for correct fitting of all members and components.

I. Erect structural steel plumb and level and to proper tolerances as set forth in the AISC Manual. Provide temporary bracing, supports or connections required for complete safety of structure until final permanent connections are installed.

J. Install column bases within a tolerance of 1/8 inch of detailed centerlines, level at proper elevations. Support bases on double nuts and solidly fill spaces under bases with cement grout.

K. Provide anchor bolts with templates and diagrams. CONTRACTOR shall be responsible for proper location and installation of bolts. Correct deficiencies and errors.

3.03 FITTING

A. Closely fit members finished true to line and in precise position required to allow accurate erection and proper joining in the field.

B. Drilling to enlarge unfair holes will not be allowed. Allow only enough drifting during assembly to bring parts into position, but not enough to enlarge holes or distort the metal. Do not heat rolled sections, unless approved by ARCHITECT.

3.04 PUNCHING AND DRILLING

A. Punch material 1/16 inch larger than nominal diameter of bolt, wherever thickness of metal is equal to or less than the diameter of the bolt plus 1/8 inch.

B. Drill or sub-punch and ream where metal is equal to or more than the diameter of the bolt plus 1/8 inch. Make diameter for sub-punched and sub-drilled holes 1/16 inch larger than nominal diameter of bolt.

C. Precisely locate holes to ensure passage of bolt through assembled materials without drifting. Enlarge holes when necessary to receive bolts by reaming; flame cutting to enlarge holes is not acceptable. Structural Steel members with poorly matched holes will be rejected.

3.05 FINISHING

A. After erection, spots or surfaces where paint has been removed, damaged, or burned off, and field rivets, bolts, and other field connections shall be cleaned of dirt, oil, grease, and burned paint and furnished with a spot coat of the same primer installed during shop priming.

B. Touchup:

1. Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint. Install paint to exposed areas with the same material installed during shop painting. Install by brush or spray to provide a minimum dry film thickness of 1.5 mils.

2. Touch Up Damaged Painted Finishes: Comply with SSPC-PA-1 for touch-up; apply with brush to produce a minimum 2.0 mil dry film thickness.

3. Galvanized Surfaces: Clean field welds, connections and damaged areas.

a. Apply two coats of Carbomastic 15 or a zinc rich coating in conformance with ASTM A780 and approved by OWNER's OEHS. Brush or roll to a 4 to 6 mil thickness.

b. Apply Galva-Guard Galvanizing Repair Solder or other zinc-based solders in conformance with ASTM A780.

c. Apply metalizing methods in accordance with ASTM A780.

3.06 FIELD QUALITY CONTROL

A. OWNER will provide a special inspector and independent testing laboratory to perform field inspections and tests and to prepare test reports.

B. Correct deficiencies in or remove and replace structural steel that inspections and test reports indicate do not comply with specified requirements.

3.07 CLEAN UP

A. Remove rubbish, debris and waste materials and legally dispose of off the Project Site.

3.08 PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.09 HANDLING

A. Both in shop and in the field, transport, handle and erect to prevent damage or overstressing of any component.

END OF SECTION

SECTION 05 5000

METAL FABRICATIONS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Metal fabrications:

1. Steel thresholds.
2. Steel ladders and ladder safety cages.
3. Ramp and stair handrails and guards.
4. Elevator hoist way door sill angles,
5. Steel framing and supports for countertops.
6. Steel tube reinforcement for low partitions.
7. Steel framing and supports for mechanical and electrical equipment.
8. Steel Gates.
9. Gratings, frames and covers.
10. Steel bollards.
11. Embedded edge angles in concrete.
12. Steel supports for coiling doors.
13. Steel framing and supports for operable partitions.
14. Supportive framing for sunshade panels.
15. Miscellaneous steel framing, supporting angles, plates, brackets, clips, anchors and bolts for equipment, and other work which is not specifically included in Section 05 1200, Structural Steel Framing.
16. Miscellaneous fabrications, as indicated on the Drawings.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 01 4523: Testing and Inspection.
3. Section 03 3000 – Cast-in-Place Concrete.

4. Section 05 0513: Hot-Dip Galvanizing.

1.02 REFERENCES

A. ASTM International (ASTM):

1. ASTM A27 – Standard Specification for Steel Castings, Carbon, for General Application.

2. ASTM A36 – Standard Specification for Carbon Structural Steel.

3. ASTM A47 - Standard Specification for Ferritic Malleable Iron Castings.

4. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.

5. ASTM A123 - Standard Specification for Zinc (Hot-Dipped Galvanized) Coatings on Iron and Steel Products.

6. ASTM A153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

7. ASTM A283 - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates.

8. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.

9. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.

10. ASTM A501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.

11. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts.

12. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

13. ASTM A780 - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.

14. ASTM C1107 - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).

15. ASTM D1187 - Standard Specification for Asphalt-Base Emulsions for Use as Protective Coatings for Metal.

16. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.

17. ASTM F2329 - Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, and Special Threaded Fasteners.

B. American Welding Society (AWS):

1. AWS D1.1 Structural Welding Code - Steel.

2. AWS D1.3 Structural Welding Code - Sheet Steel.

3. AWS D-19.0 Welding Zinc Coated Steel.

1.03 COORDINATION

A. Coordination between Steel Fabricator and Galvanizer:

1. Prior to fabrication, submit approved fabrication shop drawings to the galvanizer. Indicate fabrications to be painted or powder coated.

2. Notify galvanizer of steel fabrications that exceed the ASTM A385 recommended percentages for carbon, phosphorus, manganese and silicon, so special galvanizing processing techniques are used.

3. Coordinate modifications needed to the fabrications to accommodate lifting and handling during galvanizing.

B. Coordinate installation of metal fabrications that are anchored to concrete or masonry, or that receive work specified by other Sections. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry.

C. Field Measurements: Field verify dimensions prior to fabrication.

D. Coordinate selection of shop primers with galvanizing, and with paintings to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and paintings are compatible with one another.

1.04 SUBMITTALS

A. Shop Drawings: Submit Shop Drawings indicating provided materials, grade, dimensions, anchoring detail, and details of termination or connection to adjacent construction. Indicate items that are purchased from a manufacturer and items that are shop fabricated. Indicate component parts requiring Project site fabrication or assembly.

B. Product Data: Submit Product Data for manufactured items. Submit Product Data for primers and finishes.

C. Material Samples: Submit Samples of primers and finishes on fabricated items.

D. Fabricator qualifications per Article “Quality Assurance”.

E. Welding:

1. Welder's Certificates: Field welders shall be Project certified in accordance with AWS D1.1.

2. Welding Material Certification: Provide certificate that welding material complies with specifications.

F. Research/Evaluation Reports: ICC-ES for post-installed anchors.

1.05 QUALITY ASSURANCE

A. Fabricator Qualifications: Firm with a minimum five year experience in successfully producing metal fabrications similar to that shown on the drawings.

B. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D-1.1– Structural Welding Code – Steel.

2. AWS D1.3 - Structural Welding Code - Sheet Steel.

C. Inspection of Welding: Refer to Section 01 4523: Testing and Inspection.

D. Field applied primers, paintings, sealers and adhesives shall be approved by the OWNER's Office of Environmental Health and Safety (OEHS).

E. Preassemble items in shop to greatest extent possible to minimize field welding. Mark units for reassembly and coordination of installation. Use marking method compatible with galvanizing.

1.06 DELIVERY, STORAGE AND HANDLING

A. Store miscellaneous metal items above grade on platforms, skids, or other required supports.

B. Protect from damage and from corrosion, dirt, grease and other foreign matter.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Structural Steel Shapes: ASTM A36.

B. Rolled Steel Plates: ASTM A36. Plates to be bent or cold-formed shall conform to ASTM A283, Grade C.

C. Round HSS: ASTM A500 Grade B or C.

D. Square and Rectangular HSS: ASTM A500 Grade B or C.

E. Steel Pipe: ASTM A53 Type E or S, Grade B, standard weight (Schedule 40) minimum, unless otherwise noted or required to satisfy the performance requirements. Black finish.

F. Steel Sheet: ASTM A1008 or ASTM A1011.

G. Steel Bolts: ASTM A307, Grade A, or F3125 with hex steel nuts per ASTM A563 and washers. Galvanized in accordance with ASTM A153 for exterior locations.

H. Steel Bars: Conforming to ASTM A108 or ASTM A575.

I. Concrete Inserts: Threaded or wedge type; galvanized ferrous castings, either malleable iron, ASTM A47, or cast steel, ASTM A27. Provide bolts, washers, and shims, hot-dip galvanized per ASTM A153.

J. Nonshrink, Nonmetallic Grout: Factory-packaged, non-staining, noncorrosive, nongaseous grout complying with ASTM C1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

K. Welding Rods and Bare Electrodes: In conformance with AWS specifications.

L. Concrete Materials:

1. Concrete per Section 03 3000, Cast-in-Place Concrete.

2. Welded wire fabric and reinforcing per section 03 2000, Concrete Reinforcing.

M. Galvanizing Repair Materials:

1. Carbomastic 15 by Carboline, or OEHS approved zinc pains conforming with ASTM A780.

2. Galva-Guard Galvanizing Repair Solder by San Diego Galvanizing Inc. or zinc-based solders conforming with ASTM A780.

3. Metalizing methods in accordance with ASTM A780.

2.02 FABRICATION

A. General:

1. Preassemble items in the shop to greatest extent possible. Use connections that maintain structural value of joined pieces. Mark units for reassembly and installation.

2. Cut, drill, and punch metals cleanly and accurately. Ease exposed edges to a radius of approximately 1/32 inch, unless otherwise indicated or specified. Remove sharp and rough areas on exposed surfaces. Form exposed work with accurate angles and surfaces and straight edges. Form exposed connections with hairline joints, flush and smooth. Locate joints where least conspicuous.

B. Welding:

1. Weld connections unless otherwise indicated.

2. Weld corners and seams continuously and in accordance with requirements of AWS D1.1 Structural Welding Code. Welds shall be inspected as required in Section 05 1200: Structural Steel Framing.

3. Grind exposed welds smooth and flush to match and blend with adjoining surfaces.

2.03 RAILING FABRICATION

A. Pipe Railing: Handrails, posts and pickets shall be fabricated of black ASTM A53 Type E or S, Grade B standard weight steel pipe.

B. Handrail Brackets: Wagner cast iron bracket Style D, or equal.

C. Form elbow bends and wall returns to uniform radius, free from buckles and twists. Close exposed ends of pipe and tubing by welding metal closure in place or by use of pre cased fittings.

D. Accurately miter and cope intersections of posts, pickets and rails and weld all around, grind welds smooth.

E. Connect posts to stair framing by direct welding, unless otherwise indicated.

2.04 PREPARATION FOR GALVANIZING

A. Fabricate to the largest size possible and whenever possible use slip joints to minimize field welding.

B. Fabricate structural steel in accordance with Class I, II, III guidelines as described in AGA's Recommended Details for Galvanized Structures, to facilitate galvanizing process. Corners of gussets, stiffeners, and bracing shall be cropped to allow free flow of zinc during galvanizing process.

C. Remove welding slag, splatter, anti-splatter compounds and burrs prior to delivery for galvanizing.

D. Marking for Identification: Avoid unsuitable marking paints for identification, such as oil based paints and markers and crayon markers. Use water soluble paints or markers acceptable to galvanizer or steel tags wired to the work.

E. Masking: Use masking materials recommended by the American Galvanizers Association (AGA) to produce ungalvanized areas for field welding and at slip critical bolts.

F. Galvanize fabrications per Section 05 0513, Hot-Dip Galvanizing, in accordance with ASTM A123 and ASTM A153.

2.05 SHOP FINISH

A. Metal fabrications shall be provided with a coat of primer, except those indicated to be hot-dip galvanized.

B. Primers:

1. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

2. Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.

3. Minimum dry film thickness of primer shall be 2.0 mils.

C. Preparation for Primer Painting: Miscellaneous ferrous metal, except items specified galvanized, shall be thoroughly cleaned and prepared for painting, including removal of shipping oils or protective coatings, mill scale, grease, dirt and rust. Prepare in accordance with SSPC recommendations. Deliver to Project site primed or galvanized as indicated, and ready to receive Project site applied finishes.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine the areas where metal fabrications are to be installed. Notify the OAR in writing of unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Provide anchorage devices and fasteners as indicated in the drawings and where necessary for securing miscellaneous metal fabrications to in-place construction.

B. Cut, drill, and fit as required for installation of miscellaneous metal fabrications. Set metal fabrication accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

C. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop-welded because of shipping size limitations. Do not weld, cut, or abrade the surfaces of hot-dip galvanized fabrications intended for bolted or screwed field connections.

D. Alignment: Verify alignment of items with adjacent construction. Coordinate related work.

E. Grout: Follow manufacturer's recommendations for substrate preparation and application.

F. Corrosion Protection: Coat concealed surfaces of metals that will come into contact with grout, concrete, masonry, or wood, with a heavy coat of bituminous paint or zinc chromate primer. Protect dissimilar metals from galvanic corrosion by pressure tapes, coating, or isolators.

3.03 FIELD WELDING

A. Preparation of Weld Area of Galvanized Fabrications: Remove masking from fabrications. Remove remaining zinc coating between one inch and four inches from both sides of members to be welded, by grinding back the zinc coating, burning the zinc away or pushing back the molten zinc from the weld area.

B. Welding: Comply with AWS Code for procedures of manual shielded metal-arch welding, appearance and quality of welds made, methods used in correcting welding work.

1. Weld in accordance to AWS D-1.1.

2. Weld galvanized fabrications in accordance to AWS D-19.0.

C. Remove welding flux immediately. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing and contour of welded surfaces matches those adjacent.

D. Upon completion of welding plug vent, drainage and lifting holes of galvanized fabrications with appropriate diameter zinc plugs. Push in about half way by hand, and hammer to a tight fit. With a hand file or an abrasive tool, file away excess material. Repair scratches with a zinc rich coating.

1. Plug railing holes.

2. Plug visible holes of HSS members.

3.04 ADJUSTING AND CLEANING

1. Touch Up Damaged Painted Finishes: Comply with SSPC-PA-1 for touch-up; apply with brush to produce a minimum 2.0 mil dry film thickness.

A. Galvanized Surfaces: Clean field welds, connections and damaged areas.

1. Apply two coats of Carbomastic 15 or a zinc rich coating in conformance with ASTM A780 and approved by OWNER’s OEHS. Brush or roll to a 4 to 6 mil thickness.

2. Apply Galva-Guard Galvanizing Repair Solder or other zinc-based solders in conformance with ASTM A780.

3. Apply metalizing methods in accordance with ASTM A780.

3.05 CLEAN UP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

3.06 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION

END OF SECTION

SECTION 07 2600

VAPOR BARRIERS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Vapor barrier and accessories for installation under concrete slabs.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Section 03 3000: Cast-in-Place Concrete.

1.02 REFERENCES

A. American Concrete Institute (ACI) Publication:

1. ACI 302.2R - Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.

B. ASTM International (ASTM):

1. ASTM D882 - Standard Test Method for Tensile Properties of Thin Plastic Sheeting.

2. ASTM D1709 - Standard Test Methods of Impact Resistance of Plastic Film by the Free-Falling Dart Method.

3. ASTM E154 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth under Concrete Slabs.

4. ASTM E1643 - Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs.

5. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.

1.03 SUBMITTALS

A. Product Data: Submit manufacturer’s product data and installation instructions for vapor barrier and accessories.

B. Samples:

1. 12 inch by 12 inch vapor barrier samples.

2. Pressure-Sensitive Tape: 12 inch long sample.

C. Test Reports: Conducted by nationally recognized independent testing agency indicating conformance with specified performance requirements.

1.04 QUALITY ASSURANCE

A. ASTM tests referenced in this Section shall be performed on a single production roll per ASTM E1745 Section 8.1. Submit third party documentation certifying this requirement.

B. Pre-Installation Conference: CONTRACTOR shall coordinate and conduct pre-installation conference in accordance to Section 01 3119, Project Meetings, to review the progress of construction activities and preparations for the installation of vapor barrier.

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver, store, handle and protect in accordance with manufacturer's instructions and recommendations.

B. Deliver materials in manufacturer's packaging with labels intact.

C. Store materials in a clean and dry area.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Multi-layer plastic extrusion manufactured with high grade prime, virgin, polyolefin resins. Thickness shall be 15 mils minimum.

1. Stego Wrap by Stego Industries LLC.

2. Perminator by W.R. Meadows.

3. Ecoshield-E by Epro.

4. Husky Yellow Guard by Poly-America.

5. Equal.

B. Physical Properties:

1. Maintain permeance of less than 0.01 Perms [grains/(ft^2 · hr · inHg)] as tested in accordance with mandatory conditioning tests per ASTM E1745 Section 7.1 (7.1.1-7.1.5).

2. Class Rating per ASTM E1745: Class A.

3. Puncture resistance per ASTM D1709: 2200 g or higher.

4. Provide third party documentation that all testing was performed on a single production roll per ASTM E1745 Section 8.1

C. Accessories: Provide manufacturer recommended accessories for seams, penetrations and perimeter edges, including tapes, mastics, termination for a complete vapor barrier installation per ASTM E1643.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine subsoil and notify OAR of deficiencies detrimental to proper vapor barrier installation; do not proceed until corrected.

3.02 INSTALLATION

A. Install vapor barrier in accordance ASTM E1643 and manufacturer's instructions.

1. Unroll vapor barrier with the longest dimension parallel with the direction of the concrete placement and face laps away from the expected direction of the placement whenever possible.

2. Extend vapor barrier to the perimeter of the slab. If practicable, terminate it at the top of the slab, otherwise, where obstructed by impediments, such as dowels, waterstops, or any other site condition requiring early termination of the vapor barrier. At the point of termination, seal vapor barrier to the foundation wall, grade beam or slab itself using manufacturer ASTM E1643 compliant accessory designed to adhere to concrete. Seam tape shall not be used for sealing the vapor barrier to the foundation wall, grade beam or slab.

3. Overlap joints 6 inches and seal with manufacturer's seam tape.

4. Seal vapor barrier penetrations per manufacturer's instructions.

5. Avoid the use of non-permanent stakes driven through the vapor barrier.

B. Prior to concrete placement inspect vapor barrier for damage. Clean damaged areas and with vapor barrier material cut a minimum 6 inches larger than damaged area on all sides. Seal to main vapor barrier with continuous seam tape.

3.03 CLEAN UP

A. Remove rubbish, debris and waste materials and legally dispose of off the Project site.

3.04 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 09 9000

PAINTING AND COATING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Interior and exterior painting.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 03 3000 Cast in Place Concrete
3. Section 05 0513 Hot-Dip Galvanizing
4. Section 05 1200 Structural Steel Framing

C. Following items shall not be painted:

1. Brass valves, chromium or nickel-plated piping and fittings.
2. Boiler control panels and control systems.
3. Fabric connections to fans.
4. Flexible conduit connections to equipment, miscellaneous name plates, stamping, and instruction labels and manufacturer's data.
5. Mechanical and electrical utility lines, piping and heating and ventilation ductwork in tunnels, under-floor excavated areas or crawl spaces, attic spaces and enclosed utility spaces.
6. Flag, floodlight, parking light poles and loudspeaker poles, metal stairs, handrails and chain-link fence with a galvanized finish, unless otherwise noted.
7. Structural and miscellaneous steel, open web steel joists and metal floor decking, which will not be exposed in final construction, shall have no finish other than one coat of shop primer.
8. Hardboard covering on tops and backs of counters and benches.
9. Brass, bronze, aluminum, lead, stainless steel and chrome or nickel-plated surfaces.

10. Non-metallic walking surfaces unless specifically shown or specified to be painted.

1.02 REGULATORY REQUIREMENTS

A. Paint materials shall comply with the Food and Drug Administration's (F.D.A.) Lead Law and the current rules and regulations of local, state and federal agencies governing the use of paint materials.

1.03 SUBMITTALS

A. List of Materials: Before submittal of samples, submit a complete list of proposed paint materials, identifying each material by distributor's name, manufacturer's name, product name and number, including primers, thinners, and coloring agents, together with manufacturers' catalog data fully describing each material as to contents, recommended installation, and preparation methods. Identify surfaces to receive various paint materials.

B. Material Samples: Submit manufacturer's standard colors samples for each type of paint specified. Once colors have been selected, submit Samples of each color selected for each type of paint accordingly:

1. Samples of Paint and Enamel must be submitted on standard 8 ½" x 11" Leneta Opacity-Display Charts. Each display chart shall have the color in full coverage. The sample shall be prepared from the material to be installed on the Work. Identify the school on which the paint is to be installed, the batch number, the color number, the type of material, and the name of the manufacturer.

2. Elastomeric shall be submitted in duplicate samples of the texture coating. Samples will be not less than 2 ½ by 3 ½ in size and installed upon backing. Finished Work shall match the reviewed Sample in texture.

3. Materials and color samples shall be reviewed before starting any painting.

C. For transparent and stained finishes, prepare samples on same species and quality of wood to be installed in the Work, with written description of system used.

1.04 QUALITY ASSURANCE

A. Certification of Materials: With every delivery of paint materials, the manufacturer shall provide written certification the materials comply with the requirements of this section.

B. Coats: The number of coats specified is the minimum number. If full coverage is not obtained with the specified number of coats, install additional coats as required to provide the required finish.

C. Install coats and undercoats for finishes in strict accordance with the recommendations of the paint manufacturer as reviewed by the Architect.

D. Paint materials shall comply with the following as a minimum requirement:

1. Materials shall be delivered to Project site in original unbroken containers bearing manufacturer's name, brand number and batch number.

2. Open and mix ingredients on premises in presence of the Project Inspector.

E. Pre-Construction Meeting: Prior to start of Work of this section and after approval of submittals, schedule an onsite meeting between CONTRACTOR, OAR, Project Inspector, representatives of the paint manufacturer, and painting subcontractor to review construction conditions and to discuss conformance to the requirements of this Section prior to paint application.

1.05 DELIVERY, STORAGE AND HANDLING

A. Storage and Mixing of Materials: Store materials and mix only in spaces suitable for such purposes. Maintain spaces clean and provide necessary precautions to prevent fire. Store paint containers so the manufacturer's labels are clearly displayed.

1.06 SITE CONDITIONS

A. Temperature: Do not install exterior paint in damp, rainy weather or until surface has thoroughly dried from effects of such weather. Do not install paint, interior, or exterior, when temperature is below 50 degrees F, or above 90 degrees F, or dust conditions are unfavorable for installation.

1.07 WARRANTY

A. Manufacturer shall provide a three year material warranty.

B. Installer shall provide a three year application warranty.

1.08 MAINTENANCE

A. Provide at least one gallon of each type, color and sheen of paint coating installed. Label containers with color designation indicated on Drawings.

PART 2 - PRODUCTS

2.01 PAINT MATERIALS

A. Furnish the products of only one paint manufacturer unless otherwise specified or required. Primers, intermediate and finish coats of each painting system must all be the products of the same manufacturer, including thinners and coloring agents, except for materials furnished with shop prime coat by other trades.

B. B. Factory mix paint materials to correct color, gloss, and consistency for installation to the maximum extent feasible.

C. Paint materials to be minimum “Architectural Grade”.

D. Gloss degree standards shall be as follows:

GLOSS	70 and above	EGGSHELL	30 to 47
SEMI-GLOSS	48 to 69	SATIN	15 to 29

2.02 MANUFACTURERS

A. Acceptable manufacturers, unless otherwise noted:

1. Dunn-Edwards Corporation Paints.
2. Behr Paint Company.
3. Vista Paints.
4. Sherwin Williams.
5. Benjamin Moore.
6. Ever-Gard Paint; a subsidiary of Shilpark Paint
7. Equal.

PART 3 - EXECUTION

3.01 PREPARATION

A. Examine surfaces to receive paint finish. Surfaces which are not properly prepared and cleaned or which are not in condition to receive the finish specified shall be corrected before prime coat is installed.

B. New woodwork shall be thoroughly cleaned, hand sandpapered, and dusted off. Nail holes, cracks or defects in Work shall be filled. On stained woodwork, fill shall be colored to match stain. Filling shall be performed after the first coat of paint, shellac or varnish has been installed.

C. Plaster surfaces except veneer plaster shall be allowed to dry at least 3 weeks before painting. Veneer plaster shall be allowed to dry sufficiently to receive paint as determined by moisture meter tests.

D. Metal surfaces to be painted shall be thoroughly cleaned of rust, corrosion, oil, foreign materials, blisters, and loose paint.

E. Do not install painting materials to wet, damp, dusty, dirty, finger marked, rough, unfinished or defective surfaces.

F. Concrete surfaces shall be dry, cleaned of dirt and foreign materials and in proper condition to receive paint. Neutralize spots demonstrating effects of alkali.

G. Mask off areas where necessary.

3.02 APPLICATION

A. Backpainting: Immediately upon delivery to the Project site, finish lumber and millwork shall be backpainted on surfaces that will be concealed after installation. Items to be painted shall be backpainted with priming coat specified under "Priming".

B. Priming: New wood and metal surfaces specified to receive paint finish shall be primed. Surfaces of miscellaneous metal and steel not embedded in concrete, and surfaces of unprimed plain sheet metal Work shall be primed immediately upon delivery to the Project site. Galvanized metal Work and interior and exterior woodwork shall be primed immediately after installation. Priming of surfaces and priming coat shall be as follows:

1. Knots, Pitch and Sap Pockets: Shellac before priming.

2. Exterior Woodwork and Wood Doors: Prime with one coat of exterior waterborne emulsion wood primer.

3. Interior Woodwork: Where indicated to be painted, prime with one coat of waterborne wood primer.

4. Stain: Woodwork indicated to receive a stain and varnish finish shall be stained to an even color with water borne stain. On open-grained hardwood, mix stain with paste filler and completely fill pores in wood.

5. Galvanized Metal Work: Clean oil, grease and other foreign materials from surfaces. Install vinyl wash pretreatment coating. Follow manufacturer's instructions for drying time, and then prime with one coat of metal primer.

6. Unprimed Iron, Steel, and Other Uncoated Metals: Where specified to be painted, prime with one coat of metal primer.

7. Shop Primed Metal Items: Touch up bare and abraded areas with metal primer before installation of second and third coats.

8. Coats shall be installed evenly and with full coverage. Finished surfaces shall be free of sags, runs and other imperfections.

C. Allow at least 24 hours between coats of paint.

D. To ensure proper coverage when rolling, a metal bucket screen/grid must be used.

E. Rollers shall not be used on wood surfaces except as indicated for wood overhangs below

F. Each coat of painted woodwork and metal, except last coat, shall be sandpapered smooth when dry. Texture-coated gypsum board shall be sanded lightly to remove surface imperfections after first coat of paint has been installed.

