



IRVINE UNIFIED SCHOOL DISTRICT

Bid No. 19/20-02MO, University High School High Voltage Replacement

Bid Deadline: April 6, 2020 at 2:00 pm

Contact: Maria Ragas
Irvine Unified School District
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Bid No. 19/20-02MO, University High School High Voltage Replacement

Table of Contents

NOTICE CALLING FOR BIDS
INFORMATION FOR BIDDERS
*BID FORM
*BID BOND
*INFORMATION REQUIRED OF BIDDER
*DESIGNATION OF SUBCONTRACTORS
*NONCOLLUSION DECLARATION
*W-9 FORM
+AGREEMENT
+PAYMENT BOND
+FAITHFUL PERFORMANCE BOND
+WORKERS' COMPENSATION CERTIFICATE
+DRUG-FREE WORKPLACE CERTIFICATION
+CONTRACTOR'S CERTIFICATE REGARDING NON-ASBESTOS CONTAINING MATERIALS
+TOBACCO USE POLICY
NOTICE REGARDING CRIMINAL RECORDS CHECK (EDUCATION CODE SECTION 45125.1)
+CRIMINAL RECORDS CHECK CERTIFICATION
+DISTRICT RULES AND REGULATIONS
+GUARANTEE
ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION
SHOP DRAWING TRANSMITTAL
EQUIPMENT/MATERIAL SOURCE INFORMATION (OPTIONAL)
CHANGE ORDER (ADDITIVE)
CHANGE ORDER (DEDUCTIVE)
DETERMINATION OF LIMITED CONTACT OF EMPLOYEES OF CONTRACT (DISTRICT USE ONLY)
DEPARTMENT OF JUSTICE INFORMATION
STATE OF CALIFORNIA – DEPARTMENT OF INDUSTRIAL RELATIONS
DISABLED VETERAN BUSINESS ENTERPRISES CERTIFICATION
SAMPLE CERTIFICATE OF INSURANCE & ENDORSEMENT
APPENDIX A – PROJECT SCHEDULE
APPENDIX B – PROJECT MANUAL/SPECIFICATIONS
APPENDIX C – GENERAL CONDITIONS
APPENDIX D – DRAWINGS (SEPARATE DOCUMENT)

***Items must be completed, signed, and submitted as part of the bid. If required contract documents are not submitted the bidder will be declared non- responsive.**

+Items which successful bidder must submit after the award.

NOTICE CALLING FOR BIDS

District: **Irvine Unified School District**
Bid Deadline: **April 6, 2020 at 2:00 pm**
Place of Bid Receipt: **Irvine Unified School District
Maintenance & Operations Office
Attn: Joe Hoffman
100 Nightmist, Irvine, CA 92618**

NOTICE IS HEREBY GIVEN that the Irvine Unified School District of Orange County, California, acting by and through its Governing Board, hereinafter referred to as "DISTRICT," will receive up to, but not later than, the above-stated bid deadline, sealed bids at the place identified above for the award of a contract for **Bid No. 19/20-02MO, University High School High Voltage Replacement.**

Project documents will be available on March 13, 2020 as a download at <https://iusd.org/about/departments/business-services/purchasing/current-bids-rfps>.

In accordance with the provisions of Business and Professions Code Section 7028.15 and Public Contract Code Section 3300, the DISTRICT requires that the bidder possess the following classification(s) of contractor's license at the time the bid is submitted: **CLASS C10**. Any bidder not so licensed at the time of the bid opening will be rejected as nonresponsive.

Mandatory Job Walk and Pre-Bid Meeting. Mandatory job walk and pre-bid meeting will be conducted to answer any questions and explain details regarding bid requirements, specifications, and scope of work. This mandatory meeting will give bidders the opportunity to investigate and fully acquaint themselves with the conditions relating to the project so that they may fully understand facilities, difficulties, and restrictions.

Any bidder interested in this bid must attend. Bidders not in attendance for the entirety of the mandatory meeting will be deemed ineligible on this project. A mandatory sign-in sheet will be required.

Date: Monday, March 23, 2020
Time: 9:00 am
Location: University High School, 4771 Campus Drive, Irvine, CA 92612 – by the front office at the flag pole

Questions regarding the bid must be received via e-mail to the attention of Debra Vaughan-Cleff at Debra@studiowc.net by 11:00 am on March 25, 2020.

The DISTRICT reserves the right to reject any or all bids or to waive any irregularities or informalities in any bids or in the bidding process.

Effective April 1, 2015, all contractors and subcontractors must be registered with the DIR to submit a bid for a public works project pursuant to Labor Code section 1725.5.

The California Department of Industrial Relations has determined the general prevailing rates of per diem wages for the locality in which the work is to be performed for the Project. Copies of these wage rate determinations, entitled Prevailing Wage Scale, are available at the following website: www.dir.ca.gov. It shall be mandatory upon the successful bidder to whom the contract is awarded, and upon any subcontractor listed, to pay not less than the said specified rates to all workers employed by them for the Project.

No bidder may withdraw any bid for a period of **sixty (60)** calendar days after the date set for the opening of bids.

Pursuant to Public Contract Code Section 22300, the Agreement will contain provisions permitting the successful bidder to substitute securities for any monies withheld by the DISTRICT to ensure performance under the Agreement or permitting payment of retentions earned directly into escrow.

Irvine Unified School District
Governing Board

By: Maria Ragas
Specialist, Purchasing Contracts

Advertise: Orange County Register; March 13 & 20, 2020

INFORMATION FOR BIDDERS

WARNING:

READ THIS DOCUMENT CAREFULLY. DO NOT ASSUME
THAT IT IS THE SAME AS OTHER SIMILAR DOCUMENTS
YOU MAY HAVE SEEN, EVEN IF FROM THE SAME DISTRICT.

1. Preparation of Bid Form. Bids shall be submitted on the prescribed Bid Form, completed in full. All bid items and statements shall be properly and legibly filled out. Numbers shall be stated both in words and in figures where so indicated, and where there is a conflict in the words and the figures, the words shall control over the numbers. The signatures of all persons shall be in longhand and in ink. Prices, wording and notations must be in ink or typewritten.

2. Form and Delivery of Bids. The bid must conform and be responsive to all Project Documents and shall be made on the Bid Form provided, and the complete bid, together with any and all additional materials as required, shall be enclosed in a sealed envelope, addressed and hand delivered or mailed to the DISTRICT at: **100 Nightmist, Irvine, CA 92618**, and must be received on or before the bid deadline (Public Contract Code Section 20112). The envelope shall be plainly marked in the upper left hand corner with the bidder's name, the Project designation and the date and time for the opening of bids. **It is the bidder's sole responsibility to ensure that its bid is received prior to the bid deadline.** In accordance with Government Code Section 53068, any bid received after the scheduled closing time for receipt of bids shall be returned to the bidder unopened. At the time and place set forth for the opening of bids, the sealed bids will be opened and publicly read aloud. However, if prequalification of bidders is required pursuant to Public Contract Code Section 20111.5 only those sealed bids received from prequalified bidders shall be opened and publicly read aloud.

3. Bid Security. Each bid shall be accompanied by a bid security in the form of cash, a certified or cashier's check or bid bond in the amount of not less than **ten percent (10%)** of the total bid price payable to the DISTRICT and shall be given as a guarantee that the bidder, if awarded the contract, will execute the Agreement within **five (5)** working days after Notice of Award of the contract, and will furnish, on the prescribed forms, a satisfactory Faithful Performance Bond in an amount not less than one hundred percent (100%) of the total bid price and separate Payment (labor and material) Bond in an amount not less than one hundred percent (100%) of the total bid price, furnish certificates and endorsements evidencing that the required insurance is in effect, the Workers' Compensation Certificate, Drug-Free Work Place Certification, the Criminal Records Check Certification, Contractor's Certificate Regarding Non-Asbestos Containing Materials, and the Disabled Veteran Business Enterprises Certification, if applicable, all within **five (5)** working days of the notice of award of the contract or as otherwise requested in writing by the DISTRICT. It is understood and agreed that should bidder fail or refuse to return these documents as required by the DISTRICT, the bid security shall be forfeited to the DISTRICT. If the Bidder elects to furnish a bid bond as its Bid Security, the Bidder shall use the bid bond form included in the Project Documents.

4. Signature. Any signature required on Project Documents must be signed in the name of the bidder and must bear the signature of the person or persons duly authorized to sign

these documents. Where indicated, if bidder is a corporation, the legal name of the corporation shall first be set forth, together with two signatures: one from among the chairman of the board, president or vice president and one from among the secretary, chief financial officer, or treasurer. Alternatively, the signature of other authorized officers or agents may be affixed, if duly authorized by the corporation. Such documents shall include the title of such signatories below the signature and shall bear the corporate seal. Where indicated, in the event that the bidder is a joint venture or partnership, there shall be submitted with the bid certifications signed by authorized officers of each of the parties to the joint venture or partnership, naming the individual who shall sign all necessary documents for the joint venture or partnership and, should the joint venture or partnership be the successful bidder, who shall act in all matters relative to the Project for the joint venture or partnership. If bidder is an individual, his/her signature shall be placed on such documents.

5. Modifications. Changes in or additions to any of the bid documents, summary of the work bid upon, alternative proposals, or any other modifications which are not specifically called for by the DISTRICT may result in the DISTRICT'S rejection of the bid as being nonresponsive. No oral, telephonic, facsimile or electronic modification of any of the bid documents will be considered.

6. Erasures, Inconsistent or Illegible Bids. The bid submitted must not contain any erasures, interlineations, or other corrections unless each such correction is authenticated by affixing the initials of the person(s) signing the bid in the margin immediately adjacent to the correction. In the event of inconsistency between words and numbers in the bid, words shall control numbers. In the event that DISTRICT determines that any bid is unintelligible, illegible or ambiguous, the DISTRICT may reject such bid as being nonresponsive.

7. Examination of Site and Project Documents. At its own expense and prior to submitting its bid, each bidder shall examine all documents relating to the Project; visit the site and determine the local conditions which may in any way affect the performance of the work, including the general prevailing rates of per diem wages and other relevant cost factors; familiarize itself with all Federal, State and Local laws, ordinances, rules, regulations and codes affecting the performance of the work, including the cost of permits and licenses required for the work; make such surveys and investigations, including investigation of subsurface or latent physical conditions at the site or where work is to be performed, as it may deem necessary for performance of the work at its bid price ; determine the character, quality, and quantities of the work to be performed and the materials and equipment to be provided; and correlate its observations, investigations, and determinations with all requirements of the Project . The Project Documents show and describe the existing conditions as they are believed to have been used in the design of the work and are only provided as information for the bidder. The DISTRICT is not making any warranties regarding said information. The DISTRICT shall not be liable for any loss sustained by the successful bidder resulting from any variance between the conditions and design data given in the Project Documents and the actual conditions revealed during the bidder's pre-bid examination or during the progress of the work. **Bidder agrees that the submission of a bid shall be incontrovertible evidence that the bidder has complied with all the requirements of this provision of the Information for Bidders.**

8. Withdrawal of Bids. Any bid may be withdrawn, either personally or by written request signed by the bidder, at any time prior to the scheduled closing time for receipt of bids. The bid security for a bid withdrawn prior to the scheduled closing time for receipt of bids, in accordance with this paragraph, shall be returned. No bidder may withdraw any bid for a period of **sixty (60)** calendar days after the date set for the opening of bids.

9. Agreement and Bonds. The Agreement, which the successful bidder will be required to execute is included in the bid documents and should be carefully examined by the bidder. The complete Agreement consists of the following but not limited to the Notice Calling for Bids, Information for Bidders, Bid Form, Bid Bond, Information Required of Bidder, Designation of Subcontractors, Noncollusion Declaration, Payment Bond, Faithful Performance Bond, Tobacco Use of Policy, Workers' Compensation Certificate, Drug-Free Workplace Certification, Contractor's Certificate Regarding Non-Asbestos Containing Materials, Criminal Records Check Certification, District Rules and Regulations, Guarantee, Determination Of Limited Contact by Employees of Contractor, Department of Justice, Extract of Public Works Contract Award, Disabled Veteran Business Enterprises Certification, General Conditions, Specifications, Project Schedule, Drawings, W-9, all insurance requirements, any and all change orders, modifications, addenda and amendments, if any (hereinafter Bid Documents), thereof duly incorporated therein. All of above documents are intended to cooperate and be complementary so that any instructions or requirements called for in one and not mentioned in the other, or vice versa, are to be executed the same as if mentioned in all said documents. The intention of the documents is to include all labor, materials, equipment, transportation and services necessary for the proper delivery of all items called for in the Agreement.