G. Each coat of paint or enamel shall be a slightly different tint as required. Each coat of paint, enamel, stain, shellac, and varnish will be inspected by the Project Inspector

before next coat is applied. Notify the Project Inspector that such Work is ready for inspection.

1. Tinting Guideline: The first coat, primer/undercoat(s) to be untinted or tinted up to 50 percent lighter or darker (at the discretion of the installer) than the finish coat. The second coat (or third coat if a seal coat and undercoat have been specified) is to be factory tinted in the range of 10 percent to 15 percent lighter or darker (at the discretion of the installer) than the finish coat. The final coat is to be factory tinted to the required color selected. These tinting guidelines shall be provided on all surfaces receiving paint.

H. Do not "paint-out" UL labels, fusible links and identification stamps.

I. Paint Roller, brush and spray.

1. Only Paint rollers or spray shall be used on interior/exterior plaster, drywall, masonry/plaster and plywood surfaces. Roller nap shall not exceed one half inch in length.

2. First coat on wood overhang and ceilings shall have material applied by roller and then brushed out in a professional manner to leave surface free of imperfections. Finish coat may be sprayed.

3. Other surfaces shall have all coatings applied with brushes of proper size.

J. Where ceilings are specified to be painted, beams, cornices, coves, ornamental features, plaster grilles, etc. shall be included.

K. Unless otherwise indicated ceilings shall be white, including classrooms, storage rooms, offices, arcades, etc. Boiler room and fan room ceiling color shall match adjacent walls.

3.03 CLEANING

A. Remove rubbish, waste, and surplus material and clean woodwork, hardware, floors, and other adjacent Work.

B. Remove paint, varnish and brush marks from glazing material and, upon completion of painting Work, wash and polish glazing material both sides. Glazing material, which is damaged, shall be removed and replaced with new material.

C. Clean hardware and other unpainted metal surfaces with recommended cleaner. Do not furnish abrasives or edged tools.

3.04 SCHEDULE

A. Exterior:

1. Metal: 3 coats. Shall be cleaned and pre-treated. Items to be painted include but are not limited to steel columns and miscellaneous steel items, gravel stops, metal doors and frames, hoods and flashings.

a. First Coat: As specified in this section under Priming.

b. Second and Third Coats: Exterior gloss enamel.

B. Mechanical and Electrical Work:

1. Except where interior mechanical and electrical Work to be painted is specified to receive another paint finish, Work occurring in finished rooms and spaces shall be cleaned, pre-treated, and painted with 3 coats. Items to be painted include but are not limited to Steel and copper piping, pipes, vents, fittings, ducts, plenums, miscellaneous supports and hangers, electrical conduit, fittings, pull boxes, outlet boxes, unfinished surfaces of plumbing fixtures, miscellaneous metal cabinets, panels, and access doors and panels.

a. First Coat: As specified in this section under Priming.

b. Second and Third Coats: Interior enamel, semi-gloss or gloss to match adjacent wall or ceiling finish.

2. Insulation and Taping on Pipes and Ducts: 3 coats.

a. Finished Rooms:

1) First Coat: Interior waterborne primer.

2) Second and Third Coats: Interior semi-gloss or gloss enamel to match adjoining wall or ceiling finish.

b. Building Exterior:

1) First Coat: Exterior waterborne primer.

2) Second and Third Coats: Exterior gloss enamel.

3. Inside surfaces of ducts, vents, dampers and louvers as far back as visible from room in which they open shall be painted with 2 coats of flat black paint.

C. Miscellaneous:

1. Outside Storage Units (wood or metal): 3 coats.

a. First Coat: As specified in this section under Priming.

b. Second and Third Coats: Exterior gloss enamel.

2. Exterior and interior surfaces of storage bins, and potting tables shall have 3 coats of acrylic stain.

3. Wood compost bins shall be finished with 3 coats of acrylic stain.

3.05 PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.06 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 11 6843

DAKTRONICS BA-2022 BASEBALL SCOREBOARD

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Single-sided LED baseball scoreboard

1.02 REFERENCES
- A. Standard for Electric Signs, UL 48
- B. Standard for CSA C22.2 #207
- C. Federal Communications Commission Regulation Part 15
- D. National Electric Code

1.03 SUBMITTALS
- A. Product data: Submit manufacturer's product illustrations, data and literature that fully describe the scoreboards and accessories proposed for installation.
- B. Shop drawings: Submit mechanical and electrical drawings.
- C. Maintenance data: Submit manufacturer's installation, operation, and maintenance manuals.

1.04 DELIVERY, STORAGE, AND HANDLING
- A. Product delivered on site
- B. Scoreboard and equipment to be housed in a clean, dry environment

1.05 PROJECT CONDITIONS
- A. Environmental limitations: Do not install scoreboard equipment until mounting structure is secure and concrete has ample time to cure.
- B. Field measurements: Verify position and elevation of structure and its layout for scoreboard equipment. Verify dimensions by field measurements.
- C. Verify mounting structure is capable of supporting the scoreboard's weight and windload in addition to the auxiliary equipment.
- D. Installation may proceed within acceptable weather conditions.

1.06 QUALITY ASSURANCE
- A. For outdoor use
- B. Source Limitations: Obtain each type of scoring or related equipment through one source from a single manufacturer.
- C. ETL listed to UL 48
- D. NEC compliant
- E. FCC compliant
- F. ETLC listed to CSA 22.2 #207

1.07 WARRANTY
- A. Provide 5 years of no cost parts exchange including standard shipping on electronics parts and radios due to manufacturing defects
- B. Provide toll-free service coordination
- C. Provide technical online and phone support during Daktronics business hours

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, SD 57006-5128
B. _____
C. _____

2.02 PRODUCT

A. Daktronics BA-2022 single-sided baseball scoreboard displays HOME and GUEST team scores for up to seven innings, total RUNS to 99 for each team, BALL to three, STRIKE to two and OUT to two.

2.03 SCOREBOARD

A. General information
    1. Dimensions: 6'-6" (1.98 m) high, 16'-0" (4.88 m) wide, 0'-8" (203 mm) deep
    2. Base weight: 525 lb (238 kg) with vinyl captions – options may increase weight
    3. Base power requirement: 190 W (red/amber digits), 400 W (white digits)
    4. Color: choose from manufacturer's standard paint selections
B. Construction
    1. Alcoa aluminum alloy 5052 for excellent corrosion resistance
    2. Scoreboard back, face, and perimeter: 0.063" (1.60 mm) thick
    3. Scoreboard top and bottom: 0.125" (3.18 mm) thick
C. Digits
    1. LED color : **Amber**
    2. BALL, STRIKE, OUT, inning scores, and RUNS digits: 15" (381 mm) high
    3. Seven bar segments per digit
    4. PanaView® LED digit technology
    5. All digits are sealed front and back with weather-tight silicone gel
D. Captions
    1. Vinyl applied directly to scoreboard face
    2. HOME and GUEST captions: 10" (254 mm) high
    3. BALL, STRIKE, and OUT captions: 9" (229 mm) high
    4. Inning numbers and RUNS captions: 8" (203 mm) high
    5. Color: standard white or choose from manufacturer's vinyl color selections
E. Border Striping
    1. Vinyl striping applied around the scoreboard face
    2. Color: standard white or choose from manufacturer's vinyl color selections
F. Accessory Equipment
    1. **Protective netting**

2.04 SCORING CONSOLE

A. Console is an All Sport® 5000 controller
B. Scores multiple sports using changeable keyboard inserts
C. Controls multiple scoreboards and displays, including other All Sport 5000 controlled displays currently owned by customer
D. Recalls clock, score, and period information if power is lost
E. Runs Time of Day and Segment Timer modes

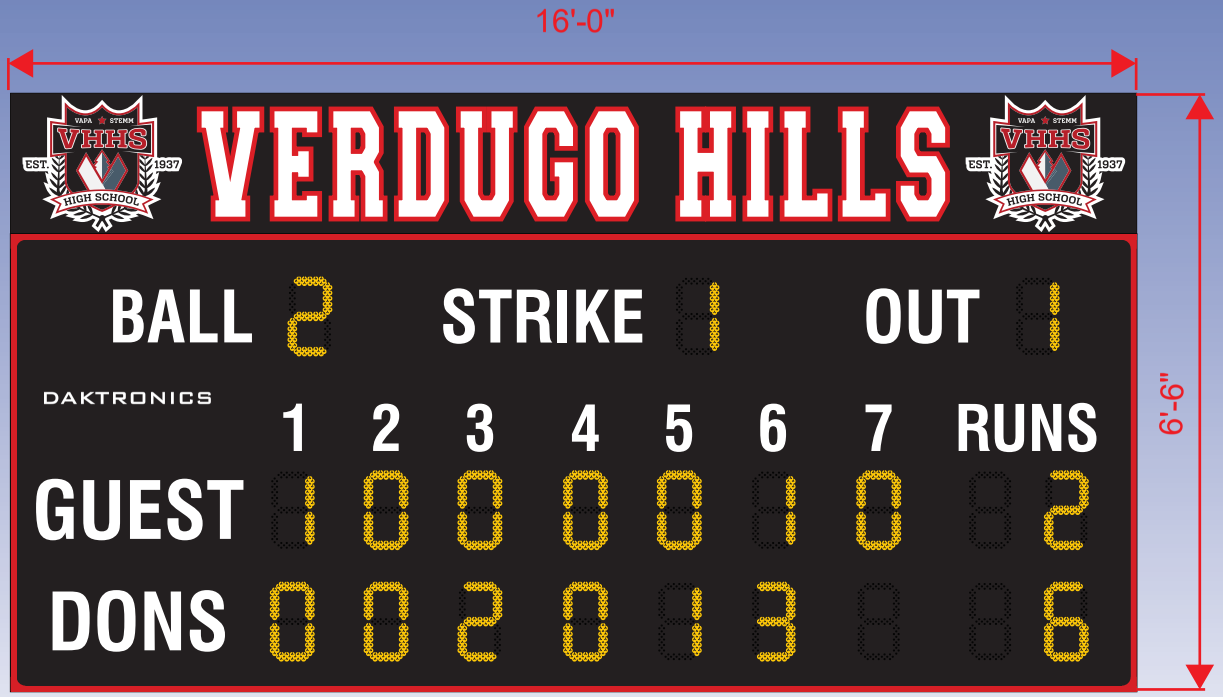
F. Console includes:
   1. Rugged aluminum enclosure to house electronics
   2. Sealed membrane water-resistant keyboard
   3. 32-character LCD to verify entries and recall information currently displayed
   4. Power cord that plugs into a standard grounded outlet; 6 watts max
   5. Control cable to connect to the control receptacle junction box (wired system only)
   6. Hand-held switch for main clock start/stop and horn
   7. Soft-sided carrying case
G. Accessory Equipment
   1. **2.4 GHz spread spectrum radio system with frequency hopping technology and 64 non-interfering channels; system includes a transmitter installed inside the console and a receiver installed inside the scoreboard(s)**
   2. **Hard carrying case**
   3. **Battery pack**

2.05 BLUE TOOTH SCORING SYSTEM

A. Scoring system consists of an All Sport® MX-1 interface box and a compatible **CUSTOMER SUPPLIED** mobile device or tablet with DAK Score application installed.
B. DAK Score application scores multiple sports including Baseball, Basketball, Football, and Soccer along with a Practice Timer mode.
C. Scoreboard(s) may be controlled via wired signal connection or wireless radio.
D. MX-1 interface box includes:
   1. Sealed USB A to USB Micro power cord and wall-plug power supply
   2. Control cable to connect to the control receptacle junction box (wired system only)
   3. 2.4 GHz spread spectrum radio system with frequency hopping technology and 64 noninterfering channels. **Requires radio receiver installed inside the scoreboard(s).**
   4. Clearly visible TX, Status, and Power diagnostic LEDs for quick system troubleshooting
E. Wireless operating ranges:
   1. 50' (15 m) between mobile device and interface box
   2. 1500' (457 m) between interface box and scoreboard
F. Accessory Equipment
   1. **Weather-sealed enclosure for permanently mounting the MX-1 unit outdoors**

2.06 NON-BACKLIT AD & ID PANELS – 2FT X 16FT @2

A. General information
   1. Dimensions and weight shall vary with size of signage. Refer to **SL-03761**.
   2. Color: provide over 150 colors to choose from, plus unlimited digital image selection
B. Construction
   1. Signage cabinetry and metal parts shall be made of durable, lightweight aluminum.
   2. All sheet metal parts shall be constructed of 0.050" (1.3 mm) aluminum with an alloy content of 5052-H34 minimum.
   3. All painted surfaces shall be primed and painted using automotive industrial finish or better.
C. Sign decoration



- ID Panel (NBacklit)
  2' high x 16' wide
- Scoreboard
  BA-2022-A
  6.5' high x 16' wide

ARTURO BARCENAS

10/06/2025 (Rev 1; 10/07/2025) Concept Verdugo Hills HS_CA Baseball BA-2022 (1-1)

VERDUGO HILLS HIGH SCHOOL TUJUNGA, CA

Production ready artwork needed for: *NA*

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DAKTRONICS

1. Sign decoration shall be constructed using self-adhesive vinyl materials with a minimum of a 3-year life expectancy.
2. Digitally produced graphics shall be UV protected.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that mounting structure is ready to receive scoreboard. Verify that placement of conduit and junction boxes are as specified and indicated in plans and shop drawings. Verify concrete has cured adequately according to specifications.

3.02 INSTALLATION

A. All power and control cables to scoreboards and displays will be routed in conduit. Power to the scoreboards/displays as well as raceways shown on electrical plans by the Electrical Contractor. Scoreboard control wiring including conduit will be the responsibility of the contractor assigned the scoreboard equipment.
B. Install scoreboards and exterior displays to beams in location detailed and in accordance with manufacturer's instructions. Verify unit is plumb and level.

3.03 INSTALLATION—CONTROL CENTER

A. Provide boxes, cover plates and jacks in locations per plans.
B. Test connect control unit to all jacks and check for proper operation of control unit, scoreboard and all features. Leave control unit in carrying case and other loose accessories with owner's designated representative.
C. Verify earth ground does not exceed 15 ohms.

END OF SECTION

SECTION 26 0500

COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.01 SUMMARY

A. This Section specifies the basic requirements for electrical installations and includes requirements common to more than one section of Division 26. It expands and supplements the requirements specified in sections of Division 01.

B. Related Requirements:

1. Division 01 – General Requirements.
2. Section 03 3000 – Cast-in-Place Concrete.
3. Division 26 – Electrical.
4. Division 31 – Earthwork.
5. Division 32 – Exterior Improvements.

C. Related Industry Standards: The most current version of the following industry standards.

1. ASTM D 709 – Laminated Thermosetting materials.
2. ANSI/NEMA FB-1 – Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable.
3. ANSI/NEMA 250 – Enclosures for Electrical Equipment (1000 Volts Maximum).
4. California Electrical Code (CEC).
5. IEEE C57.12.28 – Standard for Pad-Mounted equipment Enclosure Integrity.
6. IEEE 1584 – Performing Arc-Flash Hazard Calculations.
7. UL/ANSI 1 – Standard for Flexible Metal Conduit.
8. UL/ANSI 1242 – Standard for Electrical Intermediate Metal Conduit.
9. UL/ANSI 506 – Standard for Specialty Transformers.
10. UL/ANSI 6 – Electrical Rigid Metal Conduit-Steel.
11. UL/ANSI 6A – Electrical Rigid Metal Conduit-Aluminum, Red Brass, and Stainless Steel.

12. UL 797 – Electrical Metallic Tubing-Steel.

13. UL/ANSI 870 – Standard for Wireways, Auxiliary Gutters, and Associated Fittings.

14. UL/ANSI 891 – Standard for Safety Switchboards.

1.02 BASIC ELECTRICAL REQUIREMENTS

A. Quality Assurance:

1. Work shall be performed by CONTRACTOR'S personnel possessing the skills and experience obtained in performing work of similar scope and complexity.

2. Refer to related division(s) specifications for other requirements.

B. Drawings and Specifications Coordination:

1. For purposes of clearness and legibility, Drawings are essentially diagrammatic, and the size and location of equipment is indicated to scale whenever possible. Verify conditions, dimensions, indicated equipment sizes, and manufacturer's data and information as necessary to install the Work of this Division. Coordinate location and layout with other Work.

2. Verify final locations for rough ins with field measurements and with the requirements of the equipment to be connected.

3. Drawings indicate required size and points of termination of conduits, number and size of conductors, and diagrammatic routing of conduits. Install conduits with minimum number of bends to conform to structure, avoid obstructions, preserve headroom, keep openings and passageways clear, and comply with applicable code requirements.

4. Routing of conduits may be changed provided that the length of any conduit run is not increased more than 10 percent of length indicated on the Drawings.

5. Outlet locations shall be coordinated with architectural elements prior to start of construction. Locations indicated on the Drawings may be distorted for clarity; CONTRACTOR shall coordinate in the field prior to rough-in work.

6. Coordinate electrical equipment and materials installation with building components and the Work of other trades.

7. Equipment disconnects shall be readily accessible and free of obstructions.

8. When extending or intercepting existing electrical facilities, CONTRACTOR shall Coordinate and verify existing conditions.

C. Terminology:

1. Signal Systems: Applies to clock, bell, fire alarm, annunciator, sound, public address, buzzer, telephone, television, inter-communication, elevator access controls, lighting control systems and security systems.

2. Low Voltage: Applies to signal systems operating at 120 volts and less, and power systems operating at less than 600 volts. Medium voltage: Applies to power systems operating at more than 600 volts.

3. UL: Underwriter's Laboratories Inc, Nationally Recognized Testing Laboratory (NRTL), or equal.

D. Regulations: Work shall comply with the requirements of authorities having jurisdiction and the California Electrical and Building Codes. Material shall conform to regulations of the National Board of Fire Underwriters for electrical wiring and apparatus. Materials shall be new and listed by UL, or another NRTL.

E. Structural Considerations for Conduit Routing:

1. CONTRACTOR shall provide DSA approved calculations and drawings as necessary for any construction and/or alterations requiring conduits to pass through or interfere with any structural members, or where notching, boring or cutting of the structure is necessary, or where special openings through walls, floors, footings, or other buildings elements, or where notches and bored holes in wood or steel are required. All work shall conform to CBC, Part 2, Title 24 requirements.

2. Concrete encasement for underground conduits that abuts a foundation wall or underground structure shall rest on a haunch integral with wall or structure, or shall extend down to footing projection, or shall be doweled into structure unless otherwise indicated. Underground structures shall include maintenance holes; pull boxes, vaults, and buildings.

F. Electrically Operated Equipment and Appliances:

1. Furnished Equipment and Appliances:

a. Work shall include furnishing and installing wiring enclosures and complete connections of electrically operated equipment, appliances and electrical control devices, which are specified to be furnished and installed in this or other sections of the Specifications. Wiring enclosures shall be concealed except where exposed work is indicated on the drawings.

b. Provide all connections necessary for installation of equipment.

1) Equipment shall be tested for proper operation, including proper rotation of motorized equipment.

2) If outlets are of incorrect electrical characteristics, or any specified equipment fails to operate properly, CONTRACTOR shall repair and/or replace the outlet and/or equipment.

3) Utility connections (electrical, controls, gas, etc.) to roof mounted mechanical equipment shall be made through the side of the equipment and not from beneath the unit to facilitate future replacement.

2. Equipment and Appliances Furnished by Others:

a. Equipment and appliances indicated on Drawings as "not in contract" (NIC), "furnished by others," or "furnished by the OWNER," will be delivered to the Project site. Required electrical connections shall be performed for such equipment and appliances. Motorized equipment will be furnished factory-wired to a control panel or junction box unless otherwise indicated. Appliances will be furnished equipped with portable cord and cap. Provide disconnect switches where required.

b. Connections to equipment furnished under this Division shall be part of the Work of this section. Work shall include internal wiring, installation, connection and adjustment of bolted drive motors in which the motor is supplied as a separate unit, and connections only for equipment furnished with factory installed internal wiring, except as further limited by Drawings and this Specification. Work shall include furnishing and installing suitable outlets, disconnecting devices, starters, push-button stations, selector switches, conduit, junction boxes, and wiring necessary for a complete electrical installation. Work shall also include furnishing and installing conduit and boxes for HVAC control systems, furnished under Division 23. Devices and equipment furnished shall be of same type used elsewhere on the Work or as specified.

c. Electrical equipment furnished under other sections, for installation and connection under Work of this section, will be delivered to the Project site ready for installation.

d. Mechanical equipment furnished under other sections, and requiring electrical connection under this section, will be set in place as part of the Work of the section furnishing such equipment unless noted otherwise.

e. Suitability and condition of equipment furnished under other sections shall be determined in advance of installation. Immediate notice of damage, unsuitability, or lack of parts shall be given to the entity providing such equipment.

G. Power Distribution System Reports: For fault current, coordinatization and Arc-Flash system report requirements refer to applicable electrical distribution equipment sections. for specific requirements.

H. Protection of Materials:

1. Protect materials and equipment from damage and provide adequate and proper storage facilities during progress of the Work. Damaged materials and/or equipment shall be replaced.

I. Cleaning:

1. Exposed parts of Work shall be left in a neat, clean, usable condition. Finished painted surfaces shall be unblemished and metal surfaces shall be polished.

2. Thoroughly clean parts of apparatus and equipment. Exposed parts to be painted shall be thoroughly cleaned of cement, plaster, and other materials. Remove grease and oil spots with solvent. Such surfaces shall be wiped, and corners and cracks scraped out. Exposed rough metal shall be smooth, free of sharp edges, carefully steel brushed to remove rust and other spots, and left in proper condition to receive finish painting.

3. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

J. WARRANTIES

1. Provide one-year warranty on all material and labor performed, unless noted otherwise in specific sections.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

A. Advise the Inspector before starting the Work of this Division.

B. Exposed conduits shall be painted to match the surfaces adjacent to installation.

C. Salvaged materials removed from buildings shall be removed from the Project site as required by the OAR.

D. Trenches outside of barricade limits shall be backfilled and paved within 24 hours after being inspected by the Inspector. Provide traffic plates during the time that trenches are open in traffic areas and in areas accessible to students and staff.

E. Where existing structural walls are cored for new conduit runs, separation between cored holes shall be three inches edge to edge from new or existing holes, unless otherwise required by the Architect. All coring to be laid out and reviewed by Architect prior to drilling. CONTRACTOR to verify location of structural steel, rebar, stress cabling or similar prior to lay out.

F. Electrical equipment shall be braced and anchored for CBC Seismic Design requirements, or as otherwise indicated on the Drawings.

3.02 DELIVERY STORAGE AND HANDLING

A. Deliver products to project site with proper identification, which shall include names, model numbers, types, grades, compliance labels, and similar information needed for District identification; all products and materials shall be adequately packaged and protected to prevent damage during shipment, storage, and handling.

B. Coordinate deliveries of electrical materials and equipment to minimize construction site congestion.

3.03 CUTTING AND PATCHING

A. Cutting and patching of electrical equipment, components, and materials shall include the removal and legal disposal of selected materials, components, and equipment.

B. Do not endanger or damage installed Work through procedures and processes of cutting and patching.

C. Repair or restore other work or surfaces damaged as a result of the work performed under this contract.

3.04 CLEANUP

A. Remove rubbish, debris and waste materials and legally dispose off the Project site.

B. Remove equipment and implements of service, and leave entire work area neat and clean, to the satisfaction of the OWNER Authorized Representative.

3.05 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 26 0513

BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Boxes, enclosures, keys and locks.
2. Receptacles and switches.
3. Identifications and signs.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Division 26 – Electrical.

PART 2 - PRODUCTS

2.01 BOXES, ENCLOSURES, KEYS AND LOCKS

A. Outlet Boxes and Fittings:

1. Outlet boxes installed in concealed Work shall be galvanized steel, pressed, or welded type, with knockouts.
2. In exposed Work, where conduit runs change direction or size, outlet boxes and conduit fittings shall be malleable (FS type) metal with threaded hubs cast integral with box or fitting.
3. Fittings shall be cast metal and non-corrosive. Ferrous metal fittings shall be cadmium-plated, or zinc galvanized. Castings shall be true to pattern, smooth, straight, with even edges and corners, of uniform thickness of metal, and shall be free of cracks, gas holes, flaws, excessive shrinkage, and burnt-out sand.
4. Covers for fittings shall be galvanized steel or non-corrosive aluminum and shall be designed for the fitting installed.
5. Light fixture outlets shall be 4-inch octagon, 4-inch square, 2 1/8-inch deep, or larger based on code requirements for the number of conductors and conduits.
6. Plaster rings shall be furnished with round opening with two ears drilled 2 23/32 inches center to center.

7. For local device outlets provide 4-inch square 2 1/8-inch deep, boxes for single gang, 5-inch square boxes for two-gang, and special solid gang boxes with gang plaster ring for more than two switches.

8. For horns and strobes provide manufacturer's supplied back box as needed.

9. For television outlets, provide 4-gang deep boxes and 4-gang plaster rings.

10. Plaster rings shall be provided on flush-mounted outlet boxes except where otherwise indicated or specified. Plaster rings shall be same depth as finished surface. Install approved ring extension to obtain depth to finish surface.

11. In existing plywood wall or drywall construction, and where flexible steel conduit is fished into walls, single-gang and 2-gang outlets for wiring devices may be sectional steel boxes with plaster ears. Boxes shall be fastened to plywood with flat-head screws in each plaster ear screw hole. Boxes fastened to gypsum board shall be Raco, Appleton, Cooper, Bowers, or equal.

12. Altered knockouts shall be sealed with properly NEMA rated factory made knockout seals.

13. Provide and install weatherproof universal box extension adapters where flexible conduit is extended from flush outlet boxes.

B. Junction and Pull boxes:

1. Junction and pull boxes shall only be used in compliance with codes, recognized industry standards, and contract documents.

2. Interior and non-weatherproof boxes shall be constructed of blue or galvanized steel, boxes shall be provided with ample laps, be spot welded, and be rigid under torsion and deflecting forces. Furnished auxiliary angle iron framing where necessary to ensure rigidity.

3. Covers shall be fastened to box with enough machine screws to ensure continuous. Flush type boxes shall be drilled and tapped for cover screws if boxes are not installed plumb.

4. Surfaces of pull and junction boxes and covers shall be labeled with black marker ink designating system, panelboard and circuit designation shall be indicated in box interiors. In exposed Work, designation shall be located on inside of pullbox or junction box cover.

5. Weatherproof NEMA 3R pull and junction boxes installed in buildings interior shall conform with the following:

a. Cover of flush mounting boxes shall be furnished with a weather-tight gasket cemented and trimmed even with cover all around.

b. Surface or semi-flush mounted pull and junction boxes shall be listed by UL or another Nationally Recognized Testing Laboratory (NRTL) as rain-tight and be furnished complete with threaded conduit hubs.

c. Exposed portions of boxes shall be galvanized, finished with one prime coat and one coat of baked-on gray enamel, unless box(es) are already furnished with factory baked-on finish.