10. Interpretation of Project Documents. If any bidder is in doubt as to the true meaning of any part of the Project Documents, or finds discrepancies in, or omissions from the Project Documents, a written request for an interpretation or correction thereof must be submitted to the DISTRICT via email to the attention of **Debra Vaughan-Cleff at Debra@studiowc.net by March 25, 2020 at 11:00 am.** No requests shall be considered after this time. The bidder submitting the written request shall be responsible for its prompt delivery. Any interpretation or correction of the Project Documents will be made solely at DISTRICT's discretion and only by written addendum duly issued by the DISTRICT, and a copy of such addendum will be hand delivered or mailed or faxed to each bidder known to have received a set of the Project Documents. No person is authorized to make any oral interpretation of any provision in the Project Documents, nor shall any oral interpretation of Project Documents be binding on the DISTRICT. If there are discrepancies of any kind in the Project Documents, the interpretation of the DISTRICT shall prevail. **SUBMITTAL OF A BID WITHOUT A REQUEST FOR CLARIFICATIONS SHALL BE INCONTROVERTIBLE EVIDENCE THAT THE BIDDER HAS DETERMINED THAT THE PROJECT DOCUMENTS ARE ACCEPTABLE AND SUFFICIENT FOR BIDDING AND COMPLETING THE WORK; THAT BIDDER IS CAPABLE OF READING, FOLLOWING AND COMPLETING THE WORK IN ACCORDANCE WITH THE PROJECT DOCUMENTS; AND THAT BIDDER AGREES THAT THE PROJECT CAN AND WILL BE COMPLETED ACCORDING TO THE DISTRICT'S TIMELINES AND ACCORDING TO THE PROGRESS SCHEDULE TO BE SUBMITTED BY THE SUCCESSFUL BIDDER INCORPORATING THE DISTRICT'S TIMELINES FOR COMPLETION OF THE PROJECT.**

11. Bidders Interested in More Than One Bid. No person, firm or corporation shall be allowed to make, or file, or be interested in more than one bid for the same work unless alternate bids are specifically called for by the DISTRICT. A person, firm, or corporation that has submitted a subproposal to a bidder, or that has quoted prices of materials to a bidder, is not thereby disqualified from submitting a proposal or quoting prices to other bidders or submitting a bid on the Project.

12. Award of Contract. The DISTRICT reserves the right to reject any or all bids, or to waive any irregularities or informalities in any bids or in the bidding process. The award of the contract, if made by the DISTRICT, will be by action of the Governing Board and to the lowest responsive and responsible bidder. If two identical low bids are received from responsive and responsible bidders, the DISTRICT will determine which bid will be accepted pursuant to Public Contract Code Section 20117. In the event an award of the contract is made to a bidder, and such bidder fails or refuses to execute the Agreement and provide the required documents within **five (5)** working days after the notice of award of the contract to bidder, the DISTRICT may award the contract to the next lowest responsive and responsible bidder or reject all bidders.

13. Alternate Bids. Not Applicable.

14. Competency of Bidders. In selecting the lowest responsive and responsible bidder, consideration will be given not only to the financial standing but also to the general competency of the bidder for the performance of the Project. By submitting a bid, each bidder agrees that the DISTRICT, in determining the successful bidder and its eligibility for the award, may consider the bidder's experience and facilities, conduct and performance under other contracts, financial condition, reputation in the industry, and other factors which could affect the bidder's performance of the Project. To this end, each bid shall be supported by a statement of the bidder's experience on the form entitled "INFORMATION REQUIRED OF BIDDER."

The DISTRICT may also consider the qualifications and experience of subcontractors and other persons and organizations (including those who are to furnish the principal items of material and equipment) proposed for those portions of the work. Operating costs, maintenance considerations, performance data and guarantees of materials and equipment may also be considered by the DISTRICT. In this regard, the DISTRICT may conduct such investigations as the DISTRICT deems necessary to assist in the evaluation of any bid and to establish the responsibility, qualifications and financial ability of the bidder, proposed subcontractors, and other persons and organizations to do the work to the DISTRICT's satisfaction within the prescribed time. The DISTRICT reserves the right to reject the bid of any bidder who does not pass any such evaluation to the satisfaction of the DISTRICT.

15. Listing Subcontractors. Each bidder shall submit, on the form furnished with the Project Documents, a list of the proposed subcontractors on this Project as required by the Subletting and Subcontracting Fair Practices Act (Public Contract Code Section 4100, et seq.). If alternate bids are called for and the bidder intends to use different or additional subcontractors, a separate list of subcontractors must be submitted for each such alternate bid. If the bidder fails to specify a subcontractor for any portion of the work in excess of one half (1/2) of one percent (1%) of the bidder's total bid, the bidder agrees that he/she is fully qualified to perform that work and agrees to perform that portion of the work. Violation of this requirement (including the

procurement of a subcontractor for the Project if no subcontractor is specified) can result in the DISTRICT invoking the remedies of Public Contract Code Sections 4110 and 4111.

16. Insurance and Workers' Compensation. The successful bidder shall be required to furnish certificates and endorsements evidencing that the required insurance is in effect as set forth in the Agreement. District may request that such certificates and endorsements are completed on District provided forms. In accordance with the provisions of Section 3700 of the Labor Code, the successful bidder shall secure the payment of compensation to all employees. The successful bidder who has been awarded the contract shall sign and file with District prior to performing the work, the Workers' Compensation Certificate included as a part of the proposal documents. Labor Code section 1861.

a. Successful bidder shall, at bidder's sole cost and expense, maintain in full force and effect the following insurance coverages from a California licensed insurer with an A, VIII, or better rating from A.M. Best or an approved self-insurance program, sufficient to cover any claims, damages, liabilities, costs and expenses (including attorney fees) arising out of or in connection with bidder's fulfillment of the obligations under this bid:

i. Comprehensive General Liability Insurance, including bodily injury, property damage and contractual liability with minimum limits set by the DISTRICT. The policy may not contain an exclusion for sexual molestation or abuse coverage, may be waived by the District.

(a)	General Aggregate	\$2,000,000
(b)	Each Occurrence	\$1,000,000
(c)	Products/Completed Operations	\$1,000,000
(d)	Personal and Advertising Injury	\$1,000,000
(e)	Damage to Rented Premises	\$50,000
(f)	Medical Expense (any one person)	\$5,000

ii. Umbrella (excess) liability insurance coverage with a limit of \$3,000,000. The policy may not contain an exclusion for sexual molestation or abuse coverage, may be waived by the District.

iii. Business Automobile Liability Insurance for owned, scheduled, non-owned, or hired automobiles with a combined single limit not less than \$1,000,000 per occurrence. (Required only if the bidder drives on behalf of the DISTRICT in the course of performing Services.)

iv. Professional Liability Insurance with a limit of \$1,000,000 per occurrence, unless waived by the DISTRICT and if applicable.

v. Workers' Compensation and Employers Liability Insurance in a form and amount covering bidder's full liability under the California Workers' Compensation Insurance and Safety Act and in accordance with applicable state and federal laws. The policy shall be endorsed with the insurer's waiver of rights of subrogation against the DISTRICT.

It should be expressly understood, however, that the coverage and limits referred to under i., ii., iii., and iv. above shall not in any way limit the liability of the bidder.

b. No later than five (5) days from execution of the Agreement by the DISTRICT and successful bidder, and prior to commencing the Services under this bid, bidder shall provide DISTRICT with certificates of insurance evidencing all coverages and endorsements required hereunder.

Successful bidder shall provide prior written notice to the DISTRICT thirty (30) days in advance of any non-renewal, cancellation, or modification of the required insurance. The certificates of insurance providing the coverages referred to in clauses i. and ii. above shall name DISTRICT, its Governing Board, officers, and employees, as additional insureds with appropriate endorsements. In addition, the certificates of insurance shall include a provision stating "Such insurance as is afforded by this policy shall be primary, and any insurance carried by DISTRICT shall be excess and noncontributory." Failure to maintain the above mentioned insurance coverages shall be cause for termination of the Agreement.

17. Contractor's License. If, at the time and date of the bid opening, bidder is not properly licensed to perform the Project in accordance with Division 3, Chapter 9, of the Business and Professions Code and the Project Documents, such bid will be rejected as nonresponsive. (Public Contract Code Section 3300) Pursuant to Business and Professions Code Section 7028.15, no payment shall be made for work or materials under the contract unless and until the Registrar of Contractors verifies to the DISTRICT that the bidder was properly licensed at the time the bid was submitted. Any bidder not so licensed is subject to penalties under the law and the contract will be considered void and DISTRICT shall have the right to bring an action against the unlicensed bidder awarded the contract for recovery of all compensation paid under the contract. (Business and Professions Code Section 7031(b)) If the license classification specified hereinafter is that of a "specialty contractor" as defined in Section 7058 of the Business and Professions Code, the specialty contractor awarded the contract for this work shall construct a majority of the work, in accordance with the provisions of Business and Professions Code Section 7059. The bidder may not use the contractor license of a third party for this bid.

18. Anti-Discrimination. In connection with all work performed under this Project, there shall be no unlawful discrimination against any prospective or active employee engaged in the work because of race, color, ancestry, national origin, religious creed, sex, age, marital status, physical disability, mental disability, or medical condition. The successful bidder agrees to comply with applicable Federal and State laws including, but not limited to, the California Fair Employment and Housing Act, beginning with Government Code Section 12900 and Labor Code Section 1735. In addition, the successful bidder agrees to require like compliance by any subcontractors employed on the Project by such bidder.

19. Hold Harmless and Indemnification. The successful bidder awarded the contract will be required to indemnify and hold harmless the DISTRICT, its Governing Board, officers, agents, and employees as set forth in the Agreement.

20. Substitutions. Should the bidder wish to request any substitution for the materials, process, service, or equipment specified, the bidder shall be required to comply with Article 30 of the General Conditions.

21. Surety Qualifications for Bonds. Bidders shall ensure all surety companies have a minimum rating of "**A-VIII**," as rated by the current edition of Best's Key Rating Guide, published by A.M. Best Company, Oldwick, New Jersey 08858. Only California admitted surety insurers will be acceptable for the issuance of bonds. (Code of Civil Procedure Section 995.311) DISTRICT shall verify the status of the surety by one of the following ways: (1) printing out information from the website of the California Department of Insurance confirming the surety is an admitted surety insurer and attaching it to the bond, or (2) obtaining a certificate from the county clerk for the county in which the DISTRICT is located that confirms the surety is an admitted surety insurer and attaching it to the bond. Any admitted surety insurer who cannot satisfy the minimum rating specified above, but who satisfies the following requirements set forth in Code of Civil Procedure Section 995.660 shall be accepted and approved for the issuance of bonds:

(a) There must be on file in the office of the county clerk, for the county in which the DISTRICT is located, an unrevoked appointment, power of attorney, bylaws, or other instrument, duly certified by the proper authority and attested by the seal of the insurer authorizing the person who executed the bond to do so for and on behalf of the insurer within ten (10) calendar days of the insurer's receipt of a request to submit such document from the DISTRICT, and an original or certified copy of the document must be submitted to the DISTRICT.

(b) A certified copy of the certificate of authority of the insurer issued by the Insurance Commissioner must be submitted to the DISTRICT within ten (10) calendar days of the insurer's receipt of a request to submit such document from the DISTRICT.

(c) A certificate from the clerk of the county that the certificate of authority of the insurer has not been surrendered, revoked, cancelled, annulled, or suspended, and in the event it has, whether renewed authority has been granted must be submitted to DISTRICT within ten (10) calendar days of the insurer's receipt of a request to submit such document from the DISTRICT.

(d) Copies of the insurer's most recent annual statement and quarterly statement filed with the California Department of Insurance must be submitted to the DISTRICT within ten (10) calendar days of the insurer's receipt of a request to submit the statements.

22. Liquidated Damages. All work must be completed within the time limits set forth in the Project Documents. It is agreed that damages for the failure to complete the Project described herein within the time limits required are impossible to ascertain. Should the work not be completed within the specified time for completion, the successful bidder awarded the contract shall be liable for liquidated damages, payable to the DISTRICT, in an amount of **Five Hundred Dollars (\$500.00)** for each consecutive calendar day of delay in completion. Such damages shall be deducted from any payments due or to become due to the successful bidder. Government Code Section 53069.85, Civil Code Section 1671.

23. Drug-Free Workplace Certification. Pursuant to Government Code Sections 8350, et seq., the successful bidder will be required to execute a Drug-Free Workplace Certification upon

execution of the Agreement. The bidder will be required to take positive measures outlined in the certification in order to ensure the presence of a drug-free workplace. Failure to abide with the conditions set forth in the Drug-Free Workplace Act could result in penalties including termination of the Agreement or suspension of payment thereunder.

24. Noncollusion Declaration. In accordance with the provisions of Section 7106 of the Public Contract Code, each bid must be accompanied by a Noncollusion Declaration.

25. Escrow Agreement. Public Contract Code Section 22300 permits the substitution of securities for any monies withheld by a public agency to ensure performance under a contract. At the request and expense of the successful bidder awarded the contract, securities equivalent to the amount withheld as retention shall be deposited with the DISTRICT, or with a state or federally chartered bank in California as the escrow agent, who shall then pay such monies to the successful bidder. The DISTRICT retains the sole discretion to approve the bank selected by the successful bidder to serve as escrow agent. Upon satisfactory completion of the contract, the securities shall be returned to the successful bidder. Securities eligible for investment shall include those listed in Government Code Section 16430 or bank or savings and loan certificates of deposit. The successful bidder shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.

In the alternative, under Section 22300, the successful bidder may request DISTRICT to make payment of earned retentions directly to the escrow agent at the expense of the successful bidder. Also at the successful bidder's expense, the successful bidder may direct investment of the payments into securities, and the successful bidder shall receive interest earned on such investment upon the same conditions as provided for securities deposited by successful bidder. Upon satisfactory completion of the contract, successful bidder shall receive from the escrow agent all securities, interest and payments received by escrow agent from DISTRICT pursuant to the terms of Section 22300.

The successful bidder who elects to receive interest on monies withheld in retention by the DISTRICT shall, at the request of any subcontractor performing more than five percent (5%) of the successful bidder's total bid, make that option available to the subcontractor regarding any monies withheld in retention by the successful bidder from the subcontractor. If the successful bidder elects to receive interest on any monies withheld in retention by the DISTRICT, then the subcontractor shall receive the identical rate of interest received by the successful bidder on any retention monies withheld from the subcontractor by the successful bidder, less any actual pro rata costs associated with administering and calculating that interest. In the event that the interest rate is a fluctuating rate, the rate for the subcontractor shall be determined by calculating the interest rate paid during the time that retentions were withheld from the subcontractor. If the successful bidder elects to substitute securities in lieu of retention, then, by mutual consent of the successful bidder and subcontractor, the subcontractor may substitute securities in exchange for the release of monies held in retention by the successful bidder. Public Contract Code Section 22300(d)(1).

The successful bidder wishing to utilize Public Contract Code Section 22300 and enter into an Escrow Agreement shall complete and execute the form Escrow Agreement included in the Project Documents and submit it to the DISTRICT.

26. Change Orders. All change order requests must be submitted in the form set forth in the Project Documents and pursuant to Article 59 of the General Conditions. The amount of allowable charges submitted pursuant to a change order shall be limited to the charges allowed under Article 59 of the General Conditions. Indirect, consequential and incidental costs, project management costs, extended home office and field office overhead, administrative costs and profit and other charges not specifically authorized under Article 59 of the General Conditions will not be allowed.

27. Tobacco-Free Policy. The successful bidder shall agree to enforce a tobacco-free work site.

28. Criminal Records Check. The successful bidder will be required to comply with the applicable requirements of Education Code Section 45125.1 with respect to fingerprinting of employees and must complete the District's Criminal Records Check Certification.

29. Lead. Pursuant to the Lead-Safe Schools Protection Act (Education Code Sections 32240, et seq.) and other applicable law, the successful bidder shall not use lead-based paint, lead plumbing and solders, or other potential sources of lead contamination in the construction of any new school facility or the modernization or renovation of any existing school facility.

29. Protest. Bidders may protest the recommended award, provided the protest is in writing, contains the bid number, is delivered to the address listed for submission of bid documents, and is submitted within five (5) calendar days of the posting of the Intent to Award. Grounds for a protest is that the District failed to follow the selection procedures and adhere to requirements specified in the bid documents or any addenda or amendments; there has been a violation of conflict of interest as provided in California Government Code Section 87100 et. Seq. or violation of any State or Federal law. Protests will not be accepted on any other grounds. All protests will be handled by a panel comprised of District Staff. The District will consider only these specific issues addressed in the written protest. A written response will be directed to the protesting bidder within five (5) calendar days of the receipt of the protest, advising the decision with regard to the protest and the basis for the decision.

30. Labor Compliance Program. The awarded Contractor shall comply with the requirements of the State of California's Standard Specification Code Section 7-1.01A(4) "Labor Nondiscrimination" under this agreement.

31. Each Bidder shall comply with Senate Bill 854 ("SB854") including, but limited to, registration with California Department of Industrial Relations ("DIR"). The DIR's website is <http://www.dir.ca.gov>. Each contractor and subcontractor should carefully review the DIR website for all applicable requirements to be eligible to bid on this project and if needed should consult with an attorney. Copies of the wage rate determinations, entitled Prevailing Wage Scale, are available at the following website: www.dir.ca.gov. It shall be mandatory upon the successful bidder to whom the contract is awarded, and upon any subcontractor listed, to pay not less than the said specified rates to all workers employed by them for this bid

32. The number of executed copies of the Agreement will be required is **One (1)**.

33. The bidder shall keep and maintain all delivery vehicles in good operating and safe and clean condition. The District reserves the right to periodically inspect delivery vehicles while on District property. The District reserves the right to periodically inspect all maintenance records of vehicles used to service the District.

BID FORM

Name of Bidder: _____
To: Irvine Unified School District, acting by and through its Governing Board, herein called the "DISTRICT."

1. The undersigned Bidder, having become familiarized with all the following documents including but not limited to the Notice Calling for Bids, Information for Bidders, Bid Form, Bid Bond, Designation of Subcontractors Form, Information Required of Bidder, all prequalification forms pursuant to Public Contract Code Section 20111.5, if any, Noncollusion Declaration, Payment Bond, Faithful Performance Bond, Agreement, Workers' Compensation Certificate, Agreement, Tobacco Use of Policy, Workers' Compensation Certificate, Drug-Free Workplace Certification, Criminal Records Check Certification, Contractor's Certificate Regarding Non-Asbestos Containing Materials, District Rules and Regulations, Guarantee, Escrow Agreement, if applicable, Change Order Forms, Determination Of Limited Contact by Employees of Contractor, Department of Justice, Extract of Public Works Contract Award, Disabled Veteran Business Enterprises Certification, if applicable, all insurance requirements, General Conditions, Project Schedule, Project Manual/Specifications, drawings, any and all modifications, addenda and amendments, if any (hereinafter Project Documents), the local conditions affecting the performance of the work and the cost of the work at the place where the work is to be done, hereby proposes and agrees to be bound by all the terms and conditions of the Project Documents and agrees to perform, within the time stipulated, the work, including all of its component parts, and everything required to be performed, and to provide and furnish and pay for any and all of the labor, materials, tools, expendable equipment, and all applicable taxes, utility and transportation services necessary to perform the work and complete in a good workmanlike manner all of the work required in accordance with laws, codes, regulations, ordinances and any other legal requirements governing the work, in connection with the following:

Bid No. 19/20-02MO, University High School High Voltage Replacement

all in strict conformity with the Project Documents, including Addenda Nos. _____, _____, _____, and _____, on file at the office of the DISTRICT for the sum of _____ Dollars (\$_____).

Each individual bid term shall be determined from visiting the work site, reviewing the drawings and specifications and all portions of the Project Documents, and shall include all items necessary to complete the work, including the assumption of all obligations, duties, and responsibilities necessary to the successful completion of the Project, and the furnishing of all materials and equipment required to be incorporated in and form a permanent part of the work, and the furnishing of tools, equipment, supplies, transportation, facilities, labor, superintendence, and services required to perform and complete the work, all as per the requirements of the Project Documents, whether or not expressly listed or designated.

2. It is understood that the DISTRICT reserves the right to reject any or all bids or to waive any irregularities or informalities in any bids or in the bidding process. Bidder agrees that

this bid shall remain open and not be withdrawn for the period specified in the Information for Bidders.

3. The required bid security is attached.

4. The required list(s) of proposed subcontractors is attached hereto, and the undersigned represents and warrants that such list(s) is complete and in compliance with the Subletting and Subcontracting Fair Practices Act. Public Contract Code Sections 4100, et seq

5. It is understood and agreed that if written notice of the award of a contract is mailed, faxed, or delivered to the bidder, the bidder will execute and deliver to the DISTRICT the Agreement and will also furnish and deliver to the DISTRICT the certificates and endorsements of insurance, the Workers' Compensation Certificate, Drug-Free Work Place Certification, the Criminal Records Check Certification, Contractor's Certificate Regarding Non-Asbestos Containing Materials, District Rules and Regulations, Guarantee, and the Disabled Veteran Business Enterprises Certification, if applicable, within **five (5)** working days of the notice of award of the contract, or as otherwise requested in writing by the DISTRICT. It is understood that should bidder fail or refuse to return these documents as required by the DISTRICT, the bid security shall be forfeited to the DISTRICT. The bidder further agrees that the work shall be commenced by the bidder, if awarded the contract, as per the date stated on the DISTRICT's Notice to Proceed and shall be completed by the bidder in the time specified by the DISTRICT.

6. Communications conveying notice of award of the contract, requests for additional information or other correspondence should be addressed to the bidder at the address stated below.

7. The name(s) of all persons interested in the bid as principals are as follows:

8. In submitting this bid, the bidder offers and agrees that if the bid is accepted, it will assign to DISTRICT 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. Section 15) or under the Cartwright Act (Business & Professions Code Section 16700, et seq.) arising from purchases of goods, materials, or services by the bidder for sale to the DISTRICT pursuant to the bid. Such assignment shall be made and become effective at the time the DISTRICT tenders final payment under the contract. (Public Contract Code Section 7103.5; Government Code Section 4450, 4451 and 4552).

9. The undersigned hereby warrants that the bidder has an appropriate license, License No. _____, Class _____, at the time of the bid opening, that such license entitles bidder to provide the work, that such license will be in full force and effect throughout the duration of performance of this Project. Bidder shall be nonresponsive if the Bidder is not licensed as required by the DISTRICT at the time of the bid opening. Any and all subcontractors to be employed by the undersigned shall have appropriate licenses at the time of the bid opening.

10. The bidder hereby certifies that it is, and at all times during the performance of work hereunder shall be, in full compliance with the provisions of the Immigration Reform and Control Act of 1986 ("IRCA") in the hiring of its employees, and the bidder shall indemnify, hold harmless and defend the DISTRICT against any and all actions, proceedings, penalties or claims arising out of the bidder's failure to comply strictly with the IRCA.

11. It is understood and agreed that if requested by the DISTRICT, the bidder shall furnish a notarized financial statement, references, and other information required by the DISTRICT sufficiently comprehensive to permit an appraisal of bidder's ability to perform the Project.

12. The undersigned hereby warrants that all work shall be completed within the specified time from the date specified in the Notice to Proceed issued by the District. Time is of the essence. The undersigned agrees that failure to complete the work within the time set forth herein will result in the imposition of liquidated damages for each consecutive calendar day of delay in the amount of Five Hundred Dollars (\$500.00). (Government Code Section 53069.85)

13. The required noncollusion declaration properly notarized is attached as required by Public Contract Code Section 7106. Bidder understands and agrees that failure to submit a completed and signed affidavit will render the bidder automatically nonresponsive.

14. It is understood and agreed that all change order requests must be submitted in the form set forth in the Project Documents and pursuant to Article 59 of the General Conditions. The amount of allowable charges submitted pursuant to a change order shall be limited to the charges allowed under Article 59 of the General Conditions. Indirect, consequential and incidental costs, project management costs, extended home office and field office overhead, administrative costs and profit and other charges not specifically authorized under Article 59 of the General Conditions will not be allowed.

15. The Information Required of Bidder form has been fully completed and is attached hereto.

The undersigned hereby declares that all of the representations of this bid are made under penalty of perjury under the laws of the State of California.

Individual Name: _____
Signed by: _____
Print Name: _____
Date: _____
Business Address: _____

Telephone: _____

Partnership Name: _____
Signed by: _____
Print Name: _____
Date: _____
Business Address: _____

Telephone: _____
Other Partner(s): _____

Corporation Name: _____
(a _____ Corporation¹)
Business Address: _____

Telephone: _____
Signed by: _____, President, Date: _____
Print Name: _____, President
Signed by: _____, Secretary, Date: _____
Print Name: _____, Secretary
[Seal]

¹ A corporation awarded the contract shall furnish evidence of its corporate existence and evidence that the officer signing the Agreement and bonds is duly authorized to do so.

Joint Venturer

Name: _____

Signed by: _____, Joint Venturer

Print Name: _____

Date: _____

Business Address: _____

Telephone: _____

Other Parties to
Joint Venture:

If an individual: _____
(Name)

Signed by: _____

Print Name: _____

Date: _____

Doing Business as: _____;

Business Address: _____

Telephone: _____

If a Partnership: _____
(Name)

Signed by: _____, Partner

Print Name: _____

Date: _____

Business Address: _____

Telephone: _____

If a Corporation: _____
(a _____ Corporation)

Signed By: _____ Date: _____

Print Name: _____

Title: _____

Date: _____

Business Address: _____

Telephone: _____

Bid Bond No.: _____

BID BOND

KNOW ALL PERSONS BY THESE PRESENT, that we _____
_____, as Principal, and _____ as
Surety, a California admitted surety insurer, are held and firmly bound unto the _Irvine Unified
School DISTRICT, hereinafter called the DISTRICT, in the sum of **TEN PERCENT (10%) OF
THE TOTAL BID AMOUNT** for the work described below for the payment of which sum in
lawful money of the United States, well and truly to be made, we jointly and severally bind
ourselves, our heirs, executors, administrators, successors and assigns.

The condition of this obligation is such that whereas the Principal has submitted the accompanying
bid dated _____, 20__, for:

Bid No. 19/20-02MO, University High School High Voltage Replacement.

NOW, THEREFORE, if the Principal shall not withdraw said bid within the period
specified therein after the opening of the same, or, if no period be specified, within sixty (60) days
after said opening; and if the Principal is awarded the contract, and shall within the period specified
therefore, or, if no period be specified, within **five (5)** working days after the notice of award of
the contract, or as otherwise requested in writing by the DISTRICT, enter into a written contract
with the DISTRICT, in accordance with the bid as accepted and give bonds with good and
sufficient surety or sureties, as may be required for the faithful performance and proper fulfillment
of such contract and for the payment for labor and materials used for the performance of the
contract, furnish certificates and endorsements evidencing the required insurance is in effect and
furnish and deliver to the DISTRICT the Workers' Compensation Certificate, Drug-Free Work
Place Certification, the Criminal Records Check Certification, Contractor's Certificate Regarding
Non-Asbestos Containing Materials, and the Disabled Veteran Business Enterprises Certification,
if applicable, then the above obligation shall be void and of no effect, otherwise the bond amount
shall be forfeited to the DISTRICT.