6. Junction and pull boxes shall be rigidly fastened to structure. Junction and pull boxes shall not depend on conduits for support. Plastic anchors or EZ (drywall type) anchors shall not be used.

7. Underground Concrete Pull Boxes:

a. Pre-cast concrete pull boxes. Concrete pull boxes shall be traffic type, reinforced for H-20 wheel loading, pre-cast concrete. Pull boxes with inside dimensions of 2 feet by 3 feet by 3 feet deep shall consist of a base section, top ring, and cover. Base section shall be furnished with 2 knockouts measuring 10 inches by 10 inches in each 3 feet side, and one 20 inches by 20 inches knockout in each 2-foot side. Pull boxes with inside dimension 4 feet by 4 feet by 4 feet deep shall consist of a base section, midsection, topping, and cover. Base section shall be furnished with 2 knockouts measuring 8-inch by 16-inch on each of two opposite sides, and one 20-inch by 20-inch knockout on each of other two opposite sides. Pull boxes shall be furnished with a minimum of 6-inch diameter sump knockout and one-inch diameter ground rod knockout.

b. Provide pull boxes with installed cable racks on interior walls. Racks shall be furnished with 3 porcelain cable holders on vertical steel mounting bars. All racks shall be effectively grounded.

c. Pull boxes shall be furnished with 3/4-inch diameter pull irons. Covers shall be traffic-type consisting of steel safety plate(s) bolted to frame. Covers shall be marked as electrical, power, or signal as required, and shall have code approved size openings for lifting the cover.

d. Boxes larger than 2 feet wide by 3 feet in length shall have hinged two section traffic type covers that comply with other requirements indicated herein.

e. Underground pull boxes without a concrete base are not acceptable.

f. Provide end bells in duct entrances and terminate them flush to inside of vault.

g. Terminate each metal conduit with insulated bushings. Effectively ground bushings at grounding terminals.

h. Install pulling irons on opposite walls and below horizontal centerlines of ducts and bricked-up openings, and in bottom. Install pulling irons with each end hooked around a reinforcing bar.

i. Remove floor drain knockout and provide a depth of 24 inches of crushed rock below box extending a minimum of 12 inches beyond on all sides.

j. Permanently and effectively ground metal equipment cases, cable racks, pull box covers/lids, and similar items in pull boxes to site grounding electrode system. Provide grounding conductor in compliance with CEC Article 250.

k. Provide 6-inch deep sand base under pull boxes and a black cloth between sand and rock.

l. Identify power and signal cables by tagging in manholes and pull boxes. Tie securely to cables with nylon cord.

m. Top of steel plate shall provide a minimum coefficient of static friction of 0.5 for either wet or dry locations, when tested for any shoe sole material. Test shall comply with ASTM D 2047 or F 489 or F 609 standards. Submit manufacturer's test results for Architect's review as part of materials and equipment submittals.

n. The use of underground extension boxes shall be limited to not more than ½ times the original depth of pull box.

o. Manhole type boxes are not acceptable.

p. Approved Products: Oldcastle Precast, Jensen Precast, Kistner, Western Precast, or OWNER approved equal.

8. Underground utility boxes shall be reinforced concrete with non-setting shoulders to prevent settlement following installation. Boxes shall be furnished with cast iron cover with finger hole, size as indicated on Drawings. Utility boxes shall be as manufactured by Oldcastle, Jensen, Kistner, Western Precast, or equal.

9. Manholes, vaults, and pull boxes required by a utility company, and installed as part of this Contract, shall meet requirements of servicing utility company.

C. Floor Outlets:

1. Floor Outlets (except for extension outlets) shall be cast iron, watertight floor boxes with flush brass floor plates, and shall be set to finish flush with finish floor covering, whether it be carpeted, wood, resilient floor covering, or other finish materials.

a. Floor boxes shall be used in offices, classrooms, and in library areas only.

b. Approved Products: Harvey Hubbell Inc. B-2503, Thomas & Betts 640 series, Legrand Omnibox, or OWNER approved equal.

2. Telephones above floor outlets, where not subject to water, shall be provided with Harvey Hubbell Inc. SC-3098 pedestals with SC309T plates. Refer to other Division 26 sections. Floor boxes shall be used in offices, classrooms and in Library areas only.

a. Approved Products: Legrand 525 series, Thomas & Betts FPT-400 Series, or OWNER approved equal

3. Plugs above floor outlets where not subject to water shall be provided with pedestals and device plates. Refer to other Division 26 sections. Floor boxes shall be used in offices, classrooms, and library areas only.

    a. Approved products: Pedestals shall be Legrand 525 series, Thomas & Betts FPT-400 Series. Device plates shall be Hubbell SS309D, or District approved equal.

4. Two gang and single box pedestal boxes shall be listed for wet locations where subject to water. Provide required cover plates.

    a. Floor outlets shall be used in Cafeteria, Cafeteria serving areas, or any areas where floors are subjected to water.

    b. Approved products: Single gang boxes - Hubbell SA-6687. Two gang boxes shall be Hubbell SA-6687D, or OWNER approved equal.

5. Extension floor outlets shall be cast iron with cast iron covers, and 1/2-inch offset entries for above-floor conduit extensions; Boxes shall be designed to permit access to wiring without disturbing above-floor extensions and shall be set flush with finish floor.

6. Above floor service fittings for data outlets and surge suppression receptacles shall be faceplate interchangeable, die cast aluminum.

    a. Approved products: Hubbell SC3098 with cover plates SS309DS, Legrand 525 series, Thomas & Betts FPT-400 Series, or OWNER approved equal.

D. Floor Pockets – Plugging Boxes:

1. Three-Gang floor lighting pockets shall be flush floor type recess floor mounted enclosure, with cast iron floor plate and hinged cast iron door notched for cables.

    a. Each floor pocket shall be provided with three 20-amp, 3 wire, 120-volt receptacles with matching caps.

    b. Approved products: Legrand or Hubbell Recessed Floor Boxes, C.W. Cole TLS 353-6, or equal, for wood floors and C.W. Cole TLS-353-6-C, or OWNER approved equal for concrete slabs.

2. Single Gang:

    a. Receptacle floor pockets shall be single gang, flush floor type, with cast iron floor plate, hinged cast iron door notched for cable and cast-iron box. Provide each pocket with a standard, single grounding type receptacle unless otherwise indicated.

        1) Approved Products: C.W. Cole TLA-362-1-FE, or OWNER approved Legrand or Hubbell recessed floor box, or OWNER approved equal. For wood floors provide C.W. Cole TLS-362-1, or OWNER approved equal.

b. Microphone or projector floor pockets shall be single gang flush floor type with cast iron floor plate, hinged cast iron door, notched for cable and cast-iron box.

1) Approved Products: Legrand or Hubbell recessed floor box, C.W. Cole TLA-362-3-FE, C.W. Cole TLS-362-3, in wood floors, or OWNER approved equal.

E. Keys and Locks:

1. Provide two keys with furnished door locks, including cabinet door locks and switchboard locks, two keys for lock switches on switchboards or control panels, and two keys with interlocks or other furnished lock switches. Deliver keys to OAR.

2. Special keys and locks shall only be provided where specified. Locks shall be keyed to Corbin No. 60 or 70 as follows:

a. Access to operate equipment shall be keyed to Corbin 60.

b. Access to service areas shall be keyed to Corbin 70.

2.02RECEPTACLES AND SWITCHES

A. Receptacles:

1. Duplex receptacles shall be heavy-duty specification grade, grounding type. Terminal screws shall be wired on the side and back with internal screw pressure plates. Mounting strap shall feature heavy-duty brass construction. Receptacle back body shall be PVC. Receptacle face shall be ivory, impact resistant nylon. Receptacles shall have triple wipe brass power contacts. Approved products:

NEMA #	Pass & Seymour	Hubbell	Leviton
(20 amps) NEMA 5-20	PS5362-I	HBL5362-I	5362-I
(15 amps) NEMA 5-15	PS5262-I	HBL5262-I	5262-I

Equal products approved by OWNER may be acceptable.

2. Duplex receptacles on circuits supplied by panel boards with integral surge suppression shall be:

Pass & Seymour model number PS5262BL (blue).
Hubbell DRUBTVSS15.
Leviton 5262-SBU, 15-amps, 120-volts.
Equal products approved by OWNER may be acceptable.

3. Single receptacles shall be heavy-duty specification grade, grounding type. Terminal screws shall be back and side wire with internal screw pressure plates. Mounting strap shall feature heavy-duty brass construction. Receptacle back body shall be thermoplastic. Receptacle face shall be ivory, impact resistant nylon. Receptacles shall have triple wipe brass power contacts. For circuits consisting of one single receptacle only, ampere rating of receptacle shall be same as circuit breaker or fuse. Approved products:

NEMA #	Pass & Seymour	Hubbell	Leviton
(20 amps) NEMA 5-20R	5361-I	HBL5361-I	5361-I
(15 amps) NEMA 5-15R	5261-I	HBL5261-I	5261-I

Equal products approved by OWNER may be acceptable.

4. Single 15 and 20-amps receptacles on circuits supplied by panel boards with integral surge suppression shall be blue in color. Approved products:

   Pass & Seymour NEMA 5-20R model number 5361-BL (blue).
   NEMA 5-15R model number 5261-BL (blue).
   OWNER approved equal.

5. Ceiling Mounted Retractable Power Cord Receptacles. Duplex 20-amps heavy duty retractable cord reel with cord length and color as indicated in drawings, Reel shall be equipped with lift/drag ratchet lock and be NEMA 5-20 cap. listed industrial grade steel housing with welded steel frame.
   Approved Manufactures: KH Industries RTB series, REELCRAFT H-7122, or OWNER approved equal.

6. Kiln and range receptacles. provide 3-pole, 4-wire, grounding type, rated 50 amps or as indicated on plans. Receptacle shall be rated 125/250 volts NEMA 14-50R. Provide 2-gang, stainless steel plates. Approved products:

NEMA #	Pass & Seymour	Hubbell	Leviton
NEMA 14-50R	3894	HBL9450A	279
WALL PLATE	SS703	S703	84026

   Equal products approved by OWNER may be acceptable.

7. Dryer receptacles. Provide 3-wire, non-grounding type, rated 30 amps at 125/250 volts, NEMA 10-30R, with 2-gang stainless steel plates. Coordinate location of junction box with the work of Section 10 2815, Hand and Hair Dryers. Approved Products:

NEMA #	Pass& Seymour	Hubbell	Leviton
NEMA 10-30R	3860	HBL9350	5207
WALL PLATE	SS703	S703	84026

   Equal products approved by OWNER may be acceptable.

8. Provide specification grade ground-fault circuit interrupter (GFCI) type receptacles in accordance with 2010 UL standards. GFCI receptacles shall have a trip indication light. Receptacle terminal screws shall be back and side wire with internal screw pressure plates. Test and reset buttons shall match device body and shall be ivory. GFCI receptacles shall be manufactured in standard configuration for installation with stainless steel smooth plates. Exterior mounted receptacles shall be mounted inside weatherproof enclosure. Approved products: Provide student restroom receptacles mounted at 80 inches above finished floor with lockable CAT 60 stainless steel cover.

NEMA #	Pass & Seymour	Hubbell	Leviton
NEMA 5-20R	2097TRI	GFRST20IB	G5362-WTI
NEMA 5-15R	1597TRI	GFRST15IB	G5262-WTI

   Equal products approved by OWNER may be acceptable.

9. Provide weatherproof receptacles as indicated or specified, Receptacles shall be GFCI type receptacles, with metal plates with die-cast lockable hinged lids and weatherproof mats. Receptacles shall be tamper-resistant with thermoplastic dual mechanism shutter system to help prevent insertion of foreign objects. Receptacles shall have extra heavy-duty brass, and one-piece mounting strap with integral ground. Receptacles shall be ivory color, impact resistant nylon face and back body. Approved products:

NEMA #	Pass & Seymour	Arrow Hart	Leviton
NEMA 5-20R	TR63-I	TR8300V	8300SGI
NEMA 5-15R	TR62-I	TR8200V	8200SGI

Equal products approved by OWNER may be acceptable.

10. Standard GFCI cover plates shall be Pass & Seymour 4600, Raco 5028-0, or equal. GFI cover plates shall be provided with a CAM lock mechanism with two keys or a padlock hasp that does not protrude through the face of the cover and will allow the shank of locks keyed Corbin No. 60 keys.

11. Provide transient voltage surge suppression (TVSS) receptacles offering metal oxide varistors (MOVs) protecting normal and common modes, (L-N, L-G, N-G) with 500V suppressed voltage. TVSS devices shall offer 3-mode equal protection with 210 joules minimum per mode of energy absorption and 13,000-amp maximum surge capability. TVSS devices shall have 3 thermal fuses and two over-current protection fuses. TVSS devices shall have LED visual only surge status indicator to alert user to surge suppression circuit condition. Visual indicator will be illuminated (red) when power is on and surge suppression circuit is fully functional. Visual indicator will not be illuminated when power is off or unit experiences loss of surge suppression protection. Terminals shall be back and side wire including ground terminal. Color shall be blue. Approved Products

NEMA #	Pass& Seymour	Hubbell	Leviton
NEMA 5-20R	5352BLSP	HBL5360SA	5380B
NEMA 5-15R	5252BLSP	HBL5260SA	5280B

Equal products approved by OWNER may be acceptable.

B. Switches

1. Local Switches:

a. Local switches shall be high strength thermoplastic toggle, industrial grade, rated 20 amps at 120-277 volts AC only, with plaster ears, external screw pressure plate back and side wired, and standard size composition cups which fully enclose mechanism. Switches shall be approved for installation at currents up to full rating on resistive, inductive, tungsten filament lamp and fluorescent lamp loads, and for up to 80 percent of rating for motor loads. Switches shall have oversized silver alloy contacts for long life and better heat dissipation. Provide switches as single pole, double pole, 3-way, 4-way, non-lock type. Provide non-lock type switches with ivory handles;

	Pass & Seymour	Hubbell	Leviton

Single pole	PS20AC1I	HBL1221I	1221-2I
Double pole	PS20AC2I	HBL1222I	1222-2I
Three-way	PS20AC3I	HBL1223I	1223-2I
Four-way	PS20AC4I	HBL1224I	1224-2I

Equal products approved by OWNER may be acceptable.

b. Lock type switches shall be specification industrial grade, 20 amp, 120-277 volts with metal or nylon key guides with on/off indication, and operable by same key. Key shall be District standardized vertically oriented, tamper resistant, forked key with two each 5/16-inch long forks, 5/32-inch spacing between forks and 5/16-inch width overall. Approved products:

	Pass & Seymour	Arrow Hart
Single pole	PS20AC1L w/#500 Key-2L	1221L w/1201LK Key
Double pole	PS20AC2Lw/#500 Key	1222L w/1201LK Key
Three-way	PS20AC3L w/#500 Key	1223L w/1201LK Key
Four Way	PS20AC4L w/#500 Key	1224L w/1201LK Key

Equal products approved by OWNER may be acceptable.

c. Rotary lock switches shall incorporate a tumbler type lock to prevent unauthorized operation. Lock shall be tumbler type by Corbin, keyed to a HH41 key. Lock switch to be installed with pin tumblers facing downward. Key shall be removable in all positions. Each device shall be complete with 2 keys. Keys shall be delivered only to the OAR. Switches shall be rated at 20 amps, 120-volt or 277-volt AC. Switch plates shall be of stainless steel, engraved with on and off positions indicated. Approved products:

	Arrow Hart
Single pole	AH1191N
Double pole	AH1192N
Three-way	AH1193N

Equal products approved by OWNER may be acceptable.

d. Pilot light switches shall be rated 20 amps and shall conform to specifications for local switches. Switches shall be furnished with red, Lexan handles that are lighted by LED lamps. Pilot light shall light when load is on. Approved products for 120 and 277 Volts:

1) Pilot light 120-Volt switches. Approved products. Approved products:

	Pass& Seymour	Hubbell	Leviton
Single pole	PS20AC1-RPL	HBL1221-PL	1221-PLR
Double pole	PS20AC2-RPL	HBL1222-PL	1222-PLR
Three-way	PS20AC3-RPL	HBL1223-PL	1223-PLR

Equal products approved by OWNER may be acceptable.

2) Pilot light 277-Volt switches shall be single pole and shall conform to specifications for local switches, and the requirements of paragraph d above. Approved Products:

Pass & Seymour	Leviton	Hubbell

PS20AC1-RPL 1221-7PR HBL1221-PL7
Equal products approved by OWNER may be acceptable

e. Provide remote control switches for mechanically held contactors arranged for 3-wire control, toggle type, momentary contact, single pole, 3-position with center off position, rated 20 amps at 120-277 volts AC only, with plaster ears, binding screws for side wiring, standard size composition cups which fully enclose mechanism, and ivory handles. Approved products:

Pass & Seymour	Hubbell	Leviton
1251-I	HBL1557-I	1285-I

Equal products approved by OWNER may be acceptable.

f. Provide remote control switches for magnetically held contactors arranged for 3-wire control, toggle type, maintained contact, single pole, 3-position with center off position, rated 20 amps at 120-277 volts AC only, with plaster ears, binding screws for side wiring, standard size composition cups which fully enclosed mechanism, and ivory handles. Approved products:

Pass and Seymour	Hubbell	Leviton
1225-I	HBL 1385	1285-I

Equal products approved by OWNER may be acceptable.

g. Momentary Contact locking key type switch. 20A 120/277V center off. Key shall be District standardized vertically oriented, tamper resistant, forked key with two each 5/16" long forks, 5/32" spacing between forks and 5/16" width overall. Approved products:

Arrow Hart AH1995L w/ AH2000 key
Equal products approved by OWNER may be acceptable.

h. Momentary Contact switch low voltage 1 pole 3A 24VAC 3 position center off. Key for locking switch shall be District standardized vertically oriented, tamper resistant, forked key with two each 5/16" long forks, 5/31" spacing between forks and 5/16" width overall. Approved products:

Pass and Seymour Toggle 1081I, Locking 1081KGRY w/#500 Key.
Equal products approved by OWNER may be acceptable.

2. Time Switches and Photoelectric Controls for existing construction.

a. Provide time switches with a 7-day, solid-state, electronic type capable of fully automatic or manual operation and housed in a sheet steel enclosure unless built into a panel or switchboard. Resistive or inductive contacts rated for 25-amps, each pole 240-VAC; 5-amps tungsten or 277-VAC pilot duty, each pole 240-VAC. Time switches to contain a non-volatile clock and non-volatile memory with a built-in rechargeable super capacitor power carry-over system. Battery carryover is not acceptable. Provide a minimum of 15 on/off set points per week. Timing to be in one-minute increments with a minimum on or off time of one minute. Time

switch digital displays to indicate days of week, hours, and minutes. Display to contain a load status light to indicate when equipment is in operation.

b. Required additional features:

1) Liquid crystal display panel.

2) Holiday scheduling: Up to 40 dates may be assigned special holiday schedules, up to one year in advance.

3) Automatically adjusts to and from daylight savings time and for leap year.

4) Contact ratings: 10 amp at 240 VAC.

5) Safety override switch for each circuit to either provide shut down of circuit or to override on.

6) Selective review: All or part of schedule shall be displayed at touch of a key.

7) Super Capacitor for power carry-over system.

8) Supply voltage: 120/277-Volt.

9) 365-day advance scheduling.

c. Approved products: Tork Model EW 101B series, Intermatic ET2125C series, or OWNER approved equal.

d. Photoelectric control: Shall be rated 2,000 watts, 120V with single pole, single throw, normally closed contact, enclosed in a die-cast aluminum gasketed enclosure with 1/2-inch conduit fitting. Approved products: Tork series 2100, or OWNER approved equal.

3. Heavy Duty Disconnect Switches

a. Heavy duty type switches shall be 240 volts or 480 volts as required, totally enclosed, externally operated, with quick-make, quick-break operating mechanism, interlock cover, and provisions for locking cover in closed position and locking switch in on and off positions. Switches shall be single throw, unless otherwise indicated or specified. Switches controlling direct current loads shall be DC rated.

b. Switches shall be furnished with fully visible switch blades in off position when switch door is open. Current carrying parts shall be plated to resist corrosion and promote cool operation.

c. Switches shall be furnished with removable arch suppressors where necessary to permit easy access to line side lugs. Lugs shall be front removable.

d. Switches shall be UL or NRTL listed and shall comply with NEMA Standard KS-1. and UL, or other Nationally Recognized Testing Lab listed for no less than 75 degrees C. copper wires.

e. Switch enclosure shall be NEMA Type 1 for indoor locations, and NEMA Type 3R, rainproof for outdoor locations.

i. NEMA Type 3R enclosures shall be manufactured from galvanized steel with gray baked enamel and shall be furnished complete with rainproof bolt on hubs.

ii. Covers shall be attached with pin type hinges. Removable closing cap types are not permitted.

iii. In kitchen area, provide disconnect switchers in a NEMA type 4 stainless steel enclosure.

f. Quick release latches shall be permitted only when switches are furnished tamper resistant.

g. Switches shall be furnished with Corbin 66 locks keyed to Corbin 60 key.

h. Switches shall be fusible or non-fusible as indicated on Drawings. Fusible switches shall accept cartridge fuses.

i. Current rating of switches, number of poles, solid neutral facilities, and current rating of fuses shall be as indicated on Drawings.

j. Switches shall have proper horsepower rating equal to or greater than horsepower of motor controlled. Only lower horsepower rating of dual rated switches will be permitted as a switch rating. Switches shall accept Class H, Class J, and Class R fuses.

k. Padlocking device shall lock operating handle and cover with one padlock regardless of on or off position. Furnish a minimum of two padlocks and two keys with each switch. Padlocks shall be Corbin No. 66 keyed to Corbin No. 60 keys.

l. Furnish one spare fuse for each fusible disconnect switch installed. Spare fuses shall be same type and rating as those installed.

m. Square D, General Electric, Cutler Hammer or equal approved by OWNER.

4. Emergency Lighting Control Unit

a. The Emergency Lighting Control Unit shall provide all required functionality to allow a standard lighting control device to control emergency lighting in conjunction with normal lighting in any area within a building.

b. The emergency lighting control unit shall allow control of emergency lighting fixture in tandem with normal lighting in an area while ensuring that emergency lighting will turn on immediately to full brightness upon loss of normal power supplying the control device. Emergency lighting operation shall be independent for each controlled area and shall not require a generalized power failure for proper operation.

c. The device shall have normally closed dry contacts capable of switching 10-amp emergency ballast loads at 120-277 VAC, 60 Hz., 2-amp tungsten loads at 120 VAC, 60Hz., LED loads at 120-277V VAC, 60 Hz

d. The device shall have universal rated voltage inputs provided for normal power sense and normal switched power at 120-277 VAC, 60 Hz.

e. The device shall provide separate LEDs to indicate the presence of normal and emergency power sources. The LEDs shall indicate the unit's current operational mode (normal or emergency)

f. The device's normal power input terminal shall be connected to the line side of the control device such that any upstream fault causing a loss of power, including the tripping of the branch circuit breaker, will force the unit into the emergency mode and turn on the emergency lighting.

g. The unit shall automatically switch emergency lighting on and off as normal lighting is switched. When normal power is not available, the unit shall force and hold emergency lighting on regardless of the state of any external control device until normal power is restored.

h. Approved products: WattStopper ELCU-100 Emergency Lighting Control Unit, LVS #EPC-PM Series, Lighting Control Design #GR 2001 series, or OWNER approved equal.

5. School Main Entrance Intercom Station: Refer to specification section 28 1000 – Access Control System.

6. Kitchen Service Entry Doorbell and buzzer: Provide 24-Volts heavy duty corrosion resistant doorbell and buzzers. Buzzer shall sound in the kitchen's office and kitchen's work area. Push button shall be protruding type, AC or DC up to 48 volts. Protruding button shall have a polish anodized aluminum shell, snap fit or locknut mounted with normally open momentary contacts.

   a. Approved Products: Bell and Buzzer - Edwards AdaptaBuzzer 343A series, Edwards Adaptabel 340-Gridor OWNER approved equal.

   b. Push button – Edwards Recessed Center Push Button 694-B, or OWNER approved equal.

2.03IDENTIFICATION AND SIGNS

A. Identification Plates:

1. Provide identification plates for the following unless otherwise specified, for switchboards, unit substations, motor control centers, control panels, push-button

stations, time switches, contactors, motor starters, motor switches, panelboards, and terminal cabinets.

2. Identification plates shall be of plastic stock and shall adequately describe function, voltage and phase of identified equipment. Where identification plates are detailed or described on Drawings, inscription and size of letters shall be as indicated. For lighting and power panels, identification plates shall indicate panel designation, voltage, and phase of panel. For terminal cabinets, identification plates shall indicate system contained in terminal cabinet.

3. Identification plates shall be black-and-white nameplate stock of bakelite with characters cut through black exposing white. Plates shall be furnished with beveled edges and shall be securely fastened in place with No. 4 Phillips-head, cadmium-plated steel, self-tapping screws. Characters shall be 3/16 inch high, unless otherwise indicated.

B. Markings:

1. Install identification markings to surface-mounted starters, switches, disconnect switches, contactors, and other devices controlling motors and appliances. Provide abbreviations required along with an identifying number. Markings to be provided with locking type stencils using paint of a contrasting color. Figures shall be 3/8 inch high unless otherwise indicated. Dymo Industries Inc., self-sticking plastic labels, with embossed characters made with a typewriter may be installed instead of stencils and paint; p-touch self-adhesive plastic, or Brother P-Touch self-sticking laminated plastic labels may be installed.

2. High Voltage: High voltage switchboards, cabinets, boxes, and conduits exposed in accessible locations, including under buildings and in attics, are required to be marked "WARNING-HIGH VOLTAGE – ABOVE 600 VOLTS". Markings for switchboards shall consist of 18 gage steel, porcelain enamel sign of standard manufacture. Markings for boxes, cabinets, and conduits shall be by means of stenciling or printed self-adhesive markers, Westline Tel-A-Pipe, or equal. Provide letters of black on orange background and not less than 1-7/8 inches high. On conduit runs, install markings at intervals not exceeding 10 feet in any individual area. Markings shall be installed after other painting Work is complete.

C. Warning Signs:

1. Provide a warning sign on outside of each door or gate to rooms or enclosures containing high voltage equipment. Signs required reading, "WARNING - HIGH VOLTAGE - KEEP OUT". Provide 2-inch high lettering.

2. Provide a warning sign on each high-voltage non-load break disconnect and fused cutout (not oil filled). Signs required reading, "DO NOT OPEN UNDER LOAD". Provide 2-inch-high lettering.