Surety, for value received, hereby stipulates and agrees that no change, extension of time,
alteration or addition to the terms of the contract or the call for bids, or to the work to be performed
thereunder, or the specifications accompanying the same, shall in any way affect its obligation
under this bond, and it does hereby waive notice of any such change, extension of time, alteration
or addition to the terms of said contract or the call for bids, or to the work, or to the specifications.

In the event suit is brought upon this bond by the DISTRICT and judgment is recovered,
the Surety shall pay all costs incurred by the DISTRICT in such suit, including reasonable
attorney's fees to be fixed by the court.

IN WITNESS HEREOF, the parties have executed this bond under their several seals this day of ____, 20__, the name and corporate seal of each corporate party being hereto affixed and duly signed by its undersigned authorized representative.

(Corporate Seal of
Principal, if
Corporation)

Principal (Proper Name of Bidder)

By: _____
Signature

Print Name

Title

(Corporate Seal
of Surety)

Surety

(Attach Attorney-in-Fact Certificate
and Required Acknowledgements)

By: _____
Signature

Print Name

Title

Address

Telephone No.

Facsimile No.

INFORMATION REQUIRED OF BIDDER

The Bidder shall furnish all the following information. Bidder shall carefully read and answer all questions to ensure completeness and accuracy. Failure to comply with this requirement may cause rejection of the bid. Additional sheets may be attached if necessary. "You" or "your" as used herein refers to the bidder and any of its owners, officers, directors, shareholders, principals, responsible managing officer (RMO) or responsible managing employee (RME). DISTRICT has discretion to request additional information depending on the Project.

- (1) Bidder name and address (Post Office Box Number not sufficient):

- (2) Telephone: _____ Fax No.: _____
Electronic Mail: _____

- (3) Individual _____ Partnership _____ Corporation _____ Joint Venture _____ (check one)

- (4) Bidder's License No. _____ Class: _____
License Expiration Date _____
Name of License holder _____

- (5) Have you ever been licensed under a different name or different license number?
Yes ___ No ___ If "Yes," give name and license number.

- (6) Names and titles of all your owners, officers, principals, responsible managing officers and responsible managing employees:

Name	Title
_____	_____
_____	_____
_____	_____

- (7) Number of years as a contractor in this type of construction work: _____

(8) Person who inspected work site:

Name and Title: _____

Date of Inspection: _____

(9) How many years experience have you had in school construction work?

(a) as a general contractor? _____

(b) as a subcontractor? _____

(10) How many years experience have you had in public construction work?

(a) as a general contractor? _____

(b) as a subcontractor? _____

(11) Have you ever been terminated from a school or any public construction project prior to the completion of the project? Yes ____ No ____ If the answer is “Yes,” give dates, names and addresses of school/public agency and details. _____

(12) Have you ever been barred from bidding on any school or public construction project? Yes ____ No ____ If the answer is “Yes,” give dates, names and addresses of school/public agency and details. _____

(13) Have you ever defaulted on any school or public construction project that resulted in a claim to a surety? Yes ____ No ____ If the answer is “Yes,” give dates, names and addresses of school/public agency and details. _____

(14) Have you been assessed damages (i.e., liquidated damages) for any public construction project in the past ten (10) years? Yes ____ No ____ If the answer is “Yes,” give dates, names, and addresses of public agency and details. _____

(15) Have you ever brought any claim(s) against a public agency? Yes ____ No ____ If the answer is “Yes,” please explain in detail name of public agency, nature of the claim and outcome. _____

(16) Have you ever failed to complete a school or public construction project in the last ten (10) years? Yes ____ No ____ If the answer is “Yes,” provide name of public agency and details. _____

(17) Have you been in litigation or arbitration or dispute of any kind on a question or questions relating to a public construction project during the past ten (10) years? Yes ____ No ____ If the answer is “Yes,” provide name of public agency and details. _____

(18) List the names, addresses and telephone numbers of three Architects or Engineers whose jobs you have worked on in the past five (5) years.

<u>Name</u>	<u>Address</u>	<u>Telephone</u>
_____	_____	() _____
_____	_____	() _____
_____	_____	() _____

(19) Do you now or have you ever had any direct or indirect business, financial or other connection with any officer, employee or consultant of the DISTRICT or Architect?
Yes ____ No ____ If so, please elaborate.

(20) List at least five (5) of your most recent school construction projects.

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

(21) Are you currently under contract for another project? Yes ____ No ____ If the answer is “Yes,” please provide the following information:

(a) Project Number 1:

Name of Project: _____

Detailed Description: _____

Name of Project Owner: _____

Contract Amount: _____

Completion Date: _____

(b) Project Number 2:

Name of Project: _____

Detailed Description: _____

Name of Project Owner: _____

Contract Amount: _____

Completion Date: _____

(c) Project Number 3:

Name of Project: _____

Detailed Description: _____

Name of Project Owner: _____

Contract Amount: _____

Completion Date: _____

(d) Project Number 4:

Name of Project: _____

Detailed Description: _____

Name of Project Owner: _____

Contract Amount: _____

Completion Date: _____

(e) Project Number 5:

Name of Project: _____

Detailed Description: _____

Name of Project Owner: _____

Contract Amount: _____

Completion Date: _____

(22) Are there projects not listed above that will be undertaken during the duration of DISTRICT's Project? Yes _____ No _____ If the answer is "Yes," please provide the following information:

(a) Project Number 1:

Name of Project: _____

Detailed Description: _____

Name of Project Owner: _____

Contract Amount: _____

Completion Date: _____

(b) Project Number 2:

Name of Project: _____

Detailed Description: _____

Name of Project Owner: _____

Contract Amount: _____

Completion Date: _____

(c) Project Number 3:

Name of Project: _____

Detailed Description: _____

Name of Project Owner: _____

Contract Amount: _____

Completion Date: _____

(d) Project Number 4:

Name of Project: _____

Detailed Description: _____

Name of Project Owner: _____

Contract Amount: _____

Completion Date: _____

(e) Project Number 5:

Name of Project: _____

Detailed Description: _____

Name of Project Owner: _____

Contract Amount: _____

Completion Date: _____

(23) Additional information required: _____

(24) List of References - Public construction projects of similar nature in a school/community college/university within the last five (5) years. DISTRICT has discretion to require more than five (5) references.

1. Name: _____
Address and Telephone: _____

Contact Person: _____
Description of Project: _____
Dates of commencement and completion of Project: _____

Contract Amount: _____
Architect: _____
Architect's Address and Telephone: _____

DSA or public agency inspector: _____
Address and Telephone: _____

2. Name: _____
Address and Telephone: _____

Contact Person: _____
Description of Project: _____
Dates of commencement and completion of Project: _____

Contract Amount: _____
Architect: _____
Architect's Address and Telephone: _____

DSA or public agency inspector: _____

Address and Telephone: _____

3. Name: _____

Address and Telephone: _____

Contact Person: _____

Description of Project: _____

Dates of commencement and completion of Project: _____

Contract Amount: _____

Architect: _____

Architect's Address and Telephone: _____

DSA or public agency inspector: _____

Address and Telephone: _____

4. Name: _____

Address and Telephone: _____

Contact Person: _____

Description of Project: _____

Dates of commencement and completion of Project: _____

Contract Amount: _____

Architect: _____

Architect's Address and Telephone: _____

DSA or public agency inspector: _____

Address and Telephone: _____

5. Name: _____
Address and Telephone: _____

Contact Person: _____
Description of Project: _____
Dates of commencement and completion of Project: _____

Contract Amount: _____
Architect: _____
Architect's Address and Telephone: _____

DSA or public agency inspector: _____
Address and Telephone: _____

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing responses to the Information Required of Bidder are true and correct.

Signature

Print Name

Title

Date

Note: DISTRICT may wish to expand the scope of the “Information Required of Bidder” form and include additional questions.

DESIGNATION OF SUBCONTRACTORS

In compliance with the Subletting and Subcontracting Fair Practices Act (Public Contract Code Section 4100 et. seq.) and any amendments thereof, each bidder shall set forth below: (a) the name and the location of the place of business of each subcontractor who will perform work or labor or render service to the bidder (prime contractor) in or about the construction of the work or improvement to be performed under this contract or a subcontractor licensed by the State of California who, under subcontract to the bidder (prime contractor), specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications in an amount in excess of one-half of one percent of the bidder's (prime contractor's) total bid and (b) the portion of the work which will be done by each subcontractor. The bidder (prime contractor) shall list only one subcontractor for each such portion as is defined by the bidder (prime contractor) in this bid.

If a bidder (prime contractor) fails to specify a subcontractor or if a bidder (prime contractor) specifies more than one subcontractor for the same portion of work to be performed under the contract in excess of one-half of one percent of the bidder's (prime contractor's) total bid, bidder shall be deemed to have agreed that bidder is fully qualified to perform that portion, and that bidder alone shall perform that portion. Violation of this requirement (including the procurement of a subcontractor for the Project if no subcontractor is specified) can result in the DISTRICT invoking the remedies of Public Contract Code Sections 4110 and 4111.

No bidder (prime contractor) whose bid is accepted shall (a) substitute any subcontractor, (b) permit any subcontractor to be voluntarily assigned or transferred or allow it to be performed by anyone other than the original subcontractor listed in the original bid, or (c) sublet or subcontract any portion of the work in excess of one-half of one percent of the bidder's (prime contractor's) total bid as to which the original bid did not designate a subcontractor, except as authorized in the Subletting and Subcontracting Fair Practices Act. Subletting or subcontracting of any portion of the work in excess of one-half of one percent of the bidder's (prime contractor's) total bid as to which no subcontractor was designated in the original bid shall only be permitted in cases of public emergency or necessity, only after a finding reduced to writing as a public record of the DISTRICT awarding this contract setting forth the facts constituting the emergency or necessity.

Type of trade, labor, or service	Name & License No. of Subcontractor License Expiration Date (Indicate if a Disabled Veteran Business Enterprise)	Complete Address (Name of City Not Sufficient) and Telephone No.	DIR Registration No.

Bidder agrees that within twenty-four (24) hours of the bid opening, Bidder shall provide the DISTRICT with the license number (if applicable), expiration date of license, complete address and telephone numbers of each listed subcontractor if such information is not available at the time of the bid opening.

Dated: _____

Name of Bidder

By: _____
(Signature of Bidder)

Print Name: _____

Address: _____

Telephone: _____

NONCOLLUSION DECLARATION TO BE EXECUTED BY
BIDDER AND SUBMITTED WITH BID
(Public Contract Cod Section 7106)

The undersigned declares:

I am the _____ [Title] of _____ [Name of Company], the party making the 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. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. 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, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ [Date], at _____ [City], _____ [State].

Signature

Print Name

SAMPLE AGREEMENT

THIS AGREEMENT, dated the __ day of _____, 2020, in the County of Orange, State of California, is by and between **Irvine Unified School District**, (hereinafter referred to as "DISTRICT"), and _____, (hereinafter referred to as "CONTRACTOR").

The DISTRICT and the CONTRACTOR, for the consideration stated herein, agree as follows:

1. CONTRACTOR agrees to complete the Project known as **Bid No. 19/20-02MO, University High School High Voltage Replacement** from _____ through _____ according to all the terms and conditions set forth in the Project Documents, including but not limited to the Notice Calling For Bids, Information for Bidders, Bid Form, Bid Bond, Designation of Subcontractors, Information Required of Bidder, all prequalification forms submitted pursuant to Public Contract Code Section 20111.5, if any, Noncollusion Declaration, Payment Bond, Faithful Performance Bond, Agreement, Tobacco Use Policy, Workers' Compensation Certificate, Drug-Free Workplace Certification, Contractor's Certificate Regarding Non-Asbestos Containing Materials, Criminal Records Check Certification, District Rules and Regulations, Guarantee, Escrow Agreement, if applicable, Determination Of Limited Contact by Employees of Contractor, Department of Justice, Extract of Public Works Contract Award, Disabled Veteran Business Enterprises Certification, if applicable, Change Orders, Shop Drawing Transmittals, Insurance Certificates and Endorsements, W9, General Conditions, Project Schedule, Specifications, Drawings, if any, Supplemental Conditions, if any, Special Conditions, if any, and any and all modifications, addenda and amendments thereto by this reference incorporated herein. The Project Documents are complementary, and what is called for by any one shall be as binding as if called for by all.