3. Provide signs of standard manufacture, 18 gage steel, with porcelain enamel finish. Provide red lettering on a white background.

PART 3 - EXECUTION

3.01 INSTALLATION AND SUPPORT OF BOXES

A. Install outlet boxes flush with finished surface of wall or ceiling. Install plumb and securely fastened to structure, independent of conduit. Except where otherwise indicated, provide factory-fabricated adjustable attachment bar hangers between studs to support outlet boxes. When installation is performed in fire rated walls, maintain the wall's rating integrity by means of approved fire stop methods.

B. Outlet boxes installed in suspended or furred ceilings with steel runner or furring channels shall be supported, except where otherwise indicated, by a Unistrut P-4000, Tessco A1200HS-10, or Cooper B-Line B22s-HG, or OWNER approved equal channel spanning main ceiling runner channels.

1. Each box shall be supported from its channel by a 3/8-inch 16 threaded steel rod with a Unistrut P-4008, Fastenal #48604, Copper B-Line 78101140346 or OWNER approved equal; and nut and Tomic No. 711-B Adapta-Stud, or OWNER approved equal.

2. Rod shall be tightened to a jamb fit with channel and its nut. Box shall be locked to rod by means of a 1/2-inch locknut on stud and a 3/8-inch 16 hex nut locking stud to rod.

C. Heights of outlets and equipment indicated on Drawings shall govern. In absence of such indications, following heights shall be maintained with heights measured to centerline unless otherwise noted. Compliance with American with Disability Act is required. Coordinate with Architect and OWNER prior to installation.

1. Install wall-mounted switches at 48 inches above finished floor.

2. Outlet boxes for fire alarm pull stations shall be mounted at a mounting height above finished floor that ensures that the operating handle of the initiating device is no higher than 48 inches from finished floor.

3. Wall mounted fire alarm strobe or horn/strobe devices shall be mounted such that the entire lens is not less than 80 inches above finished floor. If ceiling heights allow, wall mounted appliances shall have bottom of lens a minimum of 80 inches but not more than 96 inches to the top of lens.

4. Install outdoor fire alarm audible devices or fire alarm sprinkler flow bells at least 10 feet but not more than 12 feet above finished floor to center. Provide STI or other OWNER approved protective covers as required in plans.

5. Voice evacuation speakers mounted indoors shall be mounted in ceiling space or if mounted on wall shall not be less than 10 feet to center above finished floor.

6. Install clocks and speakers, in classrooms and offices, 8 feet above finished floor. Unless otherwise indicated.

7. In rooms other than places of assembly such as, but not limited to, multipurpose rooms, auditoriums, and libraries, clock outlets and speakers in classrooms and offices shall be mounted 8 feet above finished floors. Other assembly areas such

as gymnasiums shall be mounted 10 to 12 feet above finished floor. Provide STI, or equal protective covers for clocks when required.

8. Install fire alarm strobe lights 80 inches to bottom of light above finished floor.

9. Install outside bells and yard light outlets 4 feet above second floor level for 2 or more story buildings, 12 inches below top plate level for one story buildings without covered porch or arcade, and 12 inches below covered porch and arcade ceilings.

10. Install desk telephones, power receptacle outlets, and data outlets 15 inches above finished floor.

11. Install panelboards and terminal cabinets 6 feet 6 inches from finish floor to top of cabinet.

12. Install television outlets at a height corresponding to location of television monitor, or as indicated on plans.

13. The use of extension boxes shall be limited to not more than 1 times the original depth of junction box.

3.02 COVER PLATES

A. Provide a plate on each switch, plug, pilot light, data, interphone, public telephone, and television outlet, and on existing and reset outlets where so indicated or required. Plates shall be of stainless steel unless otherwise specified.

B. Flush wiring device and signal system outlets indicated to be blank covered, shall be covered with blank stainless-steel plates. Flush lighting outlets to be blanked shall be covered with Wiremold 5736 steel covers, or equal, painted to match surrounding finish. Provide stainless steel covers to blank indicated or required surface-mounted outlets.

C. In the following cases, and at required locations. Switch and receptacle plates shall be engraved with the device(s), or fixtures being controlled, or as indicated:

1. Three-gang and larger gang switches in locations other than classrooms.

2. Lock switches.

3. Pilot switches.

4. Switches so located that operator cannot see fixtures, or items of equipment controlled while his hand is on the switch.

5. Switches not in same room with fixtures or items of unit heaters, air curtains, fly fans, etcetera.

6. Receptacles operating at other than 120 V shall be identified with the operating voltage.

7. Switches operating on 277 V shall be identified with the operating voltage.

8. Where indicated on Drawings.

D. Designations shall be as indicated on Drawings or as specified by Architect.

3.03 IDENTIFICATION OF CIRCUITS AND EQUIPMENT

A. Provide descriptive nameplates or tags permanently attached to switchboards, motor control centers, transformers, panelboards, circuit breakers, disconnect switches, starters, pushbutton control stations and other apparatus installed for operation or control of circuits, appliances, fire alarm control panel(s), fire alarm annunciator(s), power supplies, terminal cabinets, energy management control units, and Information technology system backbone and distribution equipment points.

B. Provide nameplates of engraved laminated plastic, or etched metal. Submit Shop Drawings denoting dimensions and format to Architect before installation. Fasten to equipment with escutcheon pins, rivets, self-tapping screws, or machine screws. Self-adhering or adhesive backed nameplates are not permitted.

C. Fasten tags to feeder wiring in conduits at every point where runs are broken or terminated, including pull wires in empty conduits. Indicate circuit, phase, and function. Tag branch circuits in panel boards and motor control centers. Tags may be manufactured of pressure-sensitive plastic or embossed self-attached stainless steel or brass ribbon.

D. Provide circuit identification cards and cardholders in all panel boards. Cardholders shall consist of metal frame retaining a clear plastic cover permanently attached to inside of panel door. List of circuits shall be typewritten on a card. Circuit description shall include name or number of circuit’s area and connected load.

E. Junction and pull boxes shall have covers stenciled with box number when indicated on Drawings, or circuit numbers according to panel schedules. Data shall be lettered in a conspicuous manner with a color contrasting with finish.

F. Name shall be correctly engraved, with a legend indicating function or areas, when required by codes or indicated on Drawings.

3.04 PROTECTION

A. Protect Work of this section until Substantial Completion.

3.05 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off Project site.

END OF SECTION

SECTION 26 0519

ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.01 SUMMARY

A. Provisions of Division 01 apply to this section.

B. Section Includes: Low-voltage wire, splices, terminations and installation.

1.02 RELATED REQUIREMENTS

A. The installation of Low voltage wiring systems shall comply with the following building codes, regulations, and industry standards:

1. Building Codes and Jurisdictional Requirements:

a. California Building Code (CBC).

b. California Electrical Code (CEC).

c. California Fire Code (CFC)

d. National Fire Protection Association (NFPA): NFPA-70 – National Electrical Code

e. NFPA-72 – National Fire Alarm and Signal Code.

f. Applicable California OSHA Standards.

g. City of Los Angeles Electrical Code.

h. City of Los Angeles Fire Code.

2. Industry Standards:

a. TIA/EIA-607 – Grounding and bonding requirements for telecommunications.

b. ANSI/SIA Standards for alarms and access controls.

3. THWN/THHN wires shall comply with the following standards:

a. UL 83 for thermoplastic insulated wires.

b. UL 1063 for machine tool wires and cables.

c. UL 44 standard for thermoplastic-insulated, heat-resistant, non-metallic sheathed cable (Type RHH/RHW) for use in both wet and dry locations.

d. UL 3566 for copper-clad aluminum conductors for installations requiring high conductivity and flexibility.

1.03 SUBMITTALS

A. Provide in accordance with Division 01.

B. Provide product data.

C. Prior to start of construction; provide letter from wiring and electrical cables manufacturer certifying that the products are qualified/ listed as low electromagnetic field products.

1.04 SUBSTITUTIONS

A. Substitution requests shall comply with the contract general provisions stated in Division 01.

B. When deviations are proposed the following information shall be submitted:

1. Substitution request form that states the reasons and benefits to OWNER.

2. Proposed substitutions requests shall provide proof of compliance with OWNER'S requirements and applicable standards.

1.05 QUALITY ASSURANCE

A. Components and materials shall be listed and approved for the intended application by Underwriter's Laboratories (UL), or other Nationally Recognized Testing Laboratory (NRTL), and in compliance with applicable industry standards and codes.

B. Wiring installation shall be performed under the supervision of state certified electricians. CONTRACTOR or Installer's electricians shall be certified in accordance with Labor Code sections 3099, and 3099.2 and section 209.0 of the California Code of Regulations.

C. CONTRACTOR shall have adequate experience installing systems of similar size and complexity.

1. Qualifications of Installer: Minimum five years of experience installing products and systems of similar scope and complexity.

2. Installer shall have completed at least five projects of equivalent scope and complexity.

3. CONTRACTOR shall have completed and commissioned a minimum of five service agreements that provide similar support services to those needed for this project.

4. System startup and testing shall be performed under direct observation of the Project Inspector and OAR.

D. The Project Inspector will observe installation of feeder cables. Notify the Project Inspector not less than two working days in advance of the proposed time of feeder installation.

1.06 WARRANTEE

A. Provide a one-year labor warranty.

B. Provide material warranty of no less than 10 years.

C. Warranty period begins at substantial completion or project acceptance for beneficial occupancy.

D. CONTRACTOR shall warranty all products and materials. Multiple warranty sources are not acceptable.

PART 2 - PRODUCTS

2.01 WIRES

A. All wiring and feeders shall be Copper. Aluminum conductors are only allowed for vehicle charging stations per Specification Section 26 0520 Low Voltage Aluminum Feeders for Electric Vehicle Charging Stations.

B. Pressure cable connectors shall be pre-insulated 3M Scotchlok, Ideal Wing Nut, O-Z/Gedney or equal.

C. Wires shall be single conductor type THHN or THWN insulated with polyvinyl chloride and covered with a protective sheath of nylon, rated at 1000 volts. Wires may be operated at a maximum continuous conductor temperature in dry locations of 90 degrees C. and 75 degrees C. in wet locations. Wires and cables shall be listed by Underwriter's Laboratories (UL) Standard 83 for thermoplastic insulated wires and listed for installation in accordance with Article 310 of the California Electrical Code (CEC).

D. Conductors shall be solid for 12 AWG and smaller conductors and stranded for 10 AWG and larger conductors.

E. For Direct Current Fast Charging stations, the CONTRACTOR may opt for either aluminum or copper, depending on which material provides the most cost-effective solution. If Aluminum if used, the following applies:

1. Provide Aluminum rated compression or cold-welded crimp connectors for termination of aluminum feeders to panels or service equipment. CONTRACTOR shall use a compression tool to crim the Aluminum conductors into place.

2. Use an approved Aluminum antioxidant compound to mitigate the risk of oxidation. Submit antioxidant compounds documentation to OWNER's OEHS department for review and approval.

3. Heavy-duty mechanical lugs/connectors shall be used for terminating large Aluminum feeders at panels and service entrance.

4. Twist-On connectors shall not be used unless specifically approved for Aluminum wiring and only if used with antioxidant compound for Aluminum branch circuit terminations.

F. Conductors shall be insulated with PVC and sheathed with nylon.

G. Wires shall be identified by surface markings indicating manufacturer's identification, conductor size and metal, voltage rating, UL symbol, type designations and optional rating. Indentations for lettering are not permitted.

H. Wires shall be tested in accordance with the requirements of UL standard for types THWN and THHN.

I. Conductors shall be solid Class B or stranded Class C annealed uncoated in accordance with UL standards, or another Nationally Recognized Testing Laboratory (NRTL).

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install all conductors and cables in raceways in finished walls, above ceiling, and floors.

B. All conductors and cables that pass-through manholes and handholes shall be full looped inside the manhole or handhole and shall be supported in Stainless steel, Fiber Reinforced Plastic (FRP) or OWNER approved equal racks.

C. Wires shall not be installed until debris and moisture is removed from conduits, boxes, and cabinets. Wires stored at site shall be protected from physical damage until they are installed, and walls are completed.

D. Wire-pulling compounds furnished as lubricants for installation of conductors in raceways shall be compounds approved and listed by UL, NRTL, or equal. Oil, grease, graphite, or similar substances are not permitted. Pulling of 2 AWG or larger conductors shall be performed with a cable pull machine. Any runs shorter than 50 feet are exempt. When pulling conductors, do not exceed manufacturer's recommended values

E. At outlets for light, power, and signal equipment, pigtail splices with 8-inch circuit conductor leads for connection to fixtures, equipment, and devices.

F. Pressure cable connectors, Yellow, Red, or Blue spring-loaded twist-on type, may be furnished in splicing number 8 AWG or smaller wires for wiring systems. Listed Push-in spring clamp wire connectors, Ideal In-Sure, or equal may be used in luminaires for fixture wiring.

G. Joints, splices, and taps for wires No. 6 gage and larger shall be performed with high-pressure cable connectors approved for installation with copper conductors. Connectors shall be insulated with heavy wall heat shrink WCSM, or cold-applied roll-on sleeve RVS. Insulation level shall be a minimum of 1000V, and joints, splices, and taps shall be qualified to ANSI C 119.1, UL, NRTL, or equal listed mechanical pressure connections.

H. Joints, splices, and taps for wires No. 6 gage and larger for Direct Current Fast Charging Stations shall be performed with high-pressure cable connectors approved for installation with aluminum conductors. Connectors shall be insulated with heavy wall heat shrink WCSM, or cold-applied roll-on sleeve RVS. Insulation level shall be a minimum of 1000V, and joints, splices, and taps shall be listed for use with Aluminum conductors.

I. Connections to any bussing and high-press cable connectors shall be securely bolted together with corrosion-resistant plated carbon steel, minimum grade five machine screws secured with constant pressure-type locking devices.

J. Connection of any bonding or grounding conductors shall be securely bolted together with corrosion-resistant plated carbon steel, minimum grade five machine screws secured with constant pressure-type locking devices.

K. Wire switchboards, panel cabinets, pull boxes, and other cabinets except public address, shall be neatly grouped and tied in bundles with nylon ties at 10-inch intervals. In switchboards, panels and terminal blocks, wires shall be fanned out to terminals. If bundles are longer than 24 inches, a maximum of nine current carrying conductors may be bundled together.

L. Install conductor lengths with a minimum length within the wiring space. Conductors must be long enough to reach the terminal location in a manner that avoids strain on the connecting lug.

M. Maintain the conductor required bending radius.

N. Neutral conductors larger than 6-gage, which are not color identified throughout their entire length, shall be taped, painted white or natural gray, or taped white where they appear in switchboards, cabinet, gutters or pull boxes. Neutral conductors 6 gage and smaller shall be white color identified throughout their entire length.

O. Fire alarm and clock wiring shall be continuous from terminal cabinets or from equipment to each device. Splices are not permitted between devices and/or terminal cabinets at junction and pull boxes. Wiring shall be terminated at terminal blocks or devices only.

P. Wiring systems shall be free from short circuits and grounds, other than required grounds. The CONTRACTOR shall be responsible for the testing of feeder and branch circuit conductor's insulation resistance. The insulation of the conductors shall be tested prior to connections to any panelboards, switchboards, variable frequency drives, lighting control systems, ballasts, and wiring devices such as but not limited to GFI receptacles, TVSS receptacles, or equipment. Insulation testing of panelboards and switchboards shall be independently performed from the insulation testing of any conductors as specified in other sections of this specification.

1. Utilize the services of an approved independent testing laboratory to perform megger time-resistance insulation testing of feeder conductors using a 500V megger for 1 minute. Tests must be conducted with conductors/cables disconnected at both ends.

    a. Provide calibration program records to assure the testing instrument to be within rated accuracy. The test equipment accuracy shall be in accord with the requirements stated by the National Institute of Standards and Technology (NIST).

    b. Test equipment shall be provided with a label stating the date of last calibration. As a minimum the equipment shall have been calibrated within the past 12 months.

    c. Test reports shall include the following:

        1) Identification of the testing organization.
        2) Equipment identification.
        3) Ambient conditions.
        4) Identification of the testing technician.
        5) Summary of project.
        6) Description of equipment being tested.
        7) Description of tests.
        8) Test results.
        9) Analysis, interpretation and recommendations.

2. Tests shall be performed in the presence of the Project Inspector.

3. Insulation resistance shall not be less than 100 mega-ohms.

3.02 COLOR CODES

A. General Wiring:

1. For phase and neutral conductors 6 gage or larger, permanent plastic-colored tape may be furnished to mark conductor end instead of coded insulation. Tape shall cover not less than 2 inches of conductor insulation within enclosure.

2. Color code conductor insulation as follows:

SYSTEM VOLTAGE		
Conductor	208Y/120	480Y/277
Phase A	Black	Brown
Phase B	Red	Orange
Phase C	Blue	Yellow
Neutral	White	Natural Gray

Neutrals shall be colored-distinguished if circuits of two voltage systems are used in the same raceway.

B. Signal Systems: Wires for signal systems shall be color-coded and installed under observation of the Project Inspector. Except where otherwise specified, color-coding shall be as follows:

SYSTEM	COLOR CODE
Clocks	Pink, Gray and Orange
Program Bells (some existing elementary schools)	White (Common)Black
Initiating Devices (Non-Addressable)	Red (+) and Black (-)
Program Bells (some existing secondary schools)	White (120-volts, common) Black (C.R. program) Blue (Shop program) Brown (Gym program) Yellow (Auditorium fire alarm)
Fire Alarm Horns	Pink (+) and Gray (-)
Fire Alarm Strobes	Orange (+) and Blue (-)
Un-Interruptible 24 Volt Power (Annunciator, Water Flow, and Audible Device)	Yellow (+) and White (-) Note: A single white wire may be common to both
Interruptible 24 Volt Power (4 wire smoke detectors, duct detectors)	Brown (+) and White (-) Note: A single white wire may be common to both
Switch-Leg Sprinkler Bell (Between water flow and audible device)	Violet (+) and White (-)

Door Holding Magnets (Non-Power Limited)	Black (+) and White (-)

3.03 FEEDER IDENTIFICATION

A. Feeder wires and cables shall be identified at each point the conduit run is broken by a cabinet, box, gutter, etc. Where terminal ends are available, identification shall be by means of heat shrink wire markers, which provide terminal strain relief. Markers shall be by Tyco Electronics, Panduit, Brady Perma-Sleeve, or equal. Identification in other areas shall be by means of wrap-around tape markers from Tyco Electronics, Panduit, Brady Perma-Code or equal. Markers shall include feeder designation, size, and description.

3.04 TAPE AND SPLICE KITS

A. Splices, joints, and connectors joining conductors in dry and wet locations shall be covered with insulation equivalent to that provided on conductors. Free ends of conductors connected to energized sources shall be taped. Voids in irregular connectors shall be filled with insulating compound before taping. Thermoplastic insulating tape approved by UL, NRTL, or equal for installation as sole insulation of splices shall be furnished and shall be installed according to manufacturer's printed specifications.

3.05 PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.06 CLEANUP

A. Remove rubbish, debris and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 26 0526

GROUNDING AND BONDING

PART 1 - GENERAL

1.01 SUMMARY

A. Provide and install an effective grounding and bonding system.

B. Related Requirements:

1. Refer to related sections for their system grounding requirements.

2. Division 01 - General Requirements.

3. Division 26 – Electrical.

1.02QUALITY ASSURANCE

A. Reference Standards:

1. IEEE 142 Green Book.

2. Underwriter's Laboratories (UL).

3. California Electrical Code.

4. Building Industry Consultant Services International (BICSI).

5. EIA/TIA (Signal and power).

6. Nationally Recognized Testing Laboratory (NRTL).

1.03SYSTEM DESCRIPTION

A. Equipment, components, or materials that enclose electrical conductors, or are likely to be energized by electrical currents shall be effectively grounded.

B. Metal equipment parts such as switchboards, panelboards, metal enclosures, raceways, equipment grounding conductors, and earth grounding electrodes shall be effectively bonded into a continuous grounding path.

C. Metallic systems or electrically conductive materials shall be effectively bonded to the building’s grounding electrode system.

D. A separately derived AC system shall be grounded to the equipment grounding conductor and to a separate “made” electrode of building grounding electrode system.

E. Provide effective electrical equipment bond continuity to all metal raceways and enclosures. Grounding shall be achieved through a code sized green insulated grounding conductor provided within each raceway.

1. Each flexible conduit over six feet in length shall be provided with a green insulated grounding conductor of required size.

2. Provide code sized equipment grounding conductor in all flexible conduits as required by CEC.

3. The length of flexible conduit installations shall not be less than six feet.

4. Effectively ground metal raceways and enclosures at each end.

F. Cold water, or other utility piping systems, shall not be utilized as grounding electrodes. In addition to bonding to cold water pipe provide at least one of the following made grounding electrodes:

1. Provide a dedicated "made" electrode for new buildings and existing facilities service upgrades. The made electrode shall be fabricated of at least 20 feet of uncoated galvanized 1/2 inch diameter rebar encased by at least two inches of concrete, and placed next to the bottom of a concrete foundation, or footing in direct contact with earth A welded extended portion shall surface at the location of the common grounding electrode bus bar and be extended by a 3/0 exothermic welded bare copper cable, or be welded directly to the bus. The exothermic weld shall be at least four inches above finished floor in a dry location. The main grounding electrode and associated grounding conductors shall be in an enclosure and in conduit.

2. The concrete enclosed electrode shall be fabricated of at least 20 feet of code sized bare copper conductor. The electrode conductor shall never be smaller than No. 2 AWG. Electrode shall be encased by at least two inches of concrete, located within or near bottom of a concrete foundation, or footing in direct contact with earth. Footing rebar shall be connected to electrode conductor with approved connectors.

3. An external grounding electrode, as specified hereafter or as required by the CEC shall be installed and connected to foundation or footing rebar.

G. Non-current carrying metal parts of equipment enclosures, signal and power conduits, switchboard and panelboard enclosures, motor frames, equipment cabinets, and metal frames of buildings shall be permanently and effectively bonded to the grounding system. Provide a CEC sized equipment grounding conductor in every raceway.

H. Metallic or semi-conducting shields and lead sheaths of cables operating above 1000 Volts shall be permanently and effectively grounded at each splice and termination.

I. Neutral of service conductors shall be grounded as follows:

1. Neutral shall be solidly grounded at only one point within the Project site for that particular service. Preferable location of grounding point shall be at the service switchboard, or main switch.

2. Equipment and conduit grounding conductors shall be bonded to that grounding point.

3. If other buildings or structures on the Project site are served from a switchboard or panelboard in another building, power supply is classified as a feeder and not as a service.

4. Equipment grounding conductor shall be installed from switchboard to each individual building. At building, grounding conductor shall be bonded with power equipment enclosures, metal frames of building, etc., to “made” electrode for that building.

5. Feeder neutrals shall be bonded at service entrance point only; neutrals of separately derived systems shall be bonded at the source only.

J. If there is a distribution transformer at a building the secondary neutral conductor shall be grounded to “made” electrode serving the building.

K. Within every building, the main switchboard or panelboard, shall be bonded to the cold-water line. Metallic piping systems such as gas, fire sprinkler, or other systems shall be bonded to the cold-water line.

1.04SUBMITTALS

A. Provide in accordance with Division 01.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Furnished yard boxes shall be precast concrete and shall be approximately 14 inches wide by 19 inches long by 12 inches deep or larger.

1. Boxes shall be furnished with bolt-down, checkered, cast iron covers and cast-iron frames cast into the yard boxes.

2. Yard boxes shall comply with LAUSD standard detail E-102.

3. Provide yard boxes with hinged Frame Locking Cover.

4. Approved products include Brooks No. 36 HFL, Jensen Precast, Oldcastle Precast, Western Precast, Kistner, or equal.

B. External ground electrodes shall be copper-clad steel ground rods, minimum 3/4-inch diameter by ten feet long.

C. Clamps and fittings used in ground boxes below grade shall be listed for direct burial.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Grounding electrodes shall be installed in the nearest suitable planting area, where not otherwise indicated on Drawings, and each electrode shall terminate within a concrete yard box installed flush with finish grade. In planting areas, finish elevation of concrete yard boxes shall be two inches above planting surfaces.

B. If concrete enclosed electrode is provided, grounding wire shall be terminated to a suitable copper plate with grounding lugs and must be enclosed in a raceway or box.

C. Grounding rods shall be driven to a depth of not less than eight feet. Permanent ground enhancement material, (GEM) as manufactured by Erico Electrical Products, Loresco Powerset, Tessco Ultrafil or equal, shall be installed at each ground rod to improve grounding effectiveness. Install in accordance with manufacture's installation instructions.

D. Grounding electrodes shall provide a resistance to ground of not more than 25 ohms.

E. When installing grounding rods, if resistance to ground exceeds 25 ohms, two or more rods connected in parallel, or coupled together shall be provided to meet CEC grounding resistance requirements.

F. Ground rods shall be separated from one another by not less than ten feet.

G. Parallel grounding rods shall be bonded together with listed fittings and grounding conductors in galvanized rigid steel conduit, buried not less than 12 inches below finish grade.

3.02TESTING

A. Provide the services of an approved independent testing laboratory to test grounding resistance of “made” electrodes, ground rods, bonding of building steel, water pipes, gas pipes and other utility piping. Tests shall be performed as follows:

1. Visually and mechanically examine ground system connections for completeness and adequacy.

2. Perform fall of potential tests on each ground rod or ground electrode where suitable locations are available per IEEE Standard No. 81, Section 8.2.1.2. Where suitable locations are not available, measurements will be referenced to a known dead earth or reference ground.

3. Perform the two-point method test per IEEE No. 81, Section 8.2.1.1 to determine ground resistance between ground rod and building steel, and utility piping - such as water, gas and panelboard grounds. Metal hand railings at building entrances and at handicapped ramps shall also be tested.

4. Test shall be performed in the presence of the Inspector.

B. Submit 3 copies of test results to the Architect. Test results shall be submitted on an official form from the independent testing laboratory recording Project location, test engineer, test conditions, test equipment data, ground system layout or diagram, and final test results.

3.03PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.04CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 26 0533

RACEWAYS, BOXES, FITTINGS, AND SUPPORTS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Raceways and wire ways.
2. Conduit installation.
3. Underground requirements.

B. Related Requirements:

1. Section 26 0500: Common Work Results for Electrical.
2. Section 26 0513: Basic Electrical Materials and Methods.

C. Applicable Standards and Codes.

1. EIA/TIA 569 Standards.
2. National American Standards Institute (ANSI).
3. National Electrical Manufacturer’s Association (NEMA).
4. Nationally Recognized Testing Laboratory (NRTL).
5. California Electrical Code (CEC).
6. Uniform Building Code (UBC).
7. Underwriters Laboratory (UL).