2. CONTRACTOR shall perform within the time set forth in Paragraph 4 of this Agreement everything required to be performed, and shall provide, furnish and pay for all the labor, materials, necessary tools, expendable equipment, and all taxes, utility and transportation services required for construction of the Project. All of said work shall be performed and completed in a good workmanlike manner in strict accordance with the drawings, specifications and all provisions of this Agreement as hereinabove defined and in accordance with applicable laws, codes, regulations, ordinances and any other legal requirements governing the Project. The CONTRACTOR shall be liable to the DISTRICT for any damages arising as a result of a failure to fully comply with this obligation, and the CONTRACTOR shall not be excused with respect to any failure to so comply by any act or omission of the Architect, Engineer, Inspector, Division of State Architect, or representative of any of them, unless such act or omission actually prevents the CONTRACTOR from fully complying with the requirements of the Project Documents, and unless the CONTRACTOR protests at the time of such alleged prevention that the act or omission is preventing the CONTRACTOR from fully complying with the Project Documents. Such protest shall not be effective unless reduced to writing and filed with the DISTRICT within three (3) working days of the date of occurrence of the act or omission preventing the CONTRACTOR from fully complying with the Project Documents.

3. The work shall be commenced as specified.

4. **Time is of the essence.** If the work is not completed in accordance with Paragraph 4 above, it is understood that the DISTRICT will suffer damage. It being impractical and infeasible to determine the amount of actual damage, in accordance with Government Code Section 53069.85, it is agreed that CONTRACTOR shall pay to DISTRICT as fixed and liquidated damages, and not as a penalty, the sum of **Five hundred Dollars (\$ 500.00)** for each calendar day of delay until work is completed and accepted. Time extensions may be granted by the DISTRICT as provided in Article 63 of the General Conditions. Liquidated damages shall be imposed as set forth in Article 63 of the General Conditions.

5. **Termination for Cause or Nonappropriation.** In the event CONTRACTOR defaults in the performance of the Agreement as set forth in General Conditions Article 13(a) or if there is a nonappropriation of funds or insufficient funds as set forth in General Conditions Article 13(d), then this Agreement shall terminate or be suspended as set forth in General Conditions Article 13.

Termination for Convenience. DISTRICT has discretion to terminate this Agreement at any time and require CONTRACTOR to cease all work on the Project by providing CONTRACTOR written notice of termination specifying the desired date of termination. Upon receipt of written notice from DISTRICT of such termination for DISTRICT's convenience, CONTRACTOR shall:

- (i) Cease operations as directed by DISTRICT in the notice;
- (ii) Take any actions necessary, or that DISTRICT may direct, for the protection and preservation of the work; and
- (iii) Not terminate any insurance provisions required by the Project Documents.

In case of such termination for DISTRICT's convenience, CONTRACTOR shall be entitled to receive payment from DISTRICT for work satisfactorily executed and for proven loss with respect to materials, equipment, and tools, including overhead and profit for that portion of the work completed. In the case of Termination for Convenience, DISTRICT shall have the right to accept assignment of subcontractors. The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to the DISTRICT.

6. **Hold Harmless and Indemnification.** To the fullest extent permitted by law, the CONTRACTOR, at the CONTRACTOR's sole cost and expense, agrees to fully defend, indemnify and hold harmless, the DISTRICT, including but not limited to any of its governing board members, officers, employees and agents, from and against any and all claims, actions, demands, costs, judgments, liens, penalties, liabilities, damages, losses, anticipated losses of revenues, and expenses, including any fees of accountants, attorneys or other professionals, arising out of, in connection with, resulting from or related to, or claimed to be arising out of, in connection with, resulting from or related to any act or omission by the CONTRACTOR or any of its officers, agents, employees, subcontractors, sub-subcontractors, any person performing any of the work

pursuant to a direct or indirect contract with the CONTRACTOR or individual entities comprising the CONTRACTOR, in connection with or relating to, or claimed to be in connection with or relating to the work, this Agreement, or the Project, including but not limited to any costs or liabilities arising out of or in connection with:

- (a) failure to comply with any applicable law, statute, code, ordinance, regulation, permit or orders;
- (b) any misrepresentation, misstatement or omission with respect to any statement made in the Project Documents or any document furnished by the CONTRACTOR in connection therewith;
- (c) any breach of duty, obligation or requirement under the Project Documents;
- (d) any failure to coordinate the work of other contractors;
- (e) any failure to provide notice to any party as required under the Project Documents;
- (f) any failure to act in such a manner as to protect the DISTRICT and the Project from loss, cost, expense or liability; or
- (g) any failure to protect the property of any utility company or property owner.

This indemnity shall survive termination of the contract or final payment thereunder. This indemnity is in addition to any other rights or remedies which the DISTRICT may have under the law or under the Project Documents. In the event of any claim or demand made against any party which is entitled to be indemnified hereunder, the DISTRICT may in its sole discretion reserve, retain or apply any monies due to the CONTRACTOR under the Project Documents for the purpose of resolving such claims; provided, however, that the DISTRICT may release such funds if the CONTRACTOR provides the DISTRICT with reasonable assurance of protection of the DISTRICT's interests. The DISTRICT shall in its sole discretion determine whether such assurances are reasonable.

7. CONTRACTOR shall take out, prior to commencing the work, and maintain, during the life of this Agreement, and shall require all subcontractors, if any, whether primary or secondary, to take out and maintain the insurance coverages set forth below and in Articles 16, 17, 18 and 19 of the General Conditions. CONTRACTOR agrees to provide all evidences of coverage required by DISTRICT including certificates of insurance and endorsements.

a. CONTRACTOR shall, at CONTRACTOR's sole cost and expense, maintain in full force and effect the following insurance coverages from a California licensed insurer with an A, VIII, or better rating from A.M. Best or an approved self-insurance program, sufficient to cover any claims, damages, liabilities, costs and expenses (including attorney fees) arising out of or in connection with CONTRACTOR's fulfillment of the obligations under this AGREEMENT:

- (i) Comprehensive General Liability Insurance, including bodily injury, property damage and contractual liability with minimum limits set by the DISTRICT. The policy may not contain an exclusion for sexual molestation or abuse coverage, may be waived by the DISTRICT.

(1) General Aggregate	\$2,000,000
(2) Each Occurrence	\$1,000,000
(3) Products/Completed Operations	\$1,000,000
(4) Personal and Advertising Injury	\$1,000,000
(5) Damage to Rented Premises	\$50,000
(6) Medical Expense (any one person)	\$5,000

(ii) Umbrella (excess) liability insurance coverage with a limit of \$3,000,000. The policy may not contain an exclusion for sexual molestation or abuse coverage, may be waived by the DISTRICT.

(iii) Business Automobile Liability Insurance for owned, scheduled, non-owned, or hired automobiles with a combined single limit not less than \$1,000,000 per occurrence. (Required only if the CONTRACTOR drives on behalf of the DISTRICT in the course of performing Services.)

(iv) Professional Liability Insurance with a limit of \$1,000,000 per occurrence, unless waived by the DISTRICT and if applicable.

(v) Workers' Compensation and Employers Liability Insurance in a form and amount covering CONTRACTOR's full liability under the California Workers' Compensation Insurance and Safety Act and in accordance with applicable state and federal laws. The policy shall be endorsed with the insurer's waiver of rights of subrogation against the DISTRICT.

It should be expressly understood, however, that the coverage and limits referred to under a., b., c., and d. above shall not in any way limit the liability of the CONTRACTOR.

b. No later than five (5) days from execution of this AGREEMENT by the DISTRICT and CONTRACTOR, and prior to commencing the Services under this AGREEMENT, CONTRACTOR shall provide DISTRICT with certificates of insurance evidencing all coverages and endorsements required hereunder.

CONTRACTOR shall provide prior written notice to the DISTRICT thirty (30) days in advance of any non-renewal, cancellation, or modification of the required insurance. The certificates of insurance providing the coverages referred to in clauses (i) and (ii) above shall name DISTRICT, its Governing Board, officers, and employees, as additional insureds with appropriate endorsements. In addition, the certificates of insurance shall include a provision stating "Such insurance as is afforded by this policy shall be primary, and any insurance carried by DISTRICT shall be excess and noncontributory." Failure to maintain the above mentioned insurance coverages shall be cause for termination of this AGREEMENT

Insurance Covering Special Hazards: The following special hazards shall be covered by rider or riders to above-mentioned public liability insurance or property damage

insurance policy or policies of insurance, or by special policies of insurance in amounts as follows:

Automotive and truck where operated in amounts as above

Material hoist where used in amounts as above

8. Public Contract Code Section 22300 permits the substitution of securities for any retention monies withheld by the DISTRICT to ensure performance under this Agreement. At the request and expense of the CONTRACTOR, securities equivalent to the monies withheld shall be deposited with the DISTRICT, or with a state or federally chartered bank in California as the escrow agent, who shall then pay such monies to the CONTRACTOR. The DISTRICT retains the sole discretion to approve the bank selected by the CONTRACTOR to serve as escrow agent. Upon satisfactory completion of the Agreement, the securities shall be returned to the CONTRACTOR. Securities eligible for investment shall include those listed in Government Code Section 16430 or bank or savings and loan certificates of deposit. The CONTRACTOR shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.

In the alternative, under Section 22300, the CONTRACTOR may request DISTRICT to make payment of earned retention monies directly to the escrow agent at the expense of the CONTRACTOR. Also at the CONTRACTOR's expense, the CONTRACTOR may direct investment of the payments into securities, and the CONTRACTOR shall receive interest earned on such investment upon the same conditions as provided for securities deposited by CONTRACTOR. Upon satisfactory completion of the Agreement, CONTRACTOR shall receive from the escrow agent all securities, interest and payments received by escrow agent from DISTRICT pursuant to the terms of Section 22300.

9. If CONTRACTOR is a corporation, the undersigned hereby represents and warrants that the corporation is duly incorporated and in good standing in the State of California, and that _____, whose title is _____, is authorized to act for and bind the corporation.

10. Each and every provision of law and clause required by law to be inserted in this Agreement shall be deemed to be inserted herein and the Agreement shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not currently inserted, then upon application of either party the Agreement shall forthwith be physically amended to make such insertion or correction.

11. This Agreement constitutes the entire agreement of the parties. No other agreements, oral or written, pertaining to the work to be performed, exists between the parties. This Agreement can be modified only by an amendment in writing, signed by both parties and pursuant to action of the Governing Board of the District. This Agreement shall be governed by the laws of the State of California.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed.

IRVINE UNIFIED SCHOOL DISTRICT

CONTRACTOR

By: _____
Signature

By: _____
Signature

Print Name

Print Name

Title

Title

Date

Date

Irvine Unified School District
Board Approval Date

Contractor's License No.

Tax ID No.
(Corporate Seal of Contractor,
if corporation)

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENT:

WHEREAS, the Irvine Unified School District of Orange County, California ("hereinafter referred to as DISTRICT"), has awarded to _____ (hereinafter referred to as the "Contractor/Principal") a contract for the work described as **Bid No. 19/20-02MO, University High School High Voltage Replacement;**

WHEREAS, said Contractor/Principal is required by Division 3, Part IV, Title XV, Chapter 7 (commencing at Section 3247) of the California Civil Code to furnish a bond in connection with said contract;

NOW, THEREFORE, we, the Contractor/Principal and _____, as Surety, a California admitted surety insurer, are held firmly bound unto the DISTRICT for one hundred percent (100%) of the total amount payable by the DISTRICT under the terms of the contract awarded by the DISTRICT to the Contractor/Principal lawful money of the United States of America for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Contractor/Principal, his/her or its heirs, executors, administrators, successors, or assigns, or a subcontractor, shall fail to pay any person or persons named in Civil Code Section 3181 or fail to pay for any materials, or other supplies, 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 work or labor thereon of any kind, or shall fail to deduct, withhold, and pay over to the Employment Development Department, any amounts required to be deducted, withheld, and paid over by Section 13020 of the Unemployment Insurance Code with respect to work and labor thereon of any kind, then said Surety will pay for the same, in or to an amount not exceeding the amount hereinabove set forth, and also will pay in case suit is brought upon this bond, such reasonable attorney's fees as shall be fixed by the court, awarded and taxed as provided in Division 3, Part IV, Title XV, Chapter 7 (commencing at Section 3247) of the California Civil Code.

This bond shall inure to the benefit of any of the persons named in Section 3181 of the California Civil Code, so as to give a right of action to such person or their assigns in any suit brought upon this bond.

It is further stipulated and agreed that the Surety of this bond shall not be exonerated or released from the obligation of the bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement hereinabove described or pertaining or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement hereinabove described, nor by any rescission or

attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the DISTRICT and original contractor or on the part of any obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Section 3110 and 3112 of the California Civil Code, and has not been paid the full amount of his/her or its claim and that Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned.

Any claims under this bond may be addressed to:

(Name and address of Surety)

(Name and address of agent or representative in California, if different from above)

(Telephone and facsimile number of Surety or agent or representative in California)

IN WITNESS HEREOF, we have here to set our hands and seals on this ____ day of _____, 20__.

CORPORATE SEAL, IF APPLICABLE, AND NOTARIAL ACKNOWLEDGEMENT OF CONTRACTOR

Contractor/Principal

By:

Signature

Print Name and Title

SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY

Surety

By: _____
Signature

Print Name and Title

(Mailing Address, Telephone and Facsimile No. of Surety)

(Attach Attorney-in-Fact Certificate and Required Acknowledgement)

FAITHFUL PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENT:

WHEREAS, the Irvine Unified School District of Orange County, California (hereinafter referred to as "DISTRICT"), awarded to _____, (hereinafter referred to as the "Contractor/Principal") the contract for the work described as **Bid No. 19/20-02MO, University High School High Voltage Replacement**;

WHEREAS, said Contractor/Principal is required under the terms of said contract to furnish a bond for the faithful performance of said contract which contract is incorporated herein by reference;

NOW, THEREFORE, we the undersigned Contractor, as Principal, and Surety, a California admitted surety insurer are held and firmly bound to the DISTRICT for one hundred percent (100%) of the total amount payable by the DISTRICT under the terms of the contract awarded by the DISTRICT to the Contractor/Principal, lawful money of the United States of America, for payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the hereby bonded Contractor/Principal, its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by and well and truly keep and perform all the undertakings, terms, covenants, conditions, and agreements in the said contract which is attached hereto and incorporated herein by reference and any alteration and/or amendments thereof, made as therein provided, including, but not limited to, the provisions regarding contract duration and liquidated damages, all within the time and in the manner therein designated in all respects according to their true intent and meaning, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

As a condition precedent to the satisfactory completion of the contract, the above obligation shall hold good for a period of **One (1)** years after the acceptance of the work by DISTRICT, during which time if Contractor/Principal shall fail to make full, complete, and satisfactory repair and replacements and totally protect the DISTRICT from loss or damage made evident during the period of **One (1)** years from the date of completion of the work, and resulting from or caused by defective materials or faulty workmanship, the above obligation in penal sum thereof shall remain in full force and effect. The obligation of Surety hereunder shall continue so long as any obligation of Contractor remains.

Whenever Contractor/Principal shall be, and is declared by the DISTRICT to be, in default under the contract, the DISTRICT having performed the DISTRICT's obligations thereunder, the Surety shall promptly remedy the default, or shall promptly:

1. Complete the contract in accordance with its terms and conditions; or

2. Obtain a bid or bids for completing the contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a contract between such bidder and the DISTRICT, and make available as work progresses sufficient funds to pay the cost of completion less the balance of the contract price, but not exceeding, including other costs and damages for which Surety may be liable hereunder, the amount set forth above. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor/Principal by the DISTRICT under the contract and any modifications thereto, less the amount previously properly paid by the DISTRICT to the Contractor/Principal.

Surety expressly agrees that the DISTRICT may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal. Surety shall not utilize Contractor/Principal in completing the contract nor shall Surety accept a bid from Contractor/Principal for completion of the work if the DISTRICT, when declaring the Contractor/Principal in default, notifies Surety of the DISTRICT's objection to Contractor's/Principal's further participation in the completion of the work.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the DISTRICT named herein or the successors or assigns of the DISTRICT. Any suit under this bond must be instituted within the applicable statute of limitations period.

FURTHER, the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or modification of the Project documents, or of the work to be performed thereunder, shall in any way affect its obligations on this bond; and it does hereby waive notice of any change, extension of time, alteration or modification of the Project documents or of work to be performed thereunder.

Contractor/Principal and Surety agree that if the DISTRICT is required to engage the services of an attorney in connection with the enforcement of this bond, each shall pay DISTRICT's reasonable attorney's fees and costs incurred, with or without suit, in addition to the above amount.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20__.

CORPORATE SEAL, IF APPLICABLE, AND NOTARIAL ACKNOWLEDGEMENT OF CONTRACTOR

Contractor/Principal

By: _____
Signature

Print Name and Title

SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY

Surety

By: _____
Signature

(Mailing Address, Telephone No. and Facsimile No. of Surety)

Print Name and Title

(Attach Attorney-in-Fact Certificate and Required Acknowledgement)

WORKERS' COMPENSATION CERTIFICATE

Labor Code Section 3700.

"Every employer except the state shall secure the payment of compensation in one or more of the following ways:

(a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state.

(b) By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees.

(c) For any county, city, city and county, municipal corporation, public district, public agency or any political subdivision of the state, including each member of a pooling arrangement under a joint exercise of powers agreement (but not the state itself), by securing from the Director of Industrial Relations a certificate of consent to self-insure against workers' compensation claims, which certificate may be given upon furnishing proof satisfactory to the director of ability to administer workers' compensation claims properly, and to pay workers' compensation claims that may become due to its employees. On or before March 31, 1979, a political subdivision of the state which, on December 31, 1978, was uninsured for its liability to pay compensation, shall file a properly completed and executed application for a certificate of consent to self-insure against workers' compensation claims. The certificate shall be issued and be subject to the provisions of Section 3702."

I am aware of the provisions of Labor Code Section 3700 which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

Name of the Contractor

By: _____
Signature

Print Name

Title

Date

(In accordance with Article 5 [commencing at Section 1860], Chapter 1, Part 7, Division 2 of the Labor Code, the above certificate must be signed and filed with the awarding body prior to performing any work under the contract.)

DRUG-FREE WORKPLACE CERTIFICATION

This Drug-Free Workplace Certification is required pursuant to Government Code Sections 8350, et seq., the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract for the procurement of any property or services from any State agency must certify that it will provide a drug-free workplace by doing certain specified acts. In addition, the Act provides that each contract awarded by a State agency may be subject to suspension of payments or termination of the contract, and the contractor may be subject to debarment from future contracting, if the state agency determines that specified acts have occurred.

Pursuant to Government Code Section 8355, every person or organization awarded a contract from a State agency shall certify that it will provide a drug-free workplace by doing all of the following:

- a) publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited in the person's or organization's workplace and specifying actions which will be taken against employees for violations of the prohibition;
- b) establishing a drug-free awareness program to inform employees about all of the following:
 - 1) the dangers of drug abuse in the workplace;
 - 2) the person's or organization's policy of maintaining a drug-free workplace;
 - 3) the availability of drug counseling, rehabilitation and employee-assistance programs;
 - 4) the penalties that may be imposed upon employees for drug abuse violations;
- c) requiring that each employee engaged in the performance of the contract be given a copy of the statement required by subdivision (a) and that, as a condition of employment on the contract, the employee agrees to abide by the terms of the statement.

I, the undersigned, agree to fulfill the terms and requirements of Government Code Section 8355 listed above and will publish a statement notifying employees concerning (a) the prohibition of controlled substance at the workplace, (b) establishing a drug-free awareness program, and (c) requiring that each employee engaged in the performance of the contract be given a copy of the statement required by Section 8355(a) and requiring that the employee agree to abide by the terms of that statement.

I also understand that if the DISTRICT determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of Section 8355,

that the contract awarded herein is subject to suspension of payments, termination, or both. I further understand that, should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of Section 8350, et seq.

I acknowledge that I am aware of the provisions of Government Code Section 8350, et seq. and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990.

NAME OF CONTRACTOR

Signature

Print Name

Title

Date

**CONTRACTOR'S CERTIFICATE REGARDING
NON-ASBESTOS CONTAINING MATERIALS**

Per Article 69 of the General Conditions.

Certification for _____ from _____ through _____. We hereby certify that no Asbestos, or Asbestos Containing Materials shall be used in this Project or in any tools, devices, clothing, or equipment used to affect the _____ which we have installed in the Irvine Unified School District.

- (a) The Contractor further certifies that he/she has instructed his/her employees with respect to the above mentioned standards, hazards, risks and liabilities.
- (b) Asbestos and/or asbestos containing material shall be defined as all items containing but not limited to chrysotile, corcidolite, amosite, anthophyllite, tremolite and actinolite.
- (c) Any or all material containing greater than one-tenth of one percent (.1%) asbestos shall be defined as asbestos containing material.
- (d) Any disputes involving the question of whether or not material contains asbestos shall be settled by electron microscopy. The costs of any such tests shall be paid by the Contractor if the material is found to contain asbestos.
- (e) All work or materials found to contain asbestos or work or material installed with asbestos containing equipment will be immediately rejected and this work will be removed at no additional cost to the District.

Date

Name of Contractor

By: _____
Signature

Print Name

Title

TOBACCO USE POLICY

IRVINE UNIFIED SCHOOL DISTRICT
Irvine, California

In the interest of public health, the Irvine Unified School District provides a tobacco-free environment. Smoking or the use of any tobacco products are prohibited in buildings and vehicles, and on any property owned, leased or contracted for, by the District. Failure to abide with this requirement could result in the termination of this contract.

I acknowledge that I am aware of Tobacco Use Policy and hereby certify that I and my employees will adhere to the requirements of the policy.

Name of Bidder

Signature

Date

NOTICE TO CONTRACTORS REGARDING CRIMINAL RECORDS CHECK
(EDUCATION CODE SECTION 45125.1)

Education Code Section 45125.1 provides that if the employees of any entity that has a contract with a school district may have any contact with pupils, those employees shall submit or have submitted their fingerprints in a manner authorized by the Department of Justice together with a fee determined by the Department of Justice to be sufficient to reimburse the Department for its costs incurred in processing the application.

The Department of Justice shall ascertain whether the individual whose fingerprints were submitted to it has been arrested or convicted of any crime insofar as that fact can be ascertained from information available to the Department. When the Department of Justice ascertains that an individual whose fingerprints were submitted to it has a pending criminal proceeding for a violent felony listed in Penal Code Section 1192.7(c), or has been convicted of such a felony, the Department shall notify the employer designated by the individual of the criminal information pertaining to the individual. The notification shall be delivered by telephone and shall be confirmed in writing and delivered to the employer by first-class mail.

The contractor shall not permit an employee to come in contact with pupils until the Department of Justice has ascertained that the employee has not been convicted of a violent or serious felony. The contractor shall certify in writing to the governing board of the school district that none of its employees who may come in contact with pupils have been convicted of a violent or serious felony.

Penal Code Section 667.5(c) lists the following “violent” felonies: murder; voluntary manslaughter; mayhem; rape; sodomy by force; oral copulation by force; lewd acts on a child under the age of 14 years; any felony punishable by death or imprisonment in the state prison for life; any felony in which the defendant inflicts great bodily injury on another; any robbery perpetrated in an inhabited dwelling; arson; penetration of a person’s genital or anal openings by foreign or unknown objects against the victim’s will; attempted murder; explosion or attempt to explode or ignite a destructive device or explosive with the intent to commit murder; kidnapping; continuous sexual abuse of a child; and carjacking.

Penal Code Section 1192.7 lists the following “serious” felonies: murder; voluntary manslaughter; mayhem; rape; sodomy by force; oral copulation by force; a lewd or lascivious act on a child under the age of 14 years; any felony punishable by death or imprisonment in the state prison for life; any felony in which the defendant personally inflicts great bodily injury on another, or in which the defendant personally uses a firearm; attempted murder; assault with intent to commit rape or robbery; assault with a deadly weapon on a peace officer; assault by a life prisoner on a noninmate; assault with a deadly weapon by an inmate; arson; exploding a destructive device with intent to injure or to murder, or explosion causing great bodily injury or mayhem; burglary of an inhabited dwelling; robbery or bank robbery; kidnapping; holding of a hostage by a person confined in a state prison; attempt to commit a felony punishable by death or imprisonment in the state prison for life; any felony in which the defendant personally uses a dangerous or deadly weapon; selling or furnishing specified controlled substances to a minor; penetration of genital or anal openings by foreign objects against the victim’s will; grand theft involving a firearm; carjacking; and a conspiracy to commit specified controlled substances offenses.

CERTIFICATION BY CONTRACTOR
CRIMINAL RECORDS CHECK
AB 1610, 1612 and 2102

To the Governing Board of Irvine Unified School District:

I, _____ certify that:
Name of Contractor

1. I have carefully read and understand the Notice to Contractors Regarding Criminal Record Checks (Education Code Section 45125.1) required by the passage of AB 1610, 1612 and 2102.
2. Due to the nature of the work I will be performing for the District, my employees may have contact with students of the District.
3. None of the employees who will be performing the work have been convicted of a violent or serious felony as defined in the Notice and in Penal Code Section 1192.7 and this determination was made by a fingerprint check through the Department of Justice.

I declare under penalty of perjury that the foregoing is true and correct.

Executed at _____, California on _____.
Date

Signature

Typed or printed name

Title

Address

Telephone

DISTRICT RULES AND REGULATIONS

MAINTENANCE & OPERATIONS

Irvine Unified School District
100 Nightmist, Irvine, CA 92618

(949) 936-5300 fax (949) 936-5309

The following rules and regulations must be followed by every contractor doing business with Irvine Unified School District. Failure to comply may result in the removal of you and/or members of your crew from the job, and possible back charges for our direct costs.

1. This a tobacco, drug and alcohol free school district; **no tobacco products, drug products or vaping** may be used on District property.
2. All of the City of Irvine's laws relating to hours and noise of construction work must be followed. If you want to work other than, 7:00 am - 6:00pm or dusk (whichever is earlier) Monday through Friday, or 9:00am - 5:00pm Saturday, you must get a waiver from the City.
3. No pets are allowed on district property.
4. Anyone not directly involved in the scope of work shall not be on the job site.
5. No music, i.e. radios, cassettes, CD's, or headphones, etc.
6. No district equipment shall be used by any contractor unless specifically allowed in writing prior to the start of work. (phone, vacuum, ladders, trash cans or bins, microwave, etc.)
7. Any contractor working on a site where students are present must supply the District with certification that all employees on the project have been finger printed and approved per state law.
8. Fraternalization or other contact with students is strictly forbidden.
9. The contractor shall supply prior to the start of work the following:
 - a. Workers' Compensation Liability of not less than \$1,000,000 per occurrence.
 - b. Liability Insurance of not less than \$1,000,000 per occurrence; \$2,000,000 aggregate with an Endorsement (separate page) listing Irvine Unified School District as an additional insured.
 - c. Excess/Umbrella Liability of \$3,000,000.
 - d. Automobile Liability of \$1,000,000 per occurrence with no annual aggregate limit.
 - e. Sexual Abuse/Molestation must be included under General Liability or be obtained in separate policies in an amount of \$1,000,000 per occurrence (\$2,000,000 aggregate) and \$3,000,000 excess/umbrella coverage.
10. The contractor must clean up all debris from the course of work daily. This includes sweeping, vacuuming, hosing down and other appropriate measures. Any and all damage

to the district's property caused by the contractor's equipment or materials shall be repaired to the district's satisfaction.