1.02 SUBMITTALS

A. Materials List: Provide in accordance with Division 01.

B. List of Materials: Submit a complete list of proposed materials.

C. Shop Drawings: Provide detailed and dimensioned Shop Drawings indicating kind, weight and thickness of materials, method of fitting and fastening parts together.

1.03 SUBSTITUTIONS

A. When deviating or substituting materials and products, the following information shall be submitted:

1. Comply with requirements indicated in Division 1, Specification Section 01 2513 – Product Procedures for Substitutions and Or Equal.

2. Provide substantiating evidence of benefits and pros and cons of the proposed material/components.

PART 2 - PRODUCTS

2.01 RACEWAYS

A. Conduit Materials:

1. Metallic conduit, and tubing shall be manufactured under the supervision of an UL, or another NRTL factory inspection and label service program. Each ten-foot length of conduit and tubing shall bear the UL or another NRTL label and manufacturer's name.

2. Rigid metallic conduit shall be rigid steel, heavy wall, mild steel, zinc-coated, with an inside and outside protective coating manufactured in accordance with ANSI C 80.1. Couplings, elbows, bends, conduits, bushings and other fittings shall be the same materials and finish as the rigid metallic conduit. Fittings, connectors, and couplings shall be threaded type, manufactured in accordance with ANSI C 80.1 and UL 6.

3. Electrical metallic tubing shall be steel tubing, zinc-coated with a protective enamel coating inside, manufactured in accordance with NEMA C 80.3. Fittings, couplings, and connectors shall be gland compression type, set screw couplings and connectors not permitted. All parts shall be manufactured in accordance with NEMA C80.3 and UL 797 Electrical metallic tubing is designated hereinafter as EMT. Steel and rain tight fittings shall be approved and listed for the intended application.

4. Flexible steel conduit shall be of flexible interlocking strip construction with continuous zinc coating on strips, manufactured in accordance with UL 1.

   a. Connectors and couplings shall be required fittings of the type, which threads into convolutions of flexible conduit.

5. Liquid-tight flexible metal conduit shall be galvanized heavy wall, flexible locked steel strip construction, UV rated, with smooth moisture and oil-proof, abrasion-resistant, extruded plastic jacket. Connectors shall be as required for installation with liquid-tight flexible conduit and shall be installed to provide a liquid-tight connection.

6. Non-metallic conduit shall be rigid PVC electrical conduit extruded to schedule 40 dimensions of Type II. Grade 1 high impact, polyvinyl chloride, sweeps, couplings, reducers and terminating fittings shall be listed under the UL, or another NRTL, and shall bear the manufacturer's listed marking.

7. Multi-cell raceway shall be four-inch PVC, Type 40, UL or another NRTL listed for underground use with optical fiber and signal system cables. Raceway shall be furnished with (3)1¼ inch factory installed inner ducts with required internal spacers, and required couplers, sweeps, and end bells. Multicell raceway shall be Carlon Multigard, or District approved equal.

8. Metal Clad (MC) cable system is not allowed.

B. Sleeves for Conduits: Sleeves shall be adjustable type by Carlon, U.S. Plastic, Arlington or equal.

C. Where conduit enters a building through a concrete foundation below grade, or ground water level, or where it is necessary to seal around a conduit where it passes through a concrete floor or wall, provide O-Z/Gedney Type FSK Thru Wall and Floor Seal, equivalent Eaton Crouse Hinds Thru-Wall, Legrand Thru-Wall, or equal.

D. Expansion Joints-Seismic Separations between building(s) and other locations as indicated on drawings:

1. Provide Thomas & Betts XJG-TB, O-Z/Gedney. type AX with bonding strap and clamps, Eaton XJGD or equal. At exterior locations, provide Thomas & Betts XJG-TB, O-Z/Gedney type EX, Eaton XJGD, or equal. Provide O-Z/Gedney type AXDX, or equal combination deflection/expansion fittings at all seismic separations. Provide manufacture’s internal and external bonding jumpers at all locations. Liquid-tight metal conduit or flexible metal conduit shall not be approved at expansion joints, separations between buildings or seismic separations.

2. Provide expansion fittings at intervals not exceeding 100 feet in conduits exposed to direct sunlight. Fittings may be installed in the conduit run or where conduit attaches to junction or pull boxes. OZ/Gedney type AX, DX or AXDX combination series, or equivalent by Thomas and Betts, Crouse-Hinds or approved equal.

E. Conduit Seal Fittings:

1. Provide conduit seal fittings where indicated on the Drawings. Conduit seals shall be of rigid galvanized steel. Seals in horizontal conduit installations shall be Thomas & Betts EYS, Appleton Type ESU, Crouse Hinds Type EYS, or equal. Seals in vertical conduit installations shall be Thomas & Betts EYD, Appleton Type SF, Crouse Hinds Type EYD, or equal, with continuous drain. When installing conduit seals make provision for percent fill space reduction in accordance with CEC.

2. Install sealing compound after wire has been installed. Ensure drain is not blocked in vertical seals when installing compound. Where conduit seals are installed in hazardous area applications, there shall be no conduit coupling, fitting, etc., between seal and boundary of hazardous area.

F. Surface Steel Raceway:

1. The surface steel raceway system for branch circuit wiring, data network, voice, video, and other low voltage wiring shall be as manufactured by the Wiremold Company, Hubbell, or Mono-Systems, Inc. or equal. The raceway system may be supplied pre-wired in accordance with all sections of these specifications and requirements herein and shall be UL or another NRTL listed. Computer data installation shall be as required by other sections of this Division.

   a. If furnished pre-wired, the system must be listed in accordance with UL or another NRTL for "Multiple Outlet Assemblies" and so labeled on interior of the assembly. The pre-wired installation must contain no extra wire splices in the raceway as compared to a CONTRACTOR assembled installation assembled from components. The pre-wired steel raceway shall be Hi-Pot tested at the factory to prevent any potential bare wire or shot circuit defects.

2. The raceway base, cover, and device bracket shall be manufactured of steel and finished in ivory, gray enamel or custom colors suitable for field painting to match adjacent finishes.

3. The raceway shall be a two-piece design with a metal base and snap-on metal cover, except for the Wiremold V700 system, Hubbell HBL750 series and Mono-Systems Inc. S145-700 series that shall be a one-piece design. The base and cover sections shall be a minimum of 0.040-inch wall thickness. The base section shall be available in ten-foot lengths. A hand-operated cutting tool shall be available for the base and cover to ensure clean, square cuts. Wiremold V500, Hubbell V500, and Mono Systems inc. SM500 series are not permitted.

4. A full complement of fittings shall be furnished, including but not limited to, flat internal and external elbows, tees, entrance fittings, wire clips, cover clips, couplings, support clips, C-hangers and end caps. The fitting color shall match the raceway color. Fittings shall be supplied with a base where indicated and/or required. A take-off fitting shall be furnished as required to adapt to existing flush wall boxes.

5. Device brackets shall be furnished for mounting single or two-gang devices within the raceway. Devices shall be provided with the ability of mounting flush or in conjunction with standard steel, stainless steel, or manufacturer's metal faceplates.

6. The raceway shall be furnished with a complete line of connectivity outlets and modular inserts for unshielded twisted pair including category 5, fiber-optic, coaxial, and other cabling types with face plates and bezels to facilitate

installation. Computer data installation shall be as required by other sections of this Division, and Division 27.

7. Raceway shall be furnished with corner elbows and tee fittings to maintain a cable bend radius which meets the requirements of fiber-optic and copper cables under EIA/TIA 569 for communications pathways.

G. Factory Pre-Wired Surface Metal Raceway:

1. Furnish and install pre-wired surface metal raceways as indicated on Drawings and as specified.

2. Metal Raceway shall be galvanized steel Wiremold V4000, Hubbell 4000 series, or Mono-Systems Inc. SMS-4000 series complete with raceway base, cover, fittings, receptacles and mounting plates required for a complete assembly. Raceway shall have two wiring compartments with integral dividing barrier for isolating the wiring compartments.

3. Pre-wired assembly shall be UL, or another NRTL listed as a multi-outlet assembly and surface raceway as labeled on interior of assembly.

4. Wiring devices and other components shall be factory installed, electrically wired and covers labeled as indicated on drawings. Each receptacle shall be identified with panelboard and circuit number from which it was fed. Grounding shall be maintained by means of factory installed grounding conductors.

5. Where shown on Drawings, Raceway covers shall have provisions for mounting computer data outlets.

6. Complete assembly is to consist of required fittings such as elbows, slide couplings for joining raceway sections, blank end caps and flat tees.

7. Prewired assembly must contain no wire splices.

8. Receptacles and wiring shall be as indicated on drawings and as specified.

9. Where raceway is used for power and computer data outlets, installation of data outlets shall be as required by other sections of this specification.

10. Prior and during installation, verify and comply with manufacturer’s installation instructions.

11. Entire assembly shall be tested for shorts, opens, ground faults, and wire insulation at factory and certified. Raceways shall be electrically continuous and bonded in accordance with California Electrical Code.

12. Submit shop drawings for approval showing the complete layout of all components of each raceway, raceway lengths, each component description, location and circuit identification.

13. All wiring devices shall be removable without requiring disassembly of wireway.

H. Wireways shall be 16 gage galvanized steel enclosed hinge/screw wiring troughs, surface metal raceway, wireway, and auxiliary gutter designed to enclose electrical wiring. Wireway fittings shall be furnished with removable covers and sides to permit complete installation of conductors throughout the entire wireway run. Cover shall be furnished with keyhole slots to accept captive screws locking the cover securely closed. Wireways shall be UL or another NRTL listed and shall be Square D Type LDB NEMA-1 enclosure for interior applications, or Type RDB NEMA-3R enclosure for exterior applications, or equal by Eaton B-line, Hoffman, Wire Guard, or Circle AW.

I. Penetration in Fire-Rated Structures: Provide 3M, or equal, sealant and fire barriers for installing fire-rated seals around penetrations through floors, walls, and elevator hoistways. Fire stop system must be UL, or another NRTL listed, and classified for through-penetration applications of metallic conduits and busways.

J. Pull Wires: Install 1/8-inch polypropylene cords in empty or spare conduits.

PART 3 - EXECUTION

3.01 CONDUIT INSTALLATION

A. General Requirements:

1. Provide complete and continuous systems of rigid metallic conduit, outlet boxes, junction boxes, fittings and cabinets for systems of electrical wiring including lighting, power, and signal systems, except as otherwise specified.

2. EMT may be installed in interior concealed applications and in areas approved by OWNER. EMT shall not be installed in concrete, directly buried underground, outdoors, in boiler rooms, elevator pits, or where subject to damage.

3. Within buildings, flexible steel conduit may be installed instead of rigid steel conduit where permitted by code and as indicated herein.

a. Concealed within frame walls, above hard lid ceilings, for drops to device outlets and light fixtures in suspended T-bar ceilings and for final connections to equipment only

b. For continuous lengths of up to 50 feet between pull points (pull boxes, outlet boxes, etcetera).

c. Where used for luminaires in accessible ceilings, it shall be neatly trimmed to proper length and avoid unnecessary bends.

d. Suspended flexible steel conduit drops for light fixtures and device outlet boxes in suspended ceilings shall not exceed 6 feet.

e. Flexible steel conduit is not allowed in other locations

f. Flexible Steel conduit shall not exceed 1-1/2 inches in size.

4. Liquid-tight flexible steel conduit shall only be installed, except where otherwise specified, for final connection of motor terminal boxes, shop equipment, cafeteria equipment, HVAC equipment and other equipment, or for frequent interchange, and shall be of sufficient length, not exceeding 36 inches, to permit full travel or adjustment of motor on its base. Liquid-tight flexible conduit shall not be used for equipment not requiring adjustment or frequent interchange.

5. Connectors for flexible metal conduit shall be made of diecast zinc, and of the types which threads into convolutions of conduit. Connectors for watertight flexible metal conduit shall be as required for installation and shall be installed to provide a watertight connection.

6. Exposed conduit shall be installed vertically and horizontally following the general configuration of the equipment, using cast threaded hub conduit fittings where required and shall be clamped to equipment with suitable iron brackets and one-hole pipe strap.

7. If connection is from a flush wall-mounted junction box, install an approved extension box.

8. Underground feeder distribution conduits for systems may be non-metallic conduit instead of rigid conduit except where otherwise specified or indicated.

9. Conduit shall be concealed unless otherwise indicated. Conduits exposed to view, except those in attic spaces and under buildings, shall be installed parallel or at right angles to structural members, walls, or lines of building. Conduits shall be installed to clear access openings.

10. Bends or offsets will not be permitted unless absolutely necessary. Radius of each conduit bend or offset shall be as required by ordinance. Bends and offsets shall be performed with standard industry tools and equipment or may be factory fabricated bends or elbows complying with requirements for radius of bend specified. Heating of metallic conduit to facilitate bending is not permitted. Public telephone conduit bends and offsets shall be provided with a radius which is not less than ten times trade size of conduit unless otherwise permitted. Refer to underground installation, specified in this section, for radius of bends and off-sets required for underground installations.

11. Running threads are not permitted. Provide conduit unions where union joints

are necessary. Conduit shall be maintained at least six inches from covering of hot water and steam pipes and 18 inches from flues and breechings. Open ends of conduits shall be sealed with permitted conduit seals during construction of buildings and during installation of underground systems.

12. Expansion Joints/Seismic Separations/Separations between buildings/Locations Indicated: Provide Thomas & Betts XJG-TB, O-Z Electrical Mfg. Co. Inc. Type AX with bonding strap and clamps. Crouse Hinds XJGD, or equal. At exterior locations, provide Thomas & Betts XJG-TB, O-Z Electrical Mfg. Co. Inc. Type EX, Crouse Hinds XJGD, or equal. Provide Crouse Hinds, Thomas & Betts, or O-Z Electrical Mfg. Co. Type AXDX, or equal Combination Deflection/Expansion Fittings at all seismic separations. Provide manufactures internal and external Bonding Jumpers at all locations. Liquid-tight flexible conduit shall not be approved at expansion joints or seismic separations.

13. Where conduits are terminated in groups at panelboards, switchboards, and signal cabinets, etc., provide templates or spacers to fasten conduits in proper position and to preserve alignment. Conduits terminating at signal cabinets shall only enter cabinets in the following locations:

    a. Conduits entering top, side, and bottom of cabinets shall be aligned in a single row, centered two inches from rear of cabinet.

    b. Conduits entering back of cabinet shall be aligned in a single row centered two inches from top of cabinet.

    c. Conduits shall not be spaced closer than three inches on centers.

14. Conduits above metal lath ceilings shall be rigidly suspended with pipe hangers or pipe racks or shall be secured to superstructure with factory fabricated pipe straps. Conduits in metal lath or steel stud partitions shall be tied to furring channels or studs. In ceiling spaces and in partitions, tie wires shall be spaced not more than 5 feet apart, shall fasten conduit tight against channels and studs at point of tie and shall not support any of conduit weight. Tie wire shall be 16 gage galvanized double annealed steel.

15. Where auxiliary supports, saddles, brackets, etc., are required to meet special conditions, they shall be fastened rigid and secure before conduit is attached.

16. Conduit in ceiling spaces, stud walls, and under floors, shall be supported with factory fabricated pipe straps or shall be suspended with pipe hangers or pipe racks. Pipe straps shall be attached to and shall fasten conduit tight at point of support against ceiling and floor joists, rafters, and wall studs, or two-inch x four-inch headers fitted between joists or wall studs.

17. Conduits installed on exposed steel trusses and rafters shall be fastened with factory fabricated conduit straps or clamps, which shall fasten conduit tight against supporting member at point of support.

18. Conduits installed under buildings shall be strapped with factory fabricated conduit straps to underside of concrete floor or joists, or wood floor joists, or shall be suspended with pipe hangers or pipe racks. Conduits under building are not permitted to be placed directly on grade; they shall be suspended from building or shall be buried below surface or ground. 1-1/4 inch and larger conduits under buildings shall be installed with conduit hangers or racks.

19. Pipe hangers for individual conduits shall be factory fabricated. Steel rods shall be 3/8 inch for two-inch conduit hangers and smaller and shall be 1/2 inch for 2 ½-inch conduit hangers and larger.

20. Pipe racks for groups of parallel conduits and for supporting total weights not exceeding 500 pounds shall be trapeze type and shall consist of a cross channel, Steel City Kindorf B-900, Unistrut P-1000, equivalent Eaton B-Line or equal, suspended with a 3/8 inch minimum diameter steel rod at each end. Rods shall be fastened with nuts, top and bottom to cross-channel and with square washers on top of channel. Conduits shall be clamped to top for cross-channel with conduit clamps, Steel City Kindorf C-105 or Unistrut P-1111 through P-1124, equivalent Eaton B-Line, or equal. Conduits shall not be stacked one on top of another, but a maximum of two tiers may be on same rack providing an additional cross-channel is installed. Where a pipe rack is to be longer than 24 inches, or if the supported weight exceeds 500 pounds, submit Shop Drawings of installation to the ARCHITECT for review.

21. Conduits suspended on rods more than two feet long shall be rigidly braced to prevent horizontal motion or swaying. Installation shall meet zone 4 seismic requirements.

22. Factory fabricated pipe straps shall be one or two-hole formed galvanized clamps, heavy-duty type, except where otherwise specified.

23. Hangers, straps, rods, or pipe supports under concrete shall be attached to inserts set at time concrete is placed, or with approved concrete anchors. Under wood, install bolts, lag bolts, or lag screws; under steel joists or trusses, install beam clamps. CONTRACTOR shall submit size of anchors, bolts, screws, and installation method to ARCHITECT for approval prior to start of any work.

24. Conduits shall be supported at intervals required by code, but not to exceed ten feet. One inch and smaller exposed conduits shall be fastened with one-hole malleable iron straps. Perforated straps and plumber's tape is not permitted for the support of conduits.

25. Conduits stubbed up through a roof or an arcade shall be flashed with a waterproof flashing. Refer to Division 07 for additional requirements.

26. Bushings and locknuts for rigid steel conduit shall be steel threaded insulating type. Setscrew bushings are not permitted.

27. Flex conduits shall be cut square and not at an angle.

28. Routing of conduits may be changed providing length of any conduit run is not increased more than ten percent of the length indicated on Drawings.

B. Underground Requirements:

1. Conduits and multicell raceways installed underground shall be entirely encased in three-inch-thick concrete on all sides, except where otherwise specified. Provide required spacers to prevent any deflection when concrete is placed and to preserve position and alignment. Spacers shall be PVC interlocking-type, intermediate and base styles, Carlon or approved equal. Conduits and raceways shall be tied to spacers. Anchors shall be installed to prevent floating of conduits and raceways during placing of concrete. If approved by Civil or Structural Engineer, UL Listed HDPE spacers may be used in concrete encased duct banks where holes are provided for continuous concrete to flow. Provide red colored concrete to encase conduits of systems operating above 1000 volts.

2. Underground conduits and raceways shall be buried to a depth of not less than 24 inches below finished grade to top of the concrete envelope, unless otherwise specified.

3. Assemble sections of conduit with required fittings. Cut ends of conduit shall be reamed to remove rough edges. Joints in conduits shall be liquid tight. Bends at risers shall be completely below surface where possible.

4. Conduits and raceways in a common trench shall be separated by at least three inches of concrete. Electrical power and/or lighting conduit runs installed in a common trench with conduits containing signal system wiring such as public address, telephone, intrusion detection, fire alarm, television, computer networking, and clock systems shall maintain a separation of a minimum of six inches from these types of signal system conduits and raceways. Electrical power, lighting and signal conduits and raceways installed in a common trench with other utility lines such as gas, water, sewer and storm lines shall maintain 12 inches separation from these types of utility lines.

5. The Inspector will observe underground installations before and during concrete placement. A mandrel shall be drawn through each run of conduit in presence of the Inspector before and after placing concrete. Mandrel shall be six inches in length minimum and have a diameter that is within 1/4 inches of diameter of conduit to be tested.

6. Non-metallic conduit installations shall comply with following additional requirements. Joints in PVC conduit shall be sealed by means of an OEHS approved solvent-weld cement supplied by conduit manufacturer. Non-metallic conduit bends and deflections shall comply with requirements of applicable electrical code, except that minimum radius of any bend or offset for conduits sized from 1/2 inch to 1 ½-inch inclusive shall not be less than 24 inches. Bends at risers and risers shall be PVC-coated rigid steel conduit. Radius of curve of bends or offsets in non-metallic conduit for public telephone system shall be not

less than ten times trade size of conduit, unless otherwise specifically permitted.

7. Furnish and install a six-inch wide, polyethylene, red underground barrier type 12 inches above full length of concrete reading, "CAUTION ELECTRIC LINE BURIED BELOW".

8. Underground conduit systems provided for utility companies shall be furnished to meet the requirements of the utility companies requiring service.

9. Protect inside of conduit and raceway from dirt and rubbish during construction by capping openings.

10. Add bell-end bushings for conduit stub-up including underground entries to pull boxes, and manholes. Under floor standing switchboards and motor control centers provide a four-inch galvanized nipple with ground bushing.

11. Underground conduit for systems operating above 600 volts shall be a minimum size of four inches.

12. At portable classroom all stub ups shall be installed with a coupling flush to finish grade.

13. Underground conduits and raceways shall be swabbed prior to wire pull.

C. Rooftop conduit shall be supported from channels, stands, clamps, trapezes, rollers, or structures mounted on 100% rubber, UV resistant rooftop supports with reflective strips, Dura-Blok, or equal. Roller type supports shall be provided below and above conduit to prevent its dislodgement. Bottom of conduits shall clear the roof surface by 10 inches.

1. At PVC roofing provide walk tread, polyester reinforced, UV resistant, with surface embossment at rooftop supports. Heat welding of walk pads shall only be done by manufacturer certified installers.

   a. Sika-Sarnafil and Carlisle: Walk tread shall be no more than one inch larger than the plan area of the pipe support blocks and adhered to the roof membrane with Sika 1A or Carlisle Universal Single-Ply sealant, as applicable.

   b. Johns Manville: Walk tread shall be installed under the pipe support blocks and adhered to the blocks, if possible, and left loose laid on top of the PVC roof system. Walk-pad shall have a minimum of 4 inches of material past perimeter on all 4 sides of block.

2. Built-up roofing: Provide APP granulated modified torch-down at each pipe support block. Torch-down shall extend 2 to 4 inches beyond the edges of the block and adhered by torch application over existing cap sheet membrane. This work shall be performed by a certified roofer.

D. General Installation Requirements for Computer Network System Conduits:

1. Location of outlet boxes and equipment on Drawings is approximate, unless dimensions are indicated. Drawings shall not be scaled to determine position and routing of wireways, drops, and outlet boxes. Location of outlet boxes and equipment shall conform to architectural features of the building and other Work already in place and must be ascertained in the field before start of Work.

2. The maximum pulling tensions of the specified cables shall not be exceeded, and proper radius of cable bends shall be maintained.

3. For computer network wiring, conduit types shall be limited to rigid metal conduit, electrical metallic tubing, schedule 40 PVC, multi-cell raceways, and flexible metallic conduit for lengths less than six feet.

4. Interior section of conduit run shall be not longer than 100 feet and shall not contain more than two bends of 90 degrees between pull points or pull boxes.

5. The inside radius of a conduit bend shall be at least six times the internal diameter of the conduit. When the conduit size is greater than two inches, the inside radius shall be at least ten times the internal diameter of the conduit. For fiber-optic cable, the inside radius of a conduit bend shall be at least ten times the internal diameter of the conduit.

6. Conduit shall be sized in accordance with Table 4.4-1 of EIA/ TIA 569 standard.

7. Splicing or terminating cables in pull boxes is not permitted.

8. For indoor application, a pull box shall be provided in conduit run where:

    a. The length is over 100 feet.

    b. There are more than two bends of 90 degrees.

    c. There is a reverse bend in the run.

9. Boxes shall be provided in a straight section of conduit and shall not be installed in lieu of a bend. The corresponding conduit ends are to be aligned with each other. Conduit fittings shall not be installed in place of pull boxes.

10. Where a pull box is provided with raceways, pull box shall comply with the following:

    a. For straight pull-through, provide a length of at least eight times the trade-size diameter of the largest raceway.

    b. For angle and U-pulls:

        1) Provide a distance between each raceway entry inside the box and the opposite wall of the box of at least six times the trade-size diameter of the largest raceway, this distance being increased

by the sum of the trade-size diameters of the other raceways on the same wall of the box.

2) Provide a distance between the nearest edges of each raceway entry enclosing the same conductor of at least:

3) Six times the trade-size diameter of the raceway; or

4) Six times the trade-size diameter of the larger raceway if they are of different size.

5) For a raceway entering the wall of a pull box opposite to a removable cover, provide a distance from the wall to the cover of not less than the trade-size diameter of the largest raceway plus six times the diameter of the largest conductor.

11. Drawings generally indicate Work to be installed, but do not indicate all bends, transitions of special fittings required to clear beams, girders or other Work already in place. Investigate conditions where conduits and wireways are to be installed and furnish and install required fittings.

E. Slabs on Grade:

1. Unless specifically reviewed by the ARCHITECT and DSA, conduits 1 ¼-inches and larger are not permitted to be installed in structural concrete slabs. Where conduits are permitted, and are installed in concrete slabs on grade, slabs shall be thickened at bottom where conduits occur to provide three inches of concrete between conduit and earth. Required excavation shall be part of the Work of this section.

2. If concrete slab is five inches or more in thickness with a moisture barrier plastic sheet between earth and slab, one inch and smaller conduits shall be installed in the slab with a minimum of one-inch concrete between earth and conduit.

F. Concrete Walls, Beams, and Floors: Provide sleeves where conduits pierce concrete walls, beams, and floors, except floor slabs on grade. Sleeves shall provide 1/2-inch clearance around conduits. Sleeves shall not extend beyond exposed surfaces of concrete and shall be securely fastened to forms. Where conduits pass through walls below grade, seal with required sealant and backer materials between conduit and sleeve to provide a watertight joint. Sealant shall be as indicated in Section 07 9200: Joint Sealants.

3.02 STUBS

A. Panelboard: Install two one-inch conduits from each flush mounted panelboard to access under floor space and to access above ceiling space where these conditions occur. Cap conduits with standard galvanized pipe caps.

B. Floor: At points where floor stubs are indicated in open floor areas, for connections to machines and equipment, conduits shall be terminated with couplings, tops flush with finished floor. Stubs shall extend above couplings the indicated distance. Where capped stubs are designated, couplings shall be closed with cast iron plugs with screw drive slots.