11. All employees and subcontractors shall act in a professional manner and wear a shirt or uniform with the company name and logo plainly visible. All other clothing shall be free from holes and any inappropriate logos or patches.
12. Any contractor that loses site keys may be billed for the full cost of rekeying the site.
13. The contractor will only make changes at the request of the District's Facilities/Construction or Maintenance Departments Director, Supervisor, Foreman, or Inspector.
14. The contractor is responsible for locating any and all utilities and other appurtenances that may be affected by this project. Any and all damage is the contractor's responsibility to repair to the District's satisfaction. The District will make available any as-built documents in its possession to the contractor for review at his request. The District does not guarantee the accuracy of the documents and it is the contractor's responsibility to verify the actual location of utilities and appurtenances.
15. Contractor is responsible for security of the entire project area, including fencing if necessary to protect the District and contractor from liability relative to the project. Any contractor that leaves a building unsecured will be liable for any loss incurred or the direct cost to the district to secure the building. The district's labor agreement requires a four hour minimum payment for after hour call outs.
16. Any items issued to the contractor (keys, badges, alarm cards, etc.) shall be returned prior to final payment.
17. Any project over \$15,000.00 is a prevailing wage project. Labor Code Section 1770-1771. (www.dir.ca.gov). SB854 requires contractor to be registered with the Department of Industrial Relations.
18. Firearms or weapons of any type are strictly prohibited on school district property.
19. Contractor to provide payment bond for projects over \$25,000.
20. Contractor to provide performance bond for projects over \$25,000.
21. Contractor will be required to provide certified payroll records on all projects.

Please read both pages of this document. Your signature indicates you have read, understand, and agree to this document.

Signature

Date

GUARANTEE

Guarantee for workmanship. We hereby guarantee that the workmanship, which we have installed in _____ from _____ through _____, has been done in accordance with the Project Documents and that the work as installed will fulfill the requirements included in the Project Documents. The undersigned agrees to repair or replace any or all of such work, together with any other adjacent work which may be displaced in connection with such repair or replacement, that may prove to be defective in workmanship or material within a period of _____ years from the date of completion of the Project, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of the undersigned's or undersigned surety's failure to commence and pursue with diligence said repairs or replacements within ten (10) calendar days after being notified in writing by the DISTRICT, the undersigned authorizes the DISTRICT to proceed to have said defects repaired or replaced and made good at the expense of the undersigned and surety who hereby agree to pay the costs and charges therefore immediately upon demand. (General Conditions Article 46(d))

Name of Contractor

By: _____
Signature of Contractor

Print Name

Title

Contractor shall provide copy of this Guarantee to Contractor's surety.

Guarantee (continued)

Name of Subcontractor
(if work performed by
subcontractor)

By: _____
Signature of Subcontractor

Print Name

Title

Representatives to be contacted for service:

Name: _____

Address: _____

Telephone Number: _____

**ESCROW AGREEMENT FOR
SECURITY DEPOSITS IN LIEU OF RETENTION**

This Escrow Agreement is made and entered into, as of _____, 20____, by and between _____, whose address is _____, hereinafter called "DISTRICT;" _____, whose address is _____, hereinafter called "Contractor;" and, _____, whose address is _____, hereinafter called "Escrow Agent."

For the consideration hereinafter set forth, the DISTRICT, Contractor, and Escrow Agent agree as follows:

(1) Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by DISTRICT pursuant to the Agreement entered into between the DISTRICT and Contractor for _____ in the amount of _____,

(Name of Project)

dated _____ (hereinafter referred to as the "Agreement"). Alternatively, on written request of the Contractor, the DISTRICT shall make payments of the retention earnings directly to the Escrow Agent. When the Contractor deposits the securities as a substitute for retention earnings, the Escrow Agent shall notify the DISTRICT within ten (10) days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Agreement between the DISTRICT and Contractor. Securities shall be held in the name of DISTRICT, and shall designate the Contractor as the beneficial owner.

(2) The DISTRICT shall make progress payments to the Contractor for those funds which otherwise would be withheld from progress payments, provided that the Escrow Agent holds securities in the form and amount specified above.

(3) When the DISTRICT makes payment of retentions earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until the time the escrow created under this Escrow Agreement is terminated. The Contractor may direct the investment of the payments into securities. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the DISTRICT pays the Escrow Agent directly.

(4) Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the DISTRICT. These expenses and payment terms shall be determined by the DISTRICT, Contractor and Escrow Agent.

(5) The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the DISTRICT.

(6) Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from the DISTRICT to the Escrow Agent that DISTRICT consents to the withdrawal of the amount sought to be withdrawn by Contractor.

(7) The DISTRICT shall have a right to draw upon the securities in the event of default by the Contractor. Upon seven (7) days' written notice to the Escrow Agent from the DISTRICT of the default, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the DISTRICT.

(8) Upon receipt of written notification from the DISTRICT certifying that the Agreement is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Agreement, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all monies and securities on deposit and payments of fees and charges.

(9) Escrow Agent shall rely on the written notifications from the DISTRICT and the Contractor pursuant to Sections (5) to (8), inclusive, of this Escrow Agreement and the DISTRICT and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

(10) The names of the persons who are authorized to give written notice or to receive written notice on behalf of the DISTRICT and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of DISTRICT:

On behalf of Contractor:

Title

Title

Name

Name

Signature

Signature

Address

Address

On behalf of Escrow Agent:

Title

Name

Signature

Address

At the time the Escrow Account is opened, the DISTRICT and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Escrow Agreement.

IN WITNESS WHEREOF, the parties have executed this Escrow Agreement by their proper officers on the date first set forth above.

DISTRICT

Contractor

Title

Title

Name

Name

Signature

Signature

Escrow Agent

Title

Name

Signature

SHOP DRAWING TRANSMITTAL

The procedure governing shop drawing submittals is contained in the General Conditions. In addition, all Supplemental Conditions, Special Conditions and Specifications must be followed by the CONTRACTOR.

Failure to comply with all requirements will constitute grounds for return of the shop drawing for proper resubmittal. CONTRACTOR shall sequentially number each submittal.

Date: _____ Submittal No.: _____

From: _____ To: _____

Project Name: _____

This is a(n): Original _____
 Submittal _____
 2nd Submittal _____
 [] Submittal _____

Subject of Submittal:	Equipment Designation:	Specification Section(s):
-----------------------	------------------------	---------------------------

Complete either (a) or (b)

Check One:

(a) We have verified that the material or equipment contained in this submittal meets all the requirements specified or shown (no exceptions). _____

(b) We have verified that the material or equipment contained in this submittal meets all the requirements specified or shown, except for the following deviations (List deviations on attached sheet). _____

(continued on next page)

The CONTRACTOR has reviewed and approved not only the field dimensions but the construction criteria and has also made written notation regarding any information in the shop drawings that does not conform to the Project Documents. This shop drawing has been coordinated with all other shop drawings received to date by CONTRACTOR and this duty of coordination has not been delegated to subcontractors, material suppliers, the ARCHITECT, or the engineers on this Project.

Signature of Contractor or Supplier

Equipment/Material Source Information (OPTIONAL)

The name of the manufacturer of each piece of equipment that will be installed in this Project shall be set forth below. Only one manufacturer of each piece of equipment shall be listed. Bidder agrees that in the event any listed manufacturer is not specifically named in the Project Documents, it will, prior to award, submit complete information satisfactory to the Architect that such manufacturer's equipment complies with all requirements of the Project Documents. If, in the opinion of the Architect, the listed manufacturer's equipment does not comply with the Project Documents, the bid may be rejected unless, prior to award, the bidder agrees in writing to supply approved equipment without a change in the bid price.

Equipment/Material

Manufacturer

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

CHANGE ORDER NO.

(Additive)

PROJECT: _____

TO: _____

You are hereby directed to provide the extra work necessary to comply with this Change Order.

DESCRIPTION OF CHANGE: _____

COST (This cost shall not be exceeded.):

Original contract price: \$ _____
Change Order amount: \$ _____
New contract price: \$ _____

TIME FOR COMPLETION:

Original completion date: _____
Time for completion of
Change Order: _____
New completion date: _____

Contractor agrees to perform the above-described work in accordance with the above terms and in compliance with applicable sections of the Project Documents. The amount of the charges under this Change Order is limited to the charges allowed under Article 59 of the General Conditions. The adjustment in the contract sum, if any, and the adjustment in the contract time, if any, set out in this Change Order shall constitute the entire compensation and/or adjustment in the contract time due Contractor arising out of the change in the work covered by this Change Order, unless otherwise provided in this Change Order.

No additions or deletions to this Change Order shall be allowed, except with written permission of District. Contractor accepts the terms and conditions stated above as full and final settlement of any and all claims arising from this Change Order.

(continued on next page)

This Change Order is hereby agreed to, accepted and approved.

CONTRACTOR

By: _____
Signature

Print Name

Title

Date

DISTRICT

By: _____
Signature

Print Name

Title

Date

ARCHITECT

By: _____
Signature

Print Name

Title

Date

CHANGE ORDER NO.

(Deductive)

PROJECT: _____

TO: _____

You are hereby directed to comply with this Change Order.

DESCRIPTION OF CHANGE: _____

COST (This cost shall be deleted.):

Original contract price: \$ _____
Change Order amount: \$ _____
New contract price: \$ _____

TIME FOR COMPLETION:

Original completion date: _____
Time for completion of
Change Order: _____
New completion date: _____

Contractor agrees to deduct the above-described work in accordance with the above terms and in compliance with applicable sections of the Project Documents. Contractor agrees to the adjustment in the contract sum, if any, and the adjustment in the contract time, if any, set out in this Change Order.

No additions or deletions to this Change Order shall be allowed, except with written permission of District. Contractor accepts the terms and conditions stated above as full and final settlement of any and all claims arising from this Change Order.

(continued on next page)

This Change Order is hereby agreed to, accepted and approved.

CONTRACTOR

By: _____
Signature

Print Name

Title

Date

DISTRICT

By: _____
Signature

Print Name

Title

Date

ARCHITECT

By: _____
Signature

Print Name

Title

Date

DISTRICT USE ONLY

**DETERMINATION OF LIMITED CONTACT
BY EMPLOYEES OF CONTRACTOR**

Pursuant to Education Code section 45125.1, it is necessary to determine whether the employees of a contractor will have limited contact with students of the District. Section 42125.1 includes factors such as the length of time the contractor will be on school grounds, whether the students will be in close proximity on the school site where the contractors will be working and whether the contractors will be working by themselves or with others. In addition, the District should include the factors of frequency of contact with students, likelihood of contact with students, supervision by school employees and the physical characteristics of the school site.

With respect to _____, the following findings are made:
Name of Contractor

1. Length of time – The contractor's employees will be at the school site for approximately _____ amount of time.
2. Proximity to students – The contractor’s employees will be working approximately _____ distance from students.
i.e., number of feet, yards
3. Working by themselves or others – The employees of the contractor will be working with _____ other employees.
Number
4. Frequency of contact with students – Based on the nature of the contract, the employees of the contractor will be in contact with students of the District approximately _____.
Number of times per day, week or month
5. Likelihood of contact with students – Due to the nature of the contract, employees of the contractor will _____ have contact with students.
e.g., very likely, not likely
6. Supervision by school employees –

_____ Due to the nature of the contract, employees of the contractor will be supervised by school employees in the following manner: _____
_____ or, _____ Describe

_____ Due to the nature of the contract, employees of the contractor will not be supervised by school employees.

7. Physical characteristics of the school site – Due to the physical characteristics of the school site, the nature of the contract and the location of work:

_____ There will be more than limited contact and a fingerprint check will be necessary.

_____ There will only be limited contact and a fingerprint check is not necessary.

Date: _____

Signature

Type name and title



RE: CONTRACTORS FOR PUBLIC AND PRIVATE SCHOOLS

Dear Interested Party:

In accordance with California Penal Code Section 11077, "The Attorney General is responsible for the security of criminal offender record information."

In accordance with California Education Code Sections 33 192 and 45 125.1, a school district or private school may require an entity that has an **existing contract** with a district or private school to obtain a criminal history clearance. In keeping with the restrictions and requirements set forth in California law, the following are guidelines and restrictions;

- 1) access is granted **only** to the primary contractor (there is no authority for subcontractors to gain direct access to DOJ records),
- 2) services provided under contract must be performed on school grounds,
- 3) the entity must have a contract (entities in the bid process are not authorized),
- 4) completed applications for authorization must have original signatures only (no photocopied signatures or faxed forms will be accepted or processed).

CONSTRUCTION CONTRACTORS
33 193 AND 45 125.2 EDUCATION CODE

In accordance with statutory, regulatory, and constitutional restrictions governing the use and dissemination of criminal offender record information, the above mentioned Education Code Sections allow for exemptions from backgrounding all employees. under the following conditions:

1. The installation of a physical barrier at the worksite to limit contact with pupils.

2. Continual supervision and monitoring of all employees of the entity by an employee of the entity whom the DOJ has ascertained has not been convicted of a violent or serious felony.
3. Surveillance of employees of the entity by school personnel.

Construction contractors are not required to comply with the backgrounding requirements set forth in the Michelle Montoya School Safety Act if one or more of the above-mentioned conditions exist.

If you have any questions, please call (916) 227-3460.

Sincerely,



GEORGE RENFROE, Manager
Communications Administration Program
Bureau of Criminal Information & Analysis

For BILL LOCKYER
Attorney General

Enclosures

P.O. Box 903417
SACRAMENTO, CA 94203-4170



DEPARTMENT OF JUSTICE

**REQUEST FOR AUTHORIZATION TO RECEIVE STATE SUMMARY CRIMINAL HISTORY
INFORMATION - CONTRACT EMPLOYEE FOR PUBLIC/PRIVATE SCHOOLS**

Name of Contractor _____

Street Address _____

City _____ State _____ Zip Code _____

Telephone _____ Fax Number _____

In accordance with California Education Code Section 45 125.1, a school district may require an entity that has an **existing contract** with a school district to obtain a criminal history clearance. In keeping with the restrictions and requirements set forth in California law, the following are guidelines and restrictions:

On behalf of the **company** named above, I hereby acknowledge and agree to the following:

1. The information provided by the Department of Justice (DOJ) to this agency is confidential and shall not be disseminated to any other person or agency not authorized by law (11105 PC). A violation of this section is a misdemeanor (11142 PC).
2. Your agency shall notify the DOJ with regard to any change in agency name, address, telephone number or contact person.
3. Fingerprints received will be retained by the DOJ per 11105.2 PC until notified that the affected individual is no longer employed.
4. Access is granted **ONLY** to the primary contractor (there is NO authority for **subcontractors** to gain direct access to DOJ records).
5. Services provided under contract must be performed on school grounds.
6. The entity must have a contract (entities in the bid process are not authorized).
7. Original signatures only (no photocopied signatures or faxed forms will be accepted or processed).

Signature _____ Date _____

Printed Name _____ Title _____

PLEASE PROVIDE A SIGNATURE FROM EACH DISTRICT VERIFYING THAT A BACKGROUND CHECK HAS BEEN REQUIRED OF YOUR COMPANY. (You may attach additional letters or signatures as necessary).

School District/County Office of Education

Background Check Requirement Verification: 1. _____
Name of Contracting School District

2. _____
Signature of School Official

3. _____
Phone and Fax Number

In accordance with statutory, regulatory, and constitutional restrictions governing the use and dissemination of criminal offender record information, the above mentioned Education Code Sections allow for exemptions from backgrounding all employees under the following conditions:

1. The installation of a physical barrier at the worksite to limit contact with pupils.
2. Continual supervision and monitoring of all employees of the entity by an employee of the entity whom the DOJ has ascertained has not been convicted of a violent or serious felony.
3. Surveillance of employees of the entity by school personnel.

Construction contractors are not required to comply with the backgrounding requirements set forth in the Michelle Montoya School Safety Act if one or more of the above-mentioned conditions exist.

For Department of Justice use only

Your request to receive state summary criminal history information pursuant to the Michelle Montoya School Safety Act is approved. Information regarding procedural requirements is enclosed or will be forwarded under separate cover.

George Renfroe, Manager
Communications Administration Program
Bureau of Criminal Information & Analysis

DATE

STATE OF CALIFORNIA – DEPARTMENT OF INDUSTRIAL RELATIONS

TO: California Department of Industrial Relations
 Division of Apprenticeship Standards
 P.O. Box 420603
 San Francisco, CA 94142

AWARDING AGENCY ID NUMBER

--

If you do not have an ID number please contact DAS

FROM:

**EXTRACT OF
PUBLIC WORKS CONTRACT AWARD**

A CONTRACT TO PERFORM PUBLIC WORKS UNDER LABOR CODE SECTION 1777.5 HAS BEEN AWARDED TO:

1. NAME OF GENERAL CONTRACTOR		2. CONTRACTOR'S LICENSE NO	
3. MAILING ADDRESS (STREET NUMBER OR P.O. BOX)		4. CITY	
		5. ZIP CODE	6. TELEPHONE NUMBER
7. GENERAL CONTRACTOR'S CONTACT EMAIL ADDRESS		8. ADDRESS/LOCATION OF PUBLIC WORKS SITE (INCLUDE CITY AND COUNTY): Ba. County	
9. NAME OF PROJECT			
10. CONTRACT NUMBER	11. PROJECT NUMBER	12. DOLLAR AMOUNT OF CONTRACT AWARD	
13. FIRST ADVERTISED BID DATE MONTH DAY YEAR	14. CONTRACT AWARD DATE MONTH DAY YEAR	12a. ESTIMATED TOTAL PROJECT COSTS, IF DIFFERENT FROM ITEM 12 (see instructions)	
		15. WHICH STATUTE, IF ANY, APPLIES TO THIS PROJECT?	
16. STATE CONSTRUCTION BONDS If YES, List the Sources and Dollar Amount of Bond Proceeds: SOURCES		17. WILL YOU OPERATE A DIR-APPROVED LABOR COMPLIANCE PROGRAM (LCP) FOR THIS PROJECT? YES NO	
		18. IS THERE A PROJECT LABOR AGREEMENT (PLA) ASSOCIATED WITH THIS PROJECT? If yes, please email a copy to crmpia@dir.ca.gov YES NO	
19. STARTING DATE (ESTIMATED OR ACTUAL) (MM/DD/YYYY)		20. COMPLETION DATE (ESTIMATED OR ACTUAL) (MM/DD/YYYY)	
21. BRIEF DESCRIPTION OF WORK TO BE PERFORMED		22. NEW CONSTRUCTION REMODELING ALTERATION, DEMOLITION, REPAIR OR MAINTENANCE	
23. CLASSIFICATION OR TYPE OF WORKER (CARPENTER, PLUMBER, ETC.) THAT WILL BE EMPLOYED BY THE CONTRACTOR(S) Please list sub-contractors and their worker classifications on page 2			
24. Is language included in the Contract Award to effectuate the requirements of sections 1771, 1774, 1775, 1776, 1777.5, 1813, and 1815 of the Labor Code?		YES NO	
25. SIGNATURE	26. TITLE	27. DATE	
28. PRINTED OR TYPED NAME	29. E-MAIL ADDRESS	30. TELEPHONE NUMBERS	
If different from above, name, title, and contact information of person responsible for carrying out Awarding Body's LCP or CMU responsibilities.			
31. NAME	32. TITLE	33. E-MAIL ADDRESS	34. TELEPHONE NUMBER

Duplication of this form is permissible

**CERTIFICATION – PARTICIPATION OF
DISABLED VETERAN BUSINESS ENTERPRISES
IN ACCORDANCE WITH EDUCATION CODE 17076.11**

In accordance with Education Code Section 17076.11, the _____ School District has a participation goal for Disabled Veteran Business Enterprises of at least three percent (3%) per year of the overall dollar amount of funds allocated by the District by the State Allocation Board pursuant to the Leroy F. Greene School Facilities Act of 1998 for construction or modernization of school buildings and expended each year by the District. At the time of execution of the contract, the Contractor will provide a statement to the District of anticipated participation of Disabled Veteran Business Enterprises in the contract. Prior to, and as a condition precedent for final payment under the contract, the Contractor will provide appropriate documentation to the District identifying the amount paid to Disabled Veteran Business Enterprises pursuant to the contract, so that the District can assess its success at meeting this goal.

The Contractor may provide the anticipated participation of Disabled Veteran Business Enterprises in terms of percentage of its total contract or the dollar amount anticipated to be paid to Disabled Veteran Business Enterprises or by providing the names of the Disabled Veteran Business Enterprises that will participate in the contract. If there is a discrepancy between the anticipated goals and the actual goals at completion of the contract or a failure to meet the anticipated goal or dollar amounts, the District will require the Contractor to provide, at the completion of the contract, a detailed statement of the reason(s) for the discrepancy or failure to meet the anticipated goals or dollar amounts.

I certify that I have read the above and will comply with the anticipated participation of Disabled Veteran Business Enterprises in this contract.

Signature

Typed or Printed Name

Title

Company

Address

City, State, Zip

Telephone

Fax

E-mail

SAMPLE

ACORD™ CERTIFICATE OF LIABILITY INSURANCE		DATE (MM/DD/YYYY) INSERT DATE
PRODUCER NAME & ADDRESS OF INSURANCE COMPANY	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
INSURED NAME & ADDRESS OF COMPANY/ORGANIZATION	INSURERS AFFORDING COVERAGE INSURER A: Name of Insurance Company INSURER B: Name of Insurance Company INSURER C: Name of Insurance Company INSURER D: Name of Insurance Company INSURER E: Name of Insurance Company	NAIC #

COVERAGES
 THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
		GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	MANDATORY REQUIREMENTS	Insert Date	Insert Date	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 1,000,000
		AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS	REQUIRED IF APPLICABLE TO SERVICE	Insert Date	Insert Date	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
		GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN EA ACC \$ AUTO ONLY: AGG \$
		EXCESS/UMBRELLA LIABILITY <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION \$	REQUIRED UNLESS REDUCED/EXCLUDED	Insert Date	Insert Date	EACH OCCURRENCE \$ 3,000,000 AGGREGATE \$ \$ \$
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below	REQUIRED UNLESS REDUCED/EXCLUDED	Insert Date	Insert Date	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
		OTHER Professional Liability and/or Sexual Abuse/Molestation	MAY BE REQUIRED	Insert Date	Insert Date	\$ 1,000,000 per occurrence \$ 2,000,000 aggregate

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS
 Irvine Unified School District, its Board of Trustees, officers, agents, employees, and volunteers are named as additionally insured on this policy pursuant to written contract, agreement, or memorandum of understanding. Such insurance as is afforded by this policy shall be primary, and any insurance carried by District shall be excess and noncontributory. Sexual Abuse/Molestation is not excluded from coverage under the general liability and excess/umbrella liability policies. (Provide brief description of services/dates).

CERTIFICATE HOLDER Irvine Unified School District 5050 Barranca Parkway Irvine, California 92604 Attention: Risk Management	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL <u>30</u> DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE SIGNATURE REQUIRED
--	---

ENDORSEMENT

ADDITIONAL COVERED PARTY

COVERED PARTY

(INSERT INSURED NAME)

COVERAGE DOCUMENT

(INSERT POLICY NUMBER)

ADMINISTRATOR

(INSERT NAME OF ADMINISTRATOR)

Subject to all terms, conditions, exclusions, and endorsements, such additional covered party as is afforded by the coverage document shall also apply to the following entity but only as respects to liability arising from the actions and activities of the covered party described below.

Additional Covered Party:

Irvine Unified School District
5050 Barranca Parkway
Irvine, California 92604

Description of Activities:

Irvine Unified School District, its Board of Trustees, officers, agents, employees, and volunteers are named as additionally insured on this policy pursuant to written contract, agreement, or memorandum of understanding. Such insurance as is afforded by this policy shall be primary, and any insurance carried by District shall be excess and noncontributory.

Authorized Representative Signature
MUST APPEAR ON THE ENDORSEMENT PAGE

SAMPLE



Irvine Unified School District Insurance Requirements

All insurers must be duly licensed and admitted by the State of California

Mandatory Requirements (unless District reduces or excludes coverage requirements)

1. Commercial General Liability insurance for bodily injury and property damage, including accidental death in the combined single limit of not less than \$1,000,000 per occurrence (\$2,000,000 aggregate) and \$3,000,000 Excess/Umbrella Liability.
2. Sexual Abuse/Molestation coverage must be included under General Liability or obtained in separate policies in an amount of not less than \$1,000,000 per occurrence (\$2,000,000 aggregate) and \$3,000,000 excess/umbrella coverage.

Minimum Limits (if required by District)

1. Automobile Liability insurance for bodily injury and property damage in an amount of not less than \$1,000,000 per occurrence with no annual aggregate limit.
2. Workers' Compensation and Employer's Liability insurance in the amount of not less than \$1,000,000 per occurrence.
3. Professional Liability insurance in an amount of not less than \$1,000,000 per occurrence (\$2,000,000 aggregate). If Professional Liability policy is made on a claims-made basis, the vendor/consultant must purchase and maintain an extending reporting period (tail coverage) for one year.

Additional Insured Endorsement Language

"Irvine Unified School District, its Board of Trustees, officers, agents, employees, and volunteers are named as additionally insured on this policy pursuant to written contract, agreement, or memorandum of understanding. Such insurance as is afforded by this policy shall be primary, and any insurance carried by District shall be excess and noncontributory."

Additional Insured Endorsements are required to accompany Certificates of Insurance