C. Underground:

1. Underground conduit stubs shall be terminated at locations indicated, and shall extend five feet beyond building foundations, steps, arcades, concrete walks and paving. Rigid metallic conduit stubs and non-metallic conduit stubs shall be capped by installing a coupling flush in end wall of concrete encasement and plugging with a permitted plug. Project record drawings shall indicate location of ends of underground conduit stubs fully dimensioned and triangulated with reference to buildings or permanent landmarks. These dimensions, including depth below finished grade, shall be marked on project record drawings in presence of the Inspector before backfilling trench. Where extending existing concrete encased stubs, clean, chip and wire brush end of existing concrete and brush on a heavy coat of neat cement paste or epoxy bonding agent.

2. Over ends of individual underground conduit stubs or groups of conduit stubs, install four-inch by 18-inch deep PVC filled with concrete, flush with finished grade in asphaltic concrete or lawns, and two inches above finished grade in planting areas. Cast a three-inch by three-inch brass plate engraved "ELECT" flush in top of concrete. Secure plate to concrete with brass dowels or as indicated on drawings.

3.03 PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.04 CLEANUP

A. Remove rubbish, debris and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 31 1000

SITE CLEARING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Removal of vegetation, grass, grass roots, shrubs, tree stumps, trees, upturned stumps, weed growth, tree roots, brush, masonry, concrete, rubbish, debris and other materials.

2. Removal of concrete and bituminous surfaces.

3. Removal of existing fences and gates.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Section 31 2200 - Grading.

3. Section 31 2313 - Excavation and Fill.

4. Section 31 2316 - Excavation and Fill for Pavement.

5. Section 31 2319 - Excavation and Fill for Structures.

6. Section 31 2323 - Excavation and Fill for Utilities.

7. Section 31 2326 - Base Course.

1.02 SUBMITTALS

A. Shop Drawings: Submit site plan indicating extent of site clearing.

1.03 QUALITY ASSURANCE

A. Comply with Standard Specifications for Public Works Construction, current edition, as a minimum requirement.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 TREE AND STUMP REMOVAL

A. Remove trees and stumps indicated or required to be removed. Remove trees, together with bulk of roots, to a minimum depth of 4 feet below required grade, and within a radius of approximately 7 feet beyond perimeter of trunk at grade.

B. Fill and compact excavation from tree and stump removal. Fill in 6 inch layers, each compacted to 90 percent of maximum density in accordance with ASTM D1557.

1. Back filling shall not commence until the excavation is inspected and tested.

3.02 CONCRETE AND BITUMINOUS SURFACING REMOVAL

A. Break up and completely remove existing concrete surfacing, curbs, gutters, walks and bituminous surfacing to indicated limits. Cutting shall be performed to a neat and even line with proper tools or a concrete cutting saw. Minimum depth of cut shall be 1 1/2-inch, unless otherwise indicated. Remove concrete broken beyond the indicated limits to the nearest joint or score line and replace with new concrete to match existing.

3.03 CLEANUP

A. Remove rubbish, debris and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 31 2200

GRADING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. General exterior grading, cutting and filling, including grading for building area, paving, planting areas, banks and hillsides.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 31 1000 - Site Clearing.
3. Section 31 2313 - Excavation and Fill.
4. Section 31 2316 - Excavation and Fill for Pavement.
5. Section 31 2319 - Excavation and Fill for Structures.
6. Section 31 2323 - Excavation and Fill for Utilities.
7. Section 31 2326 - Base Course.

1.02 PROJECT REQUIREMENTS

A. General:

1. Fees: Pay as required by authorities having jurisdiction over the area.
2. Bonds: Post as required by authorities having jurisdiction over the area.
3. Haul Routes and Restrictions: Comply with requirements of authorities having jurisdiction over the area.
4. Before grading, contact Underground Service Alert of Southern California (USASC) for information on public buried utilities and pipelines. Retain the services of an underground utility locator for on-site utilities.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Materials shall conform to requirements specified in this and related sections.

PART 3 - EXECUTION

3.01 PREPARATION

A. Protect and maintain installed stakes until their removal is required for the Work. Provide replacement grade or location stakes lost or disturbed.

B. Install grade stakes and compare to indicated grades. If discrepancies are found between existing grades and grades indicated on Drawings, do not proceed until discrepancies are resolved.

3.02 ROUGH AND FINE GRADING

A. Rough grade area sufficiently high to require cutting by fine grading:

1. Grade area for bituminous surfacing and other paving to the indicated grades, equal to the section of the indicated base and pavement.

2. Slope banks to required finish grades as cut progresses or leave cuts full and finish grade by mechanical equipment to provide grades and soil densities indicated on the Drawings.

3. Rough grade, fill and compact banks beyond indicated finish grades. Finish grade banks and slopes to indicated grades and specified soil densities.

4. Grade Only Areas: In areas not indicated to receive pavement, rough grade to approximate finish grades and then scarify, moisten and roll to obtain required density and indicated finish grades.

5. Tolerances: Finish grades shall be within a tolerance of 0.05 inch per foot above or below grades indicated. Provide an average grade as indicated.

B. Base or Subgrade:

1. After subgrade has been constructed to approximate required grades, scarify to a depth of at least 6 inches:

a. After scarifying, process loosened material to a finely divided condition and adjust moisture content to optimum condition by addition of water, addition and blending of dry suitable material, or by drying of existing material.

b. Subgrade material shall be compacted by tamping, sheepsfoot rollers or pneumatic tire rollers. Required relative compaction shall be [**90**] percent minimum for the top 6 inches below subgrade.

c. Install base course in accordance with Section 31 2326 - Base Course.

2. Tolerance of completed grades of base or subgrade shall not vary more than 0.03 inch per foot from grades indicated. Provide an average grade as indicated.

3.03 SHORING

A. Provide shoring as necessary to properly and safely support earth sides of excavations, and existing curbs, sidewalks, gutter, drives and stairs, against movement and collapse.

B. Design and Calculations: Provide in accordance with requirement of CalOHSA.

C. Remove shoring upon completion of the Work of this section or when no longer needed unless required otherwise by authorities having jurisdiction.

3.04 EXCESS MATERIAL DISPOSAL

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

3.05 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 31 2313

EXCAVATION AND FILL

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Excavating, filling, backfilling, and compacting for Project site pavement, planting areas, buildings, and other structures.

2. Trenches for utility lines such as water, gas, irrigation, storm drain and sewer lines, concrete-encased conduits, manholes, vaults, valve boxes, catch basins, underground tanks, thrust blocks, yard boxes, pull boxes, and other utility appurtenances.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Section 01 4524 - Environmental Import/Export Materials Testing.

3. Section 32 1313 - Site Concrete Work.

4. Division 26 - Electrical.

1.02 PROJECT REQUIREMENTS

A. Import and Export of Earth Materials:

1. Fees: Pay as required by authorities having jurisdiction over the area.

2. Bonds: Post as required by authorities having jurisdiction over the area.

3. Haul Routes and Restrictions: Comply with requirements of authorities having jurisdiction over the area.

1.03 SUBMITTALS

A. Shoring calculations as required in Article 3.03 of this Section.

1.04 QUALITY ASSURANCE

A. Comply with the Standard Specifications for Public Works Construction, current edition, except as modified herein.

B. Sampling, testing, and certification of imported and exported soils shall be performed in accordance with Section 01 4524, Environmental Import/Export Materials Testing.

1.05 TESTING

A. OWNER will retain a Geotechnical Engineer as an OWNER Consultant who will provide observations, tests, inspections and approvals identified in the Contract Documents as being responsibility of OWNER.

B. Imported Soils: The Geotechnical Engineer will obtain initial product Sample for testing in accordance Article 3.05 of this Section.

1.06 PROJECT CONDITIONS

A. Information on Drawings or in soil investigation report does not constitute a guarantee of accuracy or uniformity of soil conditions over the Project site.

PART 2 - PRODUCTS

2.01 FILL AND BACKFILL MATERIALS

A. Fill and backfill material shall be a granular material previously removed from excavation or imported fill material, free of clods and stones larger than 3 inches, (2½ inches for utility trenches) foreign materials, vegetable growths, sod, expansive soils, rubbish and debris. Material shall conform to these specified requirements and related sections.

B. Fill material exhibiting a wide variation in consistency and moisture content shall be blended and aerated to stabilize and upgrade the material.

C. Bedding material from trench bottom to one foot above the pipe:

1. Sand, gravel, crushed aggregate or native free-draining granular material providing a sand equivalent of at least 30 or a coefficient of permeability greater than 1.4 inches per hour.

2. Sand complying with the Specifications for cement concrete aggregates.

D. Brick rubble and broken concrete originating from the Project site shall be legally disposed of off the Project site No such material shall be imported from outside the Project site.

E. Permeable Backfill:

1. Provide permeable backfill material behind retaining structures consisting of gravel, crushed gravel, crushed rock, natural sands, manufactured sand, or combinations of these materials conforming to the following gradations:

Sieve Size:	Percentage Passing:
3/4 inch (19mm)	100
3/8 inch (10mm)	80 to 100
No. 100	0 to 8
No. 200	0 to 3

2. Those portions of fill material passing a No. 4 sieve shall provide a sand equivalent of at least 60.

3. Provided backing for weep-holes shall consist of two cubic feet of aggregate in burlap sacks, securely tied. Aggregate shall conform to requirements for No. 3 concrete aggregate as specified in subsection 200-1.4 of the Standard Specifications for Public Works Construction.

4. Permeable Backfill Alternate Materials: Instead of the materials specified for retaining structures backfill, a drainage matting system Miradrain by Mirafi, Inc., American Wick Drain, JDR Enterprises, or equal, may be provided if reviewed and approved by the ARCHITECT.

F. Cement-sand slurry shall be provided with one sack of cement per cubic yard of the mixture.

2.02 BASE MATERIALS

A. Concrete Slabs on Grade: Provide "Crushed Aggregate Base" as specified in Standard Specifications for Public Works Construction, Section 200 - Rock Materials, with 3/4 inch maximum size aggregates. Provide 3 inch thick base, unless noted otherwise.

B. Bituminous Surfacing: Provide as indicated on Drawings and specified in Section 31 2326 Base Course.

PART 3 - EXECUTION

3.01 GENERAL

A. Before initiating intrusive activities, contact Underground Service Alert of Southern California (USA or Dig Alert) to obtain a Dig Alert ticket for location information on buried public and USA member utilities and pipelines at least 48-hours prior to beginning work. A copy of the Dig Alert ticket shall be forwarded to the OWNER. For on-site utilities, retain a state-licensed third party underground utility locating service.

B. Where the Work includes a building extension or addition on an occupied Project site, perform Work in such a manner, and at such times, as not to disrupt performance of existing utility services to existing Project site facilities. Where an interruption is necessary, obtain review from the OAR before proceeding.

C. Remove concrete or bituminous pavement to straight lines by saw cutting.

3.02 PROTECTION

A. Protect and guard excavations against danger to life, limb, and property as required by, but not limited to, OSHA regulations.

B. Protect existing improvements including landscaping against damage. Repair or replace damaged items.

C. Protect existing utility services and distribution systems from damage or displacement.

D. Remove conduits or pipes not in service, exposed during Work, unless a minimum cover of two feet is provided. Remove concrete, clay or other non-metallic pipe over 8 inches in diameter, unless otherwise indicated.

E. Shore, crib, or lag excavations and earthen banks as necessary to prevent cave in, erosion or gullying of sides.

F. Provide excavations free from standing water by pumping, draining, or providing protection against water intrusion. If soil becomes soft, soggy, or saturated, excavate to firm undisturbed earth and fill as required. Slope adjacent grades away from excavations to minimize entry of water.

3.03 SHORING

A. Provide shoring as necessary to properly and safely support earth sides of excavations, and existing curbs, sidewalks, gutter, drives and stairs, against movement and collapse.

B. Design and Calculations: Provide in accordance with requirement of governing Cal-OSHA requirements.

C. Remove shoring upon completion of the Work of this Section or when no longer needed unless required otherwise by authorities having jurisdiction.

3.04 EXCAVATION

A. Unclassified Excavations: Comply with the Standard Specifications for Public Works Construction, Section 300: "Earthwork", except as modified herein.

B. Form sides of footings, pads, grade beams, and slab foundations, unless otherwise indicated. Provide excavations of sufficient size to permit installation and removal of forms and other required Work.

C. Machine-drill excavation for round footings to size and depth indicated. Provide a collar or casing, or other adequate protection, to exclude dirt and debris. Protect excavations with plank covers until concrete is placed.

D. Provide excavation bottoms level and free from loose material. Excavate to indicated or required elevations of undisturbed earth.

E. Barricade trenches, ditches, pits, sumps, and similar Work outside the barricaded working area with chain link fence as specified in Section 01 5000 - Construction Facilities and Temporary Controls, and in accord with Cal-OSHA standards and requirements.

F. Trenches over five feet in depth shall comply with the Construction Safety Orders of the California Division of Industrial Safety.

G. Where indicated or required to excavate in lawn areas, protect adjoining lawn areas outside of the Work area. Replace or install removed sod upon completion of backfill by installing sod level with adjacent lawns. If installation of removed sod fails, furnish sod and install to match existing lawns.

H. For Structures:

1. Calculate excavation quantities based on elevations or depths indicated on Drawings.

2. Provide 2,000 psi concrete for backfill of over-excavated areas to indicated or required elevations.

3. Special preparation of bottom of excavated planes areas: Excavate areas shown on Drawings as bottom of excavated planes (B.E.P.), by excavating and filling to indicated grades and elevations.

I. For Utilities:

1. Excavate trenches to required depth for utility lines, such as pipes, conduits, and tanks, with minimum allowance of 6 inches at the bottom and 6 inches at the sides for bedding or concrete encasement as indicated on Drawings. Grade bottom of trenches to a uniform smooth surface. Remove loose soil from the excavation before placing sand bedding or concrete encasement.

2. Do not install piping lengthwise under concrete walks without review by the ARCHITECT.

3. Do not excavate trenches parallel to footings closer than 18 inches from the face of the footing or below a plane having a downward slope of two horizontal to one vertical, from a line 9 inches above bottom of footings.

a. Unless otherwise indicated on Drawings, depth of excavations outside buildings shall provide for a minimum coverage above top of piping, tank or conduit measured from the lowest adjoining finished grade, as follows:

Steel Pipe	24 inches below finish grade
Copper Water Tube	18 inches below finish grade
Cast-Iron, Pressure Pipe	36 inches below finished grade
Plastic Pipe (other than waste)	30 inches below finished grade
Tanks or other structure	36 inches below finished grade
Soil, sewer and storm drain	minimum 18 inches below finished grade, and as required for proper pitch and traffic load. Install polypropylene sewer pipe with at least 24 inches of coverage.
Irrigation Pipe:	Non-pressure pipe - 12 inches, pressure pipe - 24 inches.

b. Trench width shall provide space for fitting and joining. Excavate for piping bells and fittings, bell and spigot pipe and other fittings.

4. Where portions of existing structures, walks, paving, or other improvements are removed or cut for piping or conduit installation, replace the material with equal quality, finished to match adjoining existing improvements. Repair pavement as specified in Section 32 0117 - Pavement Repair.

5. Provide a minimum clear dimension of 2 inches from sides of wall excavation to outer surfaces of buried pipes or conduits placed in the same trench or outside surfaces of containers and tanks.

3.05 IMPORT/EXPORT OF MATERIALS

A. Unclassified Fill and Compaction: Comply with the Standard Specifications for Public Works Construction, Section 300 - Earthwork, except as modified herein. Install and compact fill in layers not to exceed 6 inches in thickness.

B. Provide fill materials as specified in Part 2- Products. If excavated materials from the Project site are not of required quality or sufficient quantity, import additional materials as necessary.

C. In addition to the requirements of this Section, import and/or exported materials shall comply with the requirements of Section 01 4524, Environmental Import/Export Materials Testing.

D. Imported fill materials shall be sampled by the Geotechnical Engineer, for compliance with the requirements of Part 2 of this Section.

E. The Geotechnical Engineer, will submit the samples to an independent DSA approved testing laboratory for testing.

F. Initial sampling and testing shall be performed before importing material to the Project site. Identify the location of the source site in addition to the address, name of the person and entity responsible for the source site. The Geotechnical Engineer, will obtain both the initial and additional samples from the identified site and submit samples for required testing.

G. The Geotechnical Engineer will perform additional sampling during import operations. If the total quantity of import is determined to be greater than 1000 cubic yards of material, one sample shall be obtained and submitted for testing for each 250 cubic yards of imported material. If the total quantity of import is determined to be less than 1000 yards, one sample shall be obtained and submitted for testing for each 100 cubic yards of imported material.

H. The independent approved testing laboratory will perform the required tests and report results of tests noting if the tested material passed or failed such tests and will furnish copies to the Project Inspector, ARCHITECT, OAR, DSA, CONTRACTOR, and others as required. Report shall state tests were conducted under the responsible charge of a licensed State of California professional engineer and the material was tested in accordance with applicable provisions of the Contract Documents, California Building Code, and the DSA. Upon completion of the Work of this Section, the independent testing laboratory and Geotechnical Engineer will submit a verified report to the DSA as required by the CBC.

I. Bills of lading or equivalent documentation will be submitted to the Project Inspector on a daily basis.

J. Upon completion of import operations, provide the OAR a certification statement attesting that imported material has been obtained from the identified source site.

3.06 INSTALLATION OF MATERIALS

A. Pavement: Fill or backfill materials shall be installed in horizontal layers of 6 inches, unless otherwise required. Each layer shall be evenly placed and moistened or aerated as necessary. Unless otherwise reviewed by the Geotechnical Engineer, each layer of

fill material shall cover the length and width of the area to be filled before the next layer of material is installed. Top surface of each layer shall be installed to an approximate level with a crown or crossfall of at least 1 in 50, but not more than 1 in 20. Provide adequate drainage at all times during installation of the Work of this Section.

B. Structures:

1. After concrete has been placed, forms removed, and concrete Work inspected, backfill excavations with earth to indicated or required grades. Backfill simultaneously on each side of walls or grade beams. Remove rubbish, debris and other waste materials from excavations before placing backfill.

2. Before placing backfill, adequately cure concrete and provide bracing, if required to stabilize structure. Protect waterproofing or damp-proofing against damage during backfilling operations, with required protection board. Remove bracing as backfill operation progresses.

3. Do not furnish or install expansive soils for retaining wall backfill.

4. Rigidly control the amount of water to be installed to provide optimum moisture content for type of fill material furnished. Do not over-saturate or compact by flooding or jetting.

5. Install wall backfill before installing railings and fences on walls.

6. Install weep hole drainage at the backside of walls so the backing completely covers the weep holes, is horizontally centered and extends at least 12 inches above the bottom of the weep opening. Provide an 8-inch square section of 1/4 inch galvanized or aluminum screen, with a minimum wire diameter of 0.03 inch, and install at the backside of each weep hole before installing the backfill material.

7. Where a reviewed drainage matting system is provided instead of permeable backfill for retaining structures, install in accordance with the manufacturer recommendations.

C. Utilities:

1. Do not install backfill until the Work of this Section has been inspected and tested. Do not furnish or install materials excavated from the Project site containing materials not permitted for backfill.

2. Backfill electrical or other excavated utility trenches located outside of barricaded installation areas within 24 hours after inspection by the IOR.

3. Install backfill in layers not exceeding 4 inches in thickness, except cement-sand slurry.

4. If materials excavated from the Project site are not permitted for trench backfill in paved areas, backfill trenches with a cement-sand slurry mix. Install backfill to an elevation of the existing undisturbed grades plus one inch.

3.07 COMPACTING

A. Each layer of fill material shall be compacted by tamping, sheepsfoot rollers, or pneumatic-tired rollers to provide specified relative compaction. At inaccessible locations, provide specified compaction by manually held, operated and directed compaction equipment.

B. Install and compact sand bedding to provide a uniform bearing under the full length of piping and conduits.

C. Unless otherwise indicated, compact each layer of fill material to a relative compaction of at least ninety percent.

D. When fill materials, or a combination of fill materials, are encountered or provided which develop densely packed surfaces as a result of installation or compacting operations, scarify each layer of compacted fill before installing the next succeeding layer.

3.08 INSPECTION AND TESTING

A. The Geotechnical Engineer will inspect and test excavations, sample material quality for testing as set required in Part 2, and observe installation and compaction of fill materials.

B. The Geotechnical Engineer will sample imported fill materials from their designated source and submit samples to the independent approved testing laboratory before delivery to the Project site.

C. Installation of backfill shall be observed by the Geotechnical Engineer.

D. The Geotechnical Engineer will inspect and test excavation Work before the installation of fill and other materials.

E. Compaction: Test compaction in accordance with ASTM D1557, Method C.

F. The Project Inspector will inspect foundation excavations when completed and ready for forms, after forms are in place, and before first placement of concrete.

3.09 PROTECTION

A. Protect the Work of this Section until Substantial Completion.

3.10 CLEANING

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 31 2316

EXCAVATION AND FILL FOR PAVING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Excavating, backfill, and compacting for paved areas.
2. Installation of fill materials.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 01 4524 - Environmental Import/Export Materials Testing.
3. Section 31 1000 - Site Clearing.
4. Section 31 2200 - Grading.
5. Section 31 2323 - Excavation and Fill for Utilities.
6. Section 32 2326 - Base Course.
7. Section 32 0117 - Pavement Repair.
8. Section 32 1313 - Site Concrete Work.

1.02 PROJECT REQUIREMENTS

A. Import and Export of Earth Materials:

1. Fees: Pay as required by authorities having jurisdiction over the area.
2. Bonds: Post as required by authorities having jurisdiction over the area.
3. Haul Routes and Restrictions: Comply with requirements of authorities having jurisdiction over the area.

1.03 QUALITY ASSURANCE

A. Comply with Standard Specifications for Public Works Construction, current edition, except as modified herein.

B. Sampling, testing, and certification of imported and/or exported soils shall be performed in accordance with Section 01 4524 - Environmental Import/Export Materials Testing.

1.04 TESTING

A. OWNER will retain a Geotechnical Engineer as an OWNER Consultant who will provide observations, tests, inspections and approvals identified in the Contract Documents as being responsibility of OWNER.

B. Imported Soils: The Geotechnical Engineer will obtain initial product Sample for testing in accordance Article 3.05 of this Section.

1.05 PROJECT CONDITIONS

A. Information on Drawings or in soils report does not constitute a guarantee of accuracy or uniformity of soil conditions over the Project site.

PART 2 - PRODUCTS

2.01 BASE MATERIALS

A. Concrete Slabs On Grade: Provide "Crushed Aggregate Base "as specified in the Standard Specifications for Public Works Construction, Section 200: "Rock Materials," with ¾ inch maximum size aggregates. Provide 3-inch thick base, unless noted otherwise.

B. Bituminous Surfacing: As indicated on Drawings and specified in Section 31 2326 - Base Course.

2.02 FILL AND BACKFILL MATERIALS

A. Fill and backfill materials shall be previously excavated materials or imported fill material, free of clods and stones larger than 3-inch, foreign materials, vegetable growths, sod, expansive soils, rubbish and debris. Material shall conform to these specified requirements and related sections.

B. Fill material exhibiting a wide variation in consistency and moisture content shall be blended or aerated to stabilize and upgrade the material.

C. Imported Fill Material:

1. Provide suitable materials obtained from Project site excavations for earthwork and fill materials. If excavated materials are not of suitable quality or sufficient quantity, import additional materials as necessary.

2. Imported fill shall be a granular material with sufficient binder to form a firm and stable unyielding subgrade and shall not have more than 60 percent of fines passing 200 mesh sieve. Material shall have a coefficient of expansion of not more than 2 percent from air dry to optimum moisture content and not

more than 6 percent from air dry to saturation. Imported material shall be clean and free of rubbish, debris, and toxic or hazardous contaminants. Adobe or clay soils are not permitted.

D. Brick rubble and broken concrete originating from the Project site shall be legally disposed of off the Project site. No such materials shall be imported from outside the Project site.

E. Permeable Backfill:

1. Provide permeable backfill material behind retaining structures consisting of gravel, crushed gravel, crushed rock, natural sands, manufactured sand, or combinations of these materials conforming to the following gradations:

Sieve Size:	Percentage Passing:
3/4 inch (19mm)	100
3/8 inch (10mm)	80 to 100
No. 100	0 to 8
No. 200	0 to 3

2. Those portions of fill material passing a No. 4 sieve shall provide a sand equivalent of at least 60.

3. Provided backing for weep holes shall consist of two cubic feet of aggregate in burlap sacks, securely tied. Aggregate shall conform to requirements for No. 3 concrete aggregate as specified in subsection 200-1.4 of the Standard Specifications for Public Works Construction.

4. Permeable Backfill Alternate Materials: Instead of the materials specified for retaining structures backfill, a drainage matting system, Miradrain by Mirafi, Inc., or equal, may be provided if reviewed and approved by the ARCHITECT.

PART 3 - EXECUTION

3.01 GENERAL

A. Before initiating intrusive activities, contact Underground Service Alert of Southern California (USA or Dig Alert) to obtain a Dig Alert ticket for location information on buried public and USA member utilities and pipelines at least 48-hours prior to beginning work. A copy of the Dig Alert ticket shall be forwarded to the OWNER. For on-site utilities, retain a state-licensed third party underground utility locating service.

B. Clear the Project site as indicated in Section 31 1000 - Site Clearing.

3.02 PROTECTION

A. Protect and guard excavations against danger to life, limb, and property as required by, but not limited to, Cal-OSHA regulations.

B. Protect adjacent existing improvements including landscaping against damage.

3.03 EXISTING UTILITY LINES

A. Protect existing utility lines from damage or displacement.

B. Remove conduits or pipes not in service, exposed during Work, unless a minimum cover of 2 feet is provided. Remove concrete, clay or other non-metallic pipe over 8 inches in diameter, unless otherwise indicated.

3.04 EXCAVATION

A. Unclassified Excavations: Comply with the Standard Specifications for Public Works Construction, Section 300: "Earthwork," except as modified herein.

3.05 FILL

A. Unclassified Fill and Compaction: Comply with the Standard Specifications for Public Works Construction, Section 300: "Earthwork," except as modified herein.

B. Provide fill materials as specified in Part 2 - Products. If excavated materials from the Project site are not of required quality or sufficient quantity, import additional materials as necessary.

C. In addition to the requirements of this Section, import and/or exported materials shall comply with the requirements of Section 01 4524 - Environmental Import/Export Materials Testing.

D. Imported fill materials will be sampled by the Geotechnical Engineer for compliance with the requirements of Part 2 of this Section.

E. The Geotechnical Engineer will submit samples to a DSA approved independent approved testing laboratory for testing.

F. Initial sampling will be performed by the Geotechnical Engineer before importing material to the Project site. Identify the location of the source site in addition to the address, name of the person and/or entity responsible for the source site. The Geotechnical Engineer will obtain both the initial and additional samples from the identified site and will submit samples to the approved independent testing laboratory for testing.

G. The Geotechnical Engineer will perform additional sampling during import operations. If the total quantity of import is determined to be greater than 1,000 cubic yards of material, one sample shall be obtained and submitted for testing for each 250 cubic yards of imported material. If the total quantity of import is determined to be less than 1,000 yards, one sample shall be obtained and submitted for testing for each 100 cubic yards of imported material.

H. The independent approved testing laboratory will perform the required tests and report results of tests noting if the tested material passed or failed such tests and will furnish copies to the Project Inspector, ARCHITECT, OAR, DSA, CONTRACTOR, and others as required. Report shall state tests were conducted under the responsible charge of a licensed State of California professional engineer and the material was

tested in accordance with applicable provisions of the Contract Documents, CBC, and the DSA. Upon completion of the Work of this Section, the independent testing laboratory and Geotechnical Engineer shall submit a verified report to the DSA as required by CBC.

I. Bills of lading or equivalent documentation will be submitted to the Project Inspector on a daily basis.

J. Upon completion of import operations, provide the OAR a certification statement attesting that imported material has been obtained from the identified source site.

3.06 INSTALLATION OF MATERIALS

A. Fill or backfill materials shall be installed in horizontal layers of 6 inches, unless otherwise required. Each layer shall be evenly placed and moistened or aerated as necessary. Unless otherwise reviewed by the Geotechnical Engineer, each layer of fill material shall cover the length and width of the area to be filled before the next layer of material is installed. Top surface of each layer shall be installed to an approximate level with a crown or crossfall of at least 1 in 50, but no more than 1 in 20. Provide adequate drainage at all times during construction of the Work of this Section.

3.07 COMPACTING

A. Each layer of fill material shall be compacted by tamping, sheepsfoot rollers, or pneumatic-tired rollers to provide specified relative compaction. At inaccessible locations, provide specified compaction by manually held, operated and directed compaction equipment.

B. Unless otherwise indicated, compact each layer of earth fill to a relative compaction of at least 90 percent.

C. When fill materials, or a combination of fill materials, are encountered or provided which develop densely packed surfaces as a result of installation or compacting operations, scarify each compacted layer before installing the next succeeding layer.

3.08 INSPECTION AND TESTING

A. The Geotechnical Engineer will inspect and test excavations, sample material quality as required in Part 2, and observe installation and compaction of fill materials.

B. The Geotechnical Engineer will sample imported fill materials from their designated source before delivery to the Project site.

C. Installation of backfill will be observed by the Geotechnical Engineer.

D. The Geotechnical Engineer will inspect and test excavation Work before the installation of fill and/or other materials.

E. Compaction: Test compaction in accordance with ASTM D1557, Method C.

3.09 PROTECTION

A. Protect the Work of this Section until Substantial Completion.

3.10 CLEANING

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 31 2319

EXCAVATION AND FILL FOR STRUCTURES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Excavating, backfilling, and compacting for buildings and structures.

2. Fill materials.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Section 01 4524 - Environmental Import/Export Materials Testing.

3. Section 31 1000 - Site Clearing.

4. Section 31 2200 - Grading.

5. Section 31 2316 - Excavation and Fill for Paving.

6. Section 31 2323 - Excavation and Fill for Utilities.

1.02 PROJECT REQUIREMENTS

A. Import and Export of Earth Materials:

1. Fees: Pay as required by authorities having jurisdiction over the area.

2. Bonds: Post as required by authorities having jurisdiction over the area.

3. Haul Routes and Restrictions: Comply with requirements of authorities having jurisdiction over the area.

1.03 SUBMITTALS

A. Imported Soils: A Geotechnical Engineer, retained by the Owner as an Owner Consultant, will obtain initial product Sample for testing in accordance with the terms of Article 3.05 of this Section.

B. Shoring calculations as required in Article 3.03 of this Section.

1.04 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement: Standard Specifications for Public Works Construction, current edition, except as modified herein.

B. Sampling, testing, and certification of imported and/or exported soils shall be performed in accordance with Section 01 4524 - Environmental Import/Export Materials Testing.

1.05 TESTING

A. OWNER will retain a Geotechnical Engineer as an OWNER Consultant who will provide observations, tests, inspections and approvals identified in the Contract Documents as being responsibility of OWNER.

B. Imported Soils: The Geotechnical Engineer will obtain initial product Sample for testing in accordance Article 3.05 of this Section.

1.06 PROJECT CONDITIONS

A. Information on Drawings or in soils report does not constitute a guarantee of accuracy or uniformity of soil conditions over the Project site.

PART 2 - PRODUCTS

2.01 FILL AND BACKFILL MATERIALS

A. Fill and backfill materials shall be a granular material previously removed from excavation, or imported fill material, free of large clods and stones larger than 3 inches, foreign materials, vegetable growths, sod, expansive soils, rubbish and debris. Material shall conform to these specified requirements and related sections.

B. Fill material exhibiting a wide variation in consistency and or moisture content shall be blended and/or aerated to stabilize and upgrade the material.

C. Imported Fill Material:

1. Provide suitable materials obtained from Project site excavations for earthwork and fill materials. If excavated materials are not of suitable quality or sufficient quantity, import additional materials as necessary.

2. Imported fill shall be a granular material with sufficient binder to form a firm and stable unyielding subgrade and shall not have more than 60 percent of fines passing 200 mesh sieve. Material shall have a coefficient of expansion of not more than two percent from air dry to optimum moisture content and not more than six percent from air dry to saturation. Imported material shall be clean and free of rubbish, debris and toxic or hazardous contaminants. Adobe or clay soils are not permitted.

D. Brick rubble and broken concrete originating from the Project site shall be legally disposed of off the Project site No such materials shall be imported from outside the Project site.

E. Permeable Backfill:

1. Provide permeable backfill material behind retaining structures consisting of gravel, crushed gravel, crushed rock, natural sands, manufactured sand, or combinations of these materials conforming to the following gradations:

Sieve Size	Percentage Passing
3/4 inch	100
3/8 inch	80 to 100
No. 100	0 to 8
No. 200	0 to 3

2. Those portions of fill material passing a No. 4 sieve shall provide a sand equivalent of at least 60.

3. Provided backing for weep-holes shall consist of two cubic feet of aggregate in burlap sacks, securely tied. Aggregate shall conform to requirements for No. 3 concrete aggregate as specified in subsection 200-1.4 of the Standard Specifications for Public Works Construction.

4. Permeable Backfill Alternate Materials: Instead of the materials specified for retaining structures backfill, a drainage matting system, Miradrain by Mirafi, Inc., or equal, may be provided if reviewed and approved by the ARCHITECT.

PART 3 - EXECUTION

3.01 GENERAL

A. Before initiating intrusive activities, contact Underground Service Alert of Southern California (USA or Dig Alert) to obtain a Dig Alert ticket for location information on buried public and USA member utilities and pipelines at least 48-hours prior to beginning work. A copy of the Dig Alert ticket shall be forwarded to the OWNER. For on-site utilities, retain a state-licensed third party underground utility locating service.

B. Clear the Project site as indicated in Section 31 1000 - Site Clearing.

3.02 PROTECTION

A. Protect and guard excavations against danger to life, limb, and property as required by, but not limited to, Cal-OSHA regulations.

B. Protect adjacent existing improvements including landscaping against damage.

C. Shore, crib, or lag excavations and earthen banks as necessary to prevent caving-in, erosion or gullying of sides.

D. Divert or de-water excavations until concrete is placed, forms are removed, and backfilling is complete.

3.03 SHORING

A. Provide shoring as necessary to properly and safely support earth sides of excavations, curbs, sidewalks, gutter, drives and stairs, against movement and collapse.

B. Design and Calculations: Provide in accordance with requirement of Cal-OHSA. Remove shoring upon completion of Work, or when no longer needed.

3.04 EXCAVATION

A. Form sides of footings, pads, grade beams, and slab foundations, unless otherwise indicated. Provide excavations of sufficient size to permit installation and removal of forms and other Work as required.

B. Machine-drill excavation for round footings to size and depth indicated. Provide a collar or casing, or other adequate protection, to exclude dirt and debris. Protect excavations with plank covers until concrete is placed.

C. Provide excavation bottoms level and free from loose material. Excavate to indicated or required elevations of undisturbed earth.

D. Provide excavations free from standing water by pumping, draining, or providing protection against water intrusion. If soil becomes soft, soggy, or saturated, excavate to firm undisturbed soil and fill as required. Slope adjacent grades away from excavations to minimize entry of water.

E. Calculate excavation quantities based on elevations or depths indicated on Drawings.

F. Provide 2,000 psi concrete for backfill of over-excavated areas to indicated or required elevations.

G. Special preparation of bottom of excavated planes areas: Excavate areas designated on Drawings as bottom of excavated planes (B.E.P.), by excavating and filling to indicated grades and elevations.

3.05 IMPORT/EXPORT OF MATERIALS

A. Provide fill materials as specified in Part 2- Products. If excavated materials from the Project site are not of required quality or sufficient quantity, import additional materials as necessary.

B. In addition to the requirements of this Section, import and/or exported materials shall comply with the requirements of Section 01 4524 - Environmental Import/Export Materials Testing.

C. Imported fill materials will be sampled by the Geotechnical Engineer for compliance with the requirements of Part 2 of this Section.

D. The geotechnical engineer will submit all samples to a DSA approved independent testing laboratory for testing.

E. Initial sampling will be performed by the Geotechnical Engineer before importing material to the Project site. Identify the location of the source site in addition to the address, name of the person and/or entity responsible for the source site. The Geotechnical Engineer will obtain both the initial sample and additional samples from the identified site and will submit samples to the approved independent testing laboratory for testing.

F. The Geotechnical Engineer will perform additional sampling during import operations. If the total quantity of import is determined to be greater than 1,000 cubic yards of material, one sample shall be obtained and submitted for testing for each 250 cubic yards of imported material. If the total quantity of import is determined to be less than 1,000 yards, one sample shall be obtained and submitted for testing for each 100 cubic yards of imported material.

G. The independent approved testing laboratory will perform the required tests and report results of tests noting if the tested material passed or failed such tests and will furnish copies to the Project Inspector, ARCHITECT, OAR, DSA, CONTRACTOR, and others as required. Report shall state tests were conducted under the responsible charge of a licensed State of California professional engineer and the material was tested in accordance with applicable provisions of the Contract Documents, CBC and the DSA. Upon completion of the Work of this Section, the independent testing laboratory and Geotechnical Engineer will submit a verified report to the DSA as required by CBC.

H. Bills of lading or equivalent documentation will be submitted to the Project Inspector on a daily basis.

I. Upon completion of import operations, provide the OAR a certification statement attesting that all imported material has been obtained from the identified source site.

3.06 BACKFILLING

A. After concrete has been placed, forms removed and concrete Work inspected, backfill excavations to indicated or required grades. Backfill simultaneously on each side of walls or grade beams. Remove rubbish, debris, and other waste materials from excavations before placing backfill.

B. Before installing backfill, adequately cure concrete and provide bracing to stabilize structures. Protect waterproofing or dampproofing against damage during backfilling operations with required protection board. Remove bracing as backfill operation progresses.

C. Do not furnish or install expansive soils for below grade building walls.

D. Install each layer of material in a not to exceed thickness of 6 inches, unless otherwise required.

E. Rigidly control the amount of water to be installed to provide optimum moisture content for type of fill material furnished. Do not over-saturate or compact by flooding or jetting.

F. Install wall backfill before installing railings and fences on walls.

G. Impervious backfill materials shall be installed in layers along with and by the same methods specified for structure backfill. Impervious backfill materials shall be at the approximate grade and elevation and where exposed to erosion, shall be covered with at least a 12-inch layer of fill material as reviewed by the Geotechnical Engineer.

H. Install weep hole drainage at the backside of walls so the backing completely covers the weep holes, is horizontally centered and extends at least 12 inches above the bottom of the weep opening. Provide an 8-inch square section of 1/4 inch galvanized or aluminum screen, with a minimum wire diameter of 0.03 inch, and install at the backside of each weep hole before installing the backfill material.

I. Where a reviewed drainage matting system is provided instead of permeable backfill for retaining structures, install in accordance with the manufacturer recommendations.

3.07 COMPACTING

A. Compact each layer of fill material by tamping, sheepsfoot rollers or pneumatic-tired rollers, to such extent as to provide specified relative compaction. At inaccessible locations, compact to specified requirements with hand-held, operated and directed compaction equipment.

A. Unless otherwise indicated, compact each layer of fill material to a relative compaction of at least 90 percent.

B. Do not compact by flooding or jetting.

C. When fill materials, or a combination of fill materials, are encountered or provided which develop densely packed surfaces as a result of installation or compacting operations, scarify each layer of compacted fill before installing the next succeeding layer.

3.08 INSPECTION AND TESTING

A. The Geotechnical Engineer will inspect and test excavations, sample material quality as required in Part 2, and observe installation and compaction of fill materials.

B. The Geotechnical Engineer will sample imported fill materials from their designated source before delivery to the Project site.

C. Installation of backfill shall be observed by the Geotechnical Engineer.

D. The Geotechnical Engineer will inspect and test excavation Work before the installation of fill and/or other materials.

E. Compaction: Test compaction in accordance with ASTM D1557, Method C.

F. The Project Inspector will inspect foundation excavations when completed and ready for forms, after forms are in place and before first placement of concrete.

3.09 PROTECTION

A. Protect the Work of this Section until Substantial Completion.

3.10 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 31 2323

EXCAVATION AND FILL FOR UTILITIES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Excavating, backfilling, and compacting utility trenches such as water, gas, irrigation, storm drain, sewer lines, concrete-encased conduits, and manholes, vaults, valve boxes, catch basins, underground tanks, thrust blocks, yard boxes, pull boxes and other utility appurtenances.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Section 01 4524 - Environmental Import/Export Materials Testing.

3. Section 31 1000 - Site Clearing.

4. Section 31 2200 - Grading.

5. Section 31 2316 - Excavation and Fill for Paving.

6. Section 31 2319 - Excavation and Fill for Structures.

7. Section 32 0117 - Pavement Repair.

8. Section 32 1313 - Site Concrete Work.

9. Division 26 - Electrical.

1.02 PROJECT REQUIREMENTS

A. Import and Export of Earth Materials:

1. Fees: Pay as required by authorities having jurisdiction over the area.

2. Bonds: Post as required by authorities having jurisdiction over the area.

3. Haul Routes and Restrictions: Comply with requirements of authorities having jurisdiction over the area.

1.03 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement: Standard Specifications for Public Works construction, current edition except as modified herein.

B. Sampling, testing, and certification of imported and/or exported soils shall be performed in accordance with Section 01 4524 - Environmental Import/Export Materials Testing.

1.04 TESTING

A. OWNER will retain a Geotechnical Engineer as an OWNER Consultant who will provide observations, tests, inspections and approvals identified in the Contract Documents as being responsibility of OWNER.

B. Imported Soils: The Geotechnical Engineer will obtain initial product Sample for testing in accordance Article 3.02 of this Section.

1.05 PROJECT CONDITIONS

A. Information on Drawings or in soils report does not constitute a guarantee of accuracy or uniformity of soil conditions over the Project site.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Bedding material from trench bottom to one foot above the pipe:

1. Sand, gravel, crushed aggregate or native free-draining granular material providing a sand equivalent of at least 30 or a coefficient of permeability greater than 1.4 inches per hour.

2. Sand complying with the Specifications for cement concrete aggregates.

B. Backfill Materials:

1. Excavated trench material to be installed for backfilling shall be clean, free of large clods, and stones larger than 2 ½-inch in any dimension.

2. Cement-sand slurry shall be provided with one sack of cement per cubic yard of the mixture.

3. Imported Fill Material: Imported fill material shall be a granular material with sufficient binder to form a firm and stable unyielding subgrade and shall not have more than 60 percent of fines passing a 200 mesh sieve. Material shall provide a coefficient of expansion of not more than two percent from air dry to optimum moisture content and not more than six percent from air dry to saturation. Imported materials shall be clean and free of rubbish, debris, and toxic or hazardous contaminants. Adobe or clay soils are not permitted.

PART 3 - EXECUTION

3.01 GENERAL

A. Before initiating intrusive activities, contact Underground Service Alert of Southern California (USA or Dig Alert) to obtain a Dig Alert ticket for location information on buried public and USA member utilities and pipelines at least 48-hours prior to beginning work. A copy of the Dig Alert ticket shall be forwarded to the OWNER. For on-site utilities, retain a state-licensed third party underground utility locating service.

B. Barricade trenches, ditches, pits, sumps, and similar Work outside the barricaded working area with chain link fence as specified in Section 01 5000, Construction Facilities and Temporary Controls, and in accordance with Cal-OSHA standards and requirements.

C. Saw-cut concrete or bituminous paving for trench installation.

D. Trenches over 5 feet in depth shall conform to the Cal-OSHA.

E. Where indicated and required to excavate in lawn areas, protect adjoining lawn areas outside of the Work area. Replace or install removed sod upon completion of backfill by installing sod level with adjacent lawns. If installation of removed sod fails, furnish sod and install to match existing lawns.

F. Backfill over excavations to the required elevations with earth, gravel, sand, or concrete and compact as required. Provide excavations free from standing water by pumping, draining, or providing protection against water intrusion. Slope adjacent grades away from excavations to minimize entry of water.

G. Do not install piping lengthwise under concrete walks without review by the ARCHITECT.

H. Do not excavate trenches parallel to footings closer than 18 inches from the face of the footing or below a plane having a downward slope of two horizontal to one vertical, from a line 9 inches above bottom of footings.

1. Unless otherwise indicated on Drawings, depth of excavations outside the buildings shall allow for a minimum coverage above top of pipe, tank, or conduit measured from the lowest adjoining finished grade, as follows:

Steel Pipe	24 inches below finished grade
Copper Water Tube	18 inches below finished grade
Cast-Iron Pressure Pipe	36 inches below finished grade
Plastic Pipe (other than waste)	30 inches below finished grade
Tanks or other structures	36 inches below finished grade
Soil, Sewer & Storm Drain	minimum 18 inches below finished grade, and as required for proper pitch and traffic load. (Install polypropylene sewer pipe with at least 24 inches coverage)
Irrigation Pipe:	nonpressure pipe 12 inches, pressure pipe 24 inches

2. Trench width shall provide ample space for fitting and joining. Excavate for piping bells and fittings, bell and spigot pipe and other fittings.

I. Unless indicated otherwise, excavate trenches to the required depths for utilities, such as pipes, conduit and tanks, with minimum allowances of 6 inches at the bottom and 6 inches at the sides for bedding of unprotected piping or as required for concrete encasement of conduits as indicated on Drawings. Grade bottom of trenches to a uniform smooth surface. Remove loose soil from the excavation before installing sand bedding or concrete encasement.

J. Provide excavations free from standing water by pumping, draining, or providing protection against water intrusion. If soil becomes soft, soggy, or saturated, excavate to firm undisturbed soil and fill as required. Slope adjacent grades away from excavations to minimize entry of water.

K. Provide a minimum clear dimension of 2 inches from sides of wall excavation to outer surfaces of buried pipes or conduits installed in the same trench or outside surfaces of containers and tanks.

L. Do not install backfill until required inspections and testing is completed.

M. Backfill electrical or other excavated utility trenches located outside of barricaded installation areas within 24 hours after inspection by the Project Inspector.

O. If materials excavated from the Project site are not permitted for trench backfill in paved areas, backfill trenches with a cement-sand slurry mix. Install backfill to an elevation of the existing undisturbed grade plus one inch.

P. Install and compact sand bedding to provide a uniform full length bearing under piping and conduits.

Q. Where portions of existing structures, walks, paving, or other improvements are removed or cut for piping or conduit installation, replace the material with equal quality, finished to match adjoining existing improvements. Repair pavement as specified in Section 32 0117, Pavement Repair.

3.02 IMPORT/EXPORT OF MATERIALS

A. Provide fill materials as specified in Part 2, Products. If excavated materials from the Project site are not of required quality or sufficient quantity, import additional materials as necessary.

B. In addition to the requirements of this Section, import and exported materials shall comply with the requirements of Section 01 4524, Environmental Import/Export Material Testing.

C. Imported fill materials will be sampled by the Geotechnical Engineer for compliance with the requirements of Part 2 of this Section.

D. The Geotechnical Engineer will perform the tests by utilizing an independent approved testing laboratory.

E. Initial sampling will be performed by the Geotechnical Engineer before importing material to the Project site. Identify the location of the source site in addition to the address, name of the person and/or entity responsible for the source site. The Geotechnical Engineer will obtain both the initial sample and additional samples from the identified site and shall submit all samples to the approved independent testing laboratory.

F. The Geotechnical Engineer will perform additional sampling during import operations. If the total quantity of import is determined to be greater than 1,000 cubic yards of material, one sample shall be obtained and submitted for testing for each 250 cubic yards of imported material. If the total quantity of import is determined to be less than 1,000 yards, one sample shall be obtained and submitted for testing for each 100 cubic yards of imported material.

G. The independent approved testing laboratory will perform the required tests and report results of all tests noting if the tested material passed or failed such tests and will furnish copies to the Project Inspector, ARCHITECT, OAR, DSA, CONTRACTOR, and others as required. Report shall state tests were conducted under the responsible charge of a licensed State of California professional engineer and the material was tested in accordance with applicable provisions of the Contract Documents, CBC and the DSA. Upon completion of the Work of this Section, the independent testing laboratory and Geotechnical Engineer will submit a verified report to the DSA as required by CBC.

H. Bills of lading or equivalent documentation will be submitted to the Project Inspector on a daily basis.

I. Upon completion of import operations, provide the OAR a certification statement attesting that imported material has been obtained from the identified source site.

3.03 INSPECTION AND TESTING

A. The Geotechnical Engineer will inspect and test excavations, sample material quality as required in Part 2, observe installation and compaction of fill materials.

B. Compaction test shall be performed in accordance with ASTM D1557, method "C."

3.04 PROTECTION

A. Protect the Work of this Section until Substantial Completion.

3.05 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 31 2326

BASE COURSE

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Installation of base material.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Section 01 4524 – Environmental Import / Export Material Testing.

2. Section 31 1000 - Site Clearing.

3. Section 31 2200 - Grading.

4. Section 31 2313 - Excavation and Fill.

5. Section 31 2316 - Excavation and Fill for Paving.

6. Section 32 0117 - Pavement Repair.

8. Section 32 1313 - Site Concrete Work.

1.02 SUBMITTALS

A. Crushed aggregate base (CAB) shall consist of native rock without naturally occurring asbestos or recycled materials. The CONTRACTOR shall submit written documentation, which identifies the source, volume, and proposed transport date of the material for review and approval by OWNER'S Office of Environmental Health and Safety (OEHS) prior to importing the material. A statement on company letterhead from the CAB source, stamped by either a California Professional Geologist or Engineer, which states that the subject materials are native rock, do not contain any recycled materials and that the source quarry does not mine ultramafic materials, a source of natural occurring asbestos shall be included in the submittal to OEHS. The CONTRACTOR may request variance from analytical testing required by Section 01 4524 for CAB. To be considered for a variance, the CONTRACTOR shall submit a documentation package for OEHS approval, which includes all of the aforementioned information at least 48 hours in advance of planned import.

1. Frequently used suppliers for LAUSD projects include:

a. Hansen Aggregates.

b. Vulcan Materials, Reliance Company.

c. Vulcan Materials Durbin.

C. Product Data: Submit material source, technical information and test data for base materials. Gradation and quality certifications shall be dated within 30 days of the submittal.

D. Sample: Submit sample of proposed base course material.

1.03 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement: Standard Specifications for Public Works Construction, current edition.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Crushed Aggregate Base (CAB) materials shall conform to the requirements of the Standard Specifications for Public Works Construction: Section 200 - Rock Materials.

B. Crushed Miscellaneous Base (CMB) or materials generated on site shall not be used as a base course material.

2.02 MATERIAL APPROVAL

A. Base material shall be inspected by the Project Inspector for gradation and material content prior to installation. The OWNER may choose to have additional tests performed by a geotechnical engineer, retained by the OWNER, before installation.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install base course material in layers not exceeding 4 inches in thickness, unless required otherwise. Grade and compact to indicated levels or grades, cut and fill, water and roll until the surface is hard and true to line, grade and required section. Provide a relative compaction of at least 95 percent, unless otherwise required.

B. Grade base course to elevations indicated on Drawings, ready to receive surfacing, in accordance with Section 31 2200 - Grading.

3.02 PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.03 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 32 0117

ASPHALT PAVEMENT REPAIR

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Bituminous Surfacing Repair: Areas removed for utility trenches, heaved by tree roots, cracked areas, protruding areas where pavement meets hard surfaces, depressed areas, holes and areas around new structures, and raveled bituminous pavement.

2. Areas heaved by tree roots, cracked areas, holes and trenches, and areas around new structures.

B. Related Sections:

1. Division 01 - General Requirements.

2. Section 31 2200 - Grading.

3. Section 31 2313 - Excavation and Fill.

4. Section 31 2316 - Excavation and Fill for Paving.

5. Section 31 2319 - Excavation and Fill for Structures.

6. Section 31 2323 - Excavation and Fill for Utilities.

7. Section 31 2326 - Base Course.

8. Section 32 1313 - Site Concrete Work.

1.02 SUBMITTALS

A. Shop Drawings: Submit Shop Drawings indicating areas to be repaired.

B. Product Data: Submit manufacturer’s technical data for materials and products.

1.03 QUALITY ASSURANCE

A. Comply with Standard Specifications for Public Works Construction, current edition.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Base course materials: Section 31 2326 - Base Course.

B. Asphalt paving materials: Section 32 1216 - Asphalt Paving.

C. Seal materials: Section 32 1236 - Seal for Bituminous Surfacing.

D. Headers: Section 32 1216 - Asphalt Paving.

2.02 BITUMINOUS MATERIALS

A. Provide materials and products of the class, grade or type indicated, conforming to relevant provisions of Section 203 - Bituminous Materials of the latest Standard Specifications for Public Works Construction.

PART 3 - EXECUTION

3.01 PAVEMENT REMOVAL

A. Remove bituminous and concrete pavement in accordance with applicable provisions of Section 300 - Earthwork of the Standard Specifications for Public Works Construction.

B. Pavement Heaved By Roots: Remove pavement to limits of distortion and expose roots. Trim roots to provide at least 12-inch clearance to pavement. Coordinate with OWNER's Tree Trimming Department for recommendations and approval prior to trimming roots.

C. Remove protruding bituminous surfaces flush with the surrounding grade using a suitable tool or equipment so that adjacent finishes are not blackened.

D. Remove raveled and depressed bituminous pavement to limits indicated or required.

E. Saw cut existing improvements, trim holes and trenches in bituminous and concrete pavement to permit mechanical hand tampers to compact the fill.

F. Remove broken concrete by saw cutting. If the required cut line is within 30 inches of a score or joint line or edge, cut and remove to the score, joint line, or edge.

3.02 EXCAVATING, BACKFILLING AND COMPACTING

A. Conform to requirements in Section 31 2313 - Excavation and Fill; Section 31 2316 - Excavation and Fill for Paving; Section 31 2319 - Excavation and Fill for Structures; or Section 31 2323 - Excavation and Fill for Utilities, as required.

B. Where subgrade or base is deemed to be unstable or otherwise unsuitable, excavate such materials to firm earth, and replace with a required material. Install and compact fill materials in accordance with the requirements of Section 31 2316 Excavation and Fill for Paving.

3.03 HEADERS

A. Install headers along edge of bituminous surfacing abutting turf, earth, or planting area, unless indicated otherwise.

B. Install headers so the bottom surface has continuous bearing on solid grade. Where excavation for headers is undercut, thoroughly tamp soil under the header. Compact backfill on both sides of header to the density of the adjacent undisturbed grade.

C. Fasten headers in place with redwood or Douglas fir stakes of length necessary to extend into solid earth a minimum of 12 inches. Stakes shall be of sound material, neatly pointed, driven vertically, and securely nailed to headers. Space stakes, not to exceed 4 feet on centers with top of stakes set one inch below top of header. Provide a minimum of two 12d galvanized common nails through each stake.

D. Remove existing headers where new surfacing is installed adjacent to existing surfacing.

E. Install temporary headers at transverse joints of paving where continuous paving operations are not maintained.

F. Provide additional stakes and devices as required to fasten headers.

3.04 BASE COURSE

A. Unless otherwise indicated, base course shall be crushed aggregate base, fine grade, 3 inches thick or equal to thickness of the existing base, whichever is greater.

B. Fill grade and compact as specified in Section 31 2200 - Grading.

3.05 RESURFACING

A. Utility Trenches: Remove loose dirt and backfill with cement-sand slurry allowing for surfacing one inch thicker than existing. Resurface flush with existing adjoining pavement installing the same type of materials and section provided in existing improvements.

B. Other Areas: Other surface improvements damaged or removed shall be cut to a neat even line and excavated one inch below the bottom of the existing pavement. Resurface by following the original grades and installing the same type of materials provided in existing improvements.

C. Where bituminous surfacing abuts concrete, masonry, walks or paving, tamp joint smooth, if necessary, as described above to obtain a uniformly even joint, true to line and grade. Tamp and smooth materials before asphalt cools.

3.06 REPAIRING AND RESEALING EXISTING SURFACES

A. Preparation of Surfaces: Prior to filling cracks, clean existing bituminous surfacing of loose and foreign materials and coat with a film of asphalt emulsion.

B. Repair of Existing Surfacing:

1. Fill cracks 1/2 inch wide and less with RS-1 emulsion and washed plaster sand or other OEHS approved crack filler material. Cracks larger than ½ inch wide shall be filled with Type F/Sheet Mix Asphalt Concrete as specified. Cracks shall be filled to the level of adjacent surfacing.

2. Where low areas, holes, or depressions occur in existing surfacing, refer to Section 32 1216; Asphalt Paving, Article 3.02. Use Type E/School Mix and feather edge joint flush to the level of adjacent surfacing.

C. Testing: Flood test entire area in presence of the Project Inspector. Inspect area after waiting one hour. Entire area tested shall be free of standing water or puddles in excess of 0.01 foot. Practical field measurement: 0.01 foot = two quarters stacked.

D. Surface Seal: After surface has been repaired and tested, install seal coat over entire area indicated. Surface seal shall be as specified in Section 32 1236 - Seal for Bituminous Surfacing.

3.07 CLEANING

A. Remove all stains on the Project site and adjacent properties caused by or attributed to the Work of this section.

B. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

3.08 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 32 1216

ASPHALT PAVING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Paving for playground, parking areas, areas between buildings surfacing adjacent to planting and turf areas as indicated.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 31 2200 - Grading.
3. Section 32 0117 - Pavement Repair.
4. Section 31 2326 - Base Course.
5. Section 32 1236 - Seal for Bituminous Surfacing.
6. Section 32 1313 - Site Concrete Work.

1.02 SUBMITTALS

A. Shop Drawings: Submit site plan indicating extent of paving and accessories.

B. Product Data: Manufacturer’s technical data for materials and products.

1.03 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement: Standard Specifications for Public Works Construction.

B. ADA related slopes shall be measured with a twenty-four-inch digital level.

1.04 PROJECT CONDITIONS

A. Information on Drawings or in soils report does not constitute a guarantee of accuracy or uniformity of soil conditions over the Project site.

B. A copy of the soils report is available for examination in the office of the ARCHITECT during regular office hours of the ARCHITECT.

PART 2 - PRODUCTS

2.01 BITUMINOUS MATERIALS

A. Provide materials of the class, grade, or type indicated on the Drawings, conforming to relevant provisions of Section 203 - Bituminous Materials of the Standard Specifications for Public Works Construction.

NOTES:

1. CONCRETE HEADERS ARE TO BE USED TO REDUCE LONG TERM MAINTENANCE. USE REDWOOD HEADERS ONLY AT EXISTING SCHOOLS FOR REPLACEMENT. REDWOOD HEADERS MAY NOT BE USED WITHIN 10 FEET FROM A BUILDING. HEADERS ARE TO BE INDICATED AND DETAILED ON DRAWINGS.

B. Asphalt Concrete Mix:

1. Paved slopes: Type III, D, PG-64-10.

2. Between buildings, playgrounds, parking and fire lanes: Type III, C3, PG-64-10.

3. Driveways for trash and delivery trucks: Type III, C3, PG-64-10 and Type III, B3, PG-64-10

2.02 HEADERS

A. Concrete: Per specification Section 32 1313 - Site Concrete Work.

B. Wood:

1. Redwood, Construction Heart Grade, size 2 by 6, unless otherwise indicated.

2. Stakes: 2 by 4 redwood or 2 by 3 Douglas fir, Construction Grade.

3. Nails: Common, galvanized, 12d minimum.

PART 3 - EXECUTION

3.01 HEADERS

A. Concrete Headers:

1. Install headers along edge of bituminous surfacing as indicated on the Drawings.

2. Verify that gradients and elevations of base are correct. Maintain subgrade clean and in a smooth, compacted condition until the concrete is placed.

3. Construct forms, install steel reinforcement and place concrete as indicated on Section 32 1313 Site Concrete.

B. Wood Headers:

1. Install headers along edge of bituminous surfacing abutting turf, earth, or planting area, unless indicated otherwise.

2. Install headers so the bottom surface has continuous bearing on solid grade. Where excavation for headers is undercut, thoroughly tamp soil under the header. Compact backfill on both sides of header to the density of adjacent undisturbed earth.

3. Fasten wood headers in place with redwood or Douglas fir stakes of length necessary to extend into solid grade a minimum of 12 inches. Stakes shall be of sound material, neatly pointed, driven vertically, and securely nailed to headers. Space stakes, not to exceed 4 feet on center with top of stakes set one inch below top of header. Provide a minimum of two 12d galvanized common nails through each stake.

4. Remove existing headers where new surfacing is installed adjacent to existing surfacing.

5. Install temporary headers at transverse joints of paving where continuous paving operations are not maintained.

6. Provide additional stakes and anchorage as required to fasten headers in place.

3.02 CONSTRUCTION OF ASPHALT CONCRETE PAVEMENT

A. Pavement Thickness: Unless otherwise indicated on Drawings or specified, install bituminous surfacing to a compacted thickness of 2 inches.

B. Base course shall be as specified in Section 31 2326, Base Course.

C. Surfaces of walls, concrete, masonry, or existing bituminous surfacing indicated to be in direct contact with installed bituminous surfacing shall be cleaned, dried and uniformly coated with an asphaltic emulsion film.

D. Thicken edges of bituminous surfacing that do not abut walls, concrete, or masonry, and at edges joining existing bituminous surfaces. Remove headers at existing bituminous surfacing where new bituminous surfacing is to be installed. Thicken edges an additional 2 inches and taper to the indicated or specified thickness 6 inches back from such edges.

E. At stairways, adjust thickness of paving such that the first tread is equal in height to all other treads.

F. Provide adequate protection for concrete, planting areas, and other finish Work adjacent to areas indicated to receive bituminous surfacing.

G. Placing:

1. Do not install bituminous surfacing when atmospheric temperature is below 40 degrees F; or when fog or other unsuitable weather conditions are present. Temperature of mixture at time of installation shall not be lower than 260 degrees F in warm weather or higher than 320 degrees F in cold weather.

2. Where 2-inch or 3-inch thick surfacing is indicated or specified, install surfacing in one course. Where surfacing is indicated or specified 4 inches or more in thickness, except for thickened edges, install bituminous surfacing in courses of approximately equal thickness, each course not exceeding 2 ½ inches in thickness.

H. Stakes or Screeds: Provide grade or screed stakes spaced not more than 15 feet apart in flow lines with grades of less than one percent. Continuous screeds may be provided instead of stakes.

I. Spreading: Install bituminous surfacing in a manner to cause least possible handling of mixture. In open areas and wherever practicable, install by mechanical means with a self-propelled mechanical spreader. In confined or restricted areas, install mixture with hot shovels and rakes, and smooth with lutes.

J. Joints: Provide vertical joints between successive runs. Install joints true to line, grade, and cross section. Lapped joints are not permitted.

K. Rolling:

1. Finish roll with a self-propelled tandem roller weighing at least 8 tons. Break down roll with a self-propelled roller weighing between 1 ½ tons and 8 tons.

2. Roll in a manner that preserves flow lines and the established finished grades. Break down roll in areas adjacent to flow lines parallel to flow lines. Break down roll after bituminous surfacing is installed without shoving or cracking of mixture under roller. Continue finish rolling until surfacing is unyielding, true to grade, and meets requirements for specified smoothness. Areas inaccessible to finish roller may be finish rolled with breakdown roller or tamped with hot tamping irons and smoothed with hot smoothing irons, hand roller or asphalt plate compactor.

3. Where bituminous surfacing abuts concrete, masonry, walks or paving, tamp joint smooth, if necessary, as described above to obtain a uniformly even joint, true to line and grade. Tamp and smooth to properly compact.

4. Compacted bituminous surfacing shall be provided with a bulk specific gravity of at least 2.31 when tested in accordance with ASTM D1188.

L. Allow bituminous surfacing a thirty day curing time before applying surface seal.

3.03 TOLERANCE

A. Smoothness: Surface of bituminous surfacing after rolling, shall be even, smooth and uniform in texture with no voids or rock pockets, free of roller marks or other irregularities, and not varying by more than 0.03 foot, except at local depressions or raised areas as indicated, when a 10-foot straightedge is placed on surface.

B. Grade: Finished grade shall not vary more than 0.02 foot above or below required grade. Variations within prescribed tolerance shall be compensating so that average grade and cross-section are provided.

3.04 TESTING

A. Asphalt Pavement to Receive Solar Reflective Coating:

1. After asphalt paving has been installed and after a 24 hour period, flood test entire area in presence of the Project Inspector. Inspect area after waiting one hour. Entire area tested shall be free of standing water or puddles in excess of 0.01 foot. Practical field measurement 0.01 foot = two quarters stacked. Repair areas of standing water or puddles and flood test locally; install surface seal and retest as necessary.

2. No seals are to be applied to areas of asphalt paving that are to receive solar reflective coatings.

B. Asphalt Pavement to Receive Bituminous Seal: refer to Section 32 1236 Seal for Bituminous Surfacing.

3.05 SURFACE SEALING

A. Refer to Section 32 1236 - Seal for Bituminous Surfacing.

B. Where indicated, provide multiple coats of surface seal to existing bituminous surfacing.

C. Where new bituminous surfacing joins existing bituminous surfacing, overlap surface seal a minimum of 12 inches onto existing bituminous surfacing.

3.06 PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.07 CLEANUP

A. Remove rubbish, debris and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 32 1236

SEAL FOR BITUMINOUS SURFACING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Surface sealer over bituminous surfacing.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 32 0117 - Pavement Repair.
3. Section 32 1216 - Asphalt Paving.
4. Section 32 1723 - Pavement Marking.

1.02 SUBMITTALS

A. Product Data: Submit manufacturer's product information and application procedures for bituminous surfacing.

1.03 QUALITY ASSURANCE

A. Comply with the Standard Specifications For Public Works Construction, current edition.

B. Agitate bulk materials during transport.

1.04 MAINTENANCE

A. Extra Materials: Provide 10 gallons in unopened containers.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Provide one of the following surface seals:

	Product Name	Manufacturer
1.	Guard-Top	CALMAT / Industrial Asphalt

2.	Over Kote	Diversified Asphalt Product
3.	Park Top	Western Colloid Products
4.	Sure Seal	Asphalt Coating Engineering
5.	Super Drive Top.	SAF– T Seal. Inc.
6.	Equal.	

PART 3 - EXECUTION

3.01 SURFACE PREPARATION

A. Thoroughly wash surfaces with water to remove dirt, debris, excessive oil and grease, or other foreign matter.

3.02 APPLICATION

A. Install seal coat in strict accordance with manufacturer's written directions and recommendations.

B. Install two coats of surface seal to new bituminous surfacing. First coat shall be installed before flood testing. Clean surface and allow to dry before installing second coat. Second coat shall be installed after bituminous surfacing has passed flood test.

C. Where new bituminous surfacing is installed adjacent to existing bituminous surfacing, overlap surface seal a minimum of 12 inches onto existing bituminous surfacing.

D. Where existing bituminous surfacing is indicated to be patched and sealed, install two coats of surface seal after patching. Refer to Section 32 1216 - Asphalt Paving.

3.03 PROTECTION OF SURFACES

A. Protect sealed and unsealed surfaces from damage and traffic during performance of the Work of this section and until surface seal has thoroughly set and cured. Do not permit traffic of any kind for at least 24 hours after completion of installation.

B. Protect the Work of this section until Substantial Completion.

3.04 TESTING

A. OWNER reserves the right to obtain samples, perform tests to ensure compliance with the Specifications, and to review weight slips and invoices of materials delivered to the Project site.

B. After first coat of surface seal has been installed and after a 24-hour period, flood test entire area in presence of the Project Inspector. Inspect area after waiting one hour. Entire area tested shall be free of standing water or puddles in excess of 0.01 foot.

Practical field measurement: 0.01 foot = two quarters stacked. Repair areas of standing water or puddles and flood test locally; install surface seal and retest as necessary.

3.05 CLEAN UP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 32 1313

SITE CONCRETE WORK

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: On-site concrete work:

1. Portland cement concrete pavement, driveways, curbs, gutters and mowing strips.

2. Ramps and stairs on grade.

3. Footings for fence posts, bollards, flagpoles, shade structures, light standards and athletic and playground equipment.

4. Pipe encasements, thrust blocks, and equipment pads.

5. Retaining walls, planter walls and concrete benches.

6. Skateboard deterrents.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Section 03 1000 – Concrete Forming and Accessories.

3. Section 03 2000 - Concrete Reinforcement.

4. Section 03 3000 – Cast-in-Place Concrete.

5. Division 26 - Electrical.

1.02 REFERENCES

A. Structural work, such as retaining walls, planter walls, cast-in-place benches, equipment pads, and footings for playground equipment, fences, walls, shade structures and flagpoles shall conform to the following Sections:

1. Section 03 1000 Concrete Forming.

2. Section 03 2000 Concrete Reinforcing.

3. Section 03 3000 Cast-in-Place Concrete.

B. Flatwork, such as walkways, driveways, ramps and steps on grade, swales, curbs, mow strips and utility related concrete, conform to:

1. Standard Specifications for Public Works Construction, The “Greenbook”, except reclaimed aggregates and processed miscellaneous base are not allowed.

C. Imported or exported earthwork shall conform to Section 01 4524 Environmental Import / Export Materials Testing.

D. National Ready Mixed Concrete Association (NRMCA):

1. Checklist for the Concrete Pre-Construction Conference.

1.03 QUALITY ASSURANCE

A. Source Limitations for Exposed Concrete: Obtain each color, size, type, and variety of concrete material and concrete mixture from single manufacturer with resources to provide concrete of consistent quality in appearance and physical properties. Secure material required for the duration of the project as needed to ensure consistent quality in appearance.

B. Pre-Installation Conference:

1. CONTRACTOR shall coordinate and conduct pre-installation conference in conformance to Section 01 3119 Project Meetings.

2. CONTRACTOR shall use the NRMCA “Checklist for the Concrete Pre-Construction Conference” as the meeting agenda.

C. Mockup:

1. Build 8 feet by 8 feet mockups of full-thickness sections of concrete paving using processes and techniques intended for use on permanent work, including curing procedures.

2. Build mockups to demonstrate typical joints; surface finishes and standard of workmanship.

3. Obtain ARCHITECT’s approval of mockup before proceeding with work of this Section.

4. Mockup shall remain through completion of the work for use as a quality standard for finished work.

5. Remove mockup when directed by the OAR.

D. Field applied primers, paintings, sealers, sealants, caulking, leveling and patching compounds, crack/joint repair compounds adhesives and similar products shall be approved by the OWNER’s Office of Environmental Health and Safety (OEHS).

E. ADA related slopes shall be measured with a twenty-four-inch digital level.

1.04 SUBMITTALS

A. Structural Work: Conform to the applicable requirements of Sections 03 1000 Concrete Forming, 03 2000 Concrete Reinforcing and 03 3000 Cast-in-Place Concrete.

B. Flatwork: Submit mix design in conformance to the Greenbook.

C. Shop Drawings: Submit drawings indicating the locations of concrete joints, including construction joints, expansion joints, isolation joints, and contraction joints.

1.05 DELIVERY, STORAGE AND HANDLING

A. Store cement and aggregate materials so to prevent their deterioration or intrusion by foreign matter. Deteriorated or contaminated materials shall not be furnished.

B. Packaged materials shall bear the manufacturers and brand name label and shall be stored in their original unbroken package in a weather tight place until ready for use in the work.

C. Avoid exposure of reinforcing steel bars, wire, and wire fabric to dirt, moisture or conditions harmful to reinforcing.

D. Reinforcing steel bars, wire, and wire fabric shall be stored on the Project site to permit easy access for examination and identification of each shipment. Material of each shipment shall be separated by size and shape.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Structural Work: Conform to the applicable requirements of the following Sections, except as otherwise specified:

1. Section 03 1000 Concrete Forming.

2. Section 03 2000 Concrete Reinforcing.

3. Section 03 3000 Cast-in-Place Concrete.

4. Section 07 9200 Joint Sealants.

B. Flatwork: Conform to the applicable requirements of the Greenbook, Section 201, except as follows:

1. Water/cement ratio for concrete flatwork shall be 0.50 maximum.

2. Base course shall conform to Section 31 2326 Base Course.

3. Reclaimed concrete material shall not be used.

2.02 SKATEBOARD DETERRENTS

A. Manufacturer: Barrett Robinson Inc. or equal.

B. Fabricated from 6061-T6 aluminum, clear anodized.

1. Fixed Angle Series:

a. FR0.12: For walls with 1/8" radius edge. Dimensions: 4.875" top x 1.0" face x 2.0" wide.

b. FA90A: For walls with 1/8" radius edge. Dimensions: 4.0" top x 2.375" face x 2.0" wide.

c. FA135: For chamfered edges, where the chamfer is 3/4” or more. Dimensions: 2" wide X 3-1/2" long X 1-1/8" tall.

d. FA902.5: For 90 degree walls with 1/2" radius edge. Dimensions: 3.75" top x 2.375" face x 2.0" wide.

2. Fixed Radius:

a. FR.12: For 1/8" radiused edges. Dimensions: 4.875" top x 1.0" face x 2.0" wide.

b. FR.05: For 1/2" radiused edges. Dimensions: 3.75" top x 1.0" face x 2.0" wide.

c. FR1.0: For 1" radiused edges. Dimensions: 4.375" top x 1.625" face x 2.0" wide.

3. Gorilla Series:

a. Gorilla 012: Rounded edge. For square corners from 0” - 3/8” radius. Size: 1-1/8” wide x 8” deep x 1-1/8”.

b. Gorilla 0135: Chamfered edge. For square corners from 0” - 3/8” radius. Size: 1-1/8” wide x 8” deep x 1-1/8”.

4. Two-part epoxy adhesive shall be approved by the OWNER’s Office of Environmental Health and Safety (OEHS).

5. Fastening pins as recommended by skateboard deterrent manufacturer.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that gradients and elevations of base are correct. Maintain subgrade clean and in a smooth, compacted condition until the concrete is placed.

B. Maintain subgrade in a smooth, compacted condition in conformity with the required section and established grade until the concrete is placed. Earth surface shall be kept moist by frequent sprinkling up to the time of placing concrete.

3.02 CONSTRUCTION OF FORMS

A. Flatwork Forming: Set forms to the indicated alignment, grade and dimensions. Hold forms rigidly in place by a minimum of 4 stakes per form placed at intervals not to exceed two feet. Use additional stakes and braces at corners, deep sections, and radius bends, as required. Use clamps, spreaders, and braces where required to ensure rigidity in the forms.

B. Wall Formwork: Forms shall be constructed to conform to final concrete shape, lines and dimensions of members required by Drawings and Specifications. Forms shall be sufficiently tight to prevent leakage of concrete and properly braced or tied together to maintain position and shape.

3.03 STEEL REINFORCEMENT INSTALLATION

A. Fabricate bars of the indicated sizes and bend and form to required shapes and lengths by methods not injurious to materials. Do not heat reinforcement for bending. Bend bars No. 6 size and larger in the shop only. Bars with unscheduled kinks or bends are not permitted.

B. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.

C. Install welded-wire reinforcement in lengths as long as practicable. Lap adjoining pieces, and lace splices with wire.

D. Clean reinforcement of loose rust and mill scale, earth, or bond-reducing materials.

3.04 PREPARATION FOR CONCRETE PLACEMENT

A. Surfaces to receive concrete shall be free of debris, standing water, and any other deleterious substances before start of concrete placing.

B. Do not place concrete until forms, reinforcement, pipe, conduits, outlet boxes, anchors, sleeves, bolts, and other embedded materials are securely fastened in place. Maintain a minimum of two inches clearance between said items and any part of the concrete reinforcement.

C. Adjust pull boxes, meter boxes, valve covers and manholes to proposed finish grade prior to placement of concrete. Anchor bolts shall be accurately set and maintained in position by templates while being embedded in concrete.

D. Clean thoroughly the surfaces of metalwork to be in contact with concrete, remove dirt, grease, loose scale and rust, grout, mortar, and other foreign substances before the concrete is placed.

E. Moisten subbase to provide a uniform dampened condition at time concrete is placed.

3.05 CONCRETE PLACEMENT

A. Place, compact, screed, float and trowel concrete as indicated in Section 03 3000 Cast-in-Place Concrete.

B. Finish: After straightedging, when most of the water sheen has disappeared and just before the concrete hardens, finish the surface with a wood or magnesium float or darby to a smooth and uniformly fine granular or sandy texture free of waves, irregularities, or tool marks. Produce a scored surface by brooming with a fiber-bristle brush in a direction transverse to that of the traffic, followed by edging.

1. Provide medium broom finish on surfaces up to six percent slope by striating surface 1/32 to 3/64 inch deep with a soft bristle broom across concrete surface to provide a uniform fine line texture.

2. Provide heavy broom finish on surfaces over six percent by striating surface 1/16 inch to 1/8 inch deep with a stiff-bristled broom.

3.06 JOINTS

A. Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated. Align curb, gutter, and sidewalk joints.

B. Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour.

1. Continue steel reinforcement across construction joints unless otherwise indicated on the Drawings.

2. Provide tie bars at sides of paving strips where indicated on the Drawings

3. Butt Joints: Use bonding agent or epoxy-bonding adhesive at joint locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

4. Keyed Joints: Provide preformed keyway-section forms or bulkhead forms with keys unless otherwise indicated. Embed keys at least 1-1/2 inches into concrete.

5. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.

C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated on the Drawings.

D. Expansion Joints:

1. Provide premolded joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together. Extend expansion joint fillers full-width and depth of joint, and 1/4" below finished surface where joint filler is indicated. If no joint sealer is indicated place top of premolded joint filler flush with top of concrete or curb.

2. During concrete placement, protect top edge of joint filler with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

E. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints to a depth equal to at least one-fourth of the concrete thickness, as follows:

1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with grooving tool to a 1/4-inch radius. Repeat grooving of contraction joints after applying surface finishes. Remove grooving-tool marks on concrete surfaces.

2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.

3. Doweled Contraction Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.

F. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Remove edging-tool marks on concrete surfaces.

G. Where concrete is to be cast against old concrete, (greater than 60 days of age), the surface of the old concrete shall be thoroughly cleaned and roughened by sand-blasting, exposing the aggregate. The hardened surface shall be cleaned of latent foreign material and washed clean, prior to the application of an epoxy bonding agent.

3.07 STAIRS AND RAMPS

A. Install support post sleeves into the perimeter concrete curbing during the installation process of the curbing. Sleeves shall be three-inch diameter, schedule 40 PVC with a cap solvent welded to the bottom of the sleeve. Drill a half-inch weep hole on the bottom of the cap. Sleeve and cap shall be Nibco products or approved equal. Sleeves shall be embedded into concrete a minimum of nine inches and spaced at a maximum of four feet, or as indicated on the Drawings. Fill sleeve with non-shrink grout Quickcrete #1585-01 when setting posts. Provide control joints into the concrete on both sides for each post.

B. Finish step nosings with a safety step edger/groover with a 1/2 inch radius and four grooves spaced equally 3/4 inch on center and a bit depth between 1/4 to 3/8 inch. Paint with contrasting color.

3.08 CURB AND GUTTER CONCRETE PLACEMENT AND FINISHING

A. Formed Curb and Gutter: Place concrete to the required section in a single lift. Consolidate concrete using approved mechanical vibrators. Finish curve shaped gutters with a standard curb mule or concrete slipformed curb paving equipment.

B. Concrete Finishing: Float and finish exposed surfaces with a smooth wood float until true to grade and section and uniform in texture. Brush floated surfaces with a fine-hair brush using longitudinal strokes. Round the edges of the gutter and top of the curb with an edging tool to a radius of 1/2 inch. Immediately after removing the front curb form, rub the face of the curb with a wood or concrete rubbing block and water until blemishes, form marks, and tool marks have been removed. Brush the front curb surface, while still wet, in the same manner as the gutter and curb top. Finish the top surface of gutter to grade with a wood float.

C. Surface and Thickness Tolerances: Finished surfaces shall not vary more than 1/4 inch from the testing edge of a 10-foot straightedge. Permissible deficiency in section thickness will be up to 1/4 inch.

3.10 CLEAN UP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project Site.

3.11 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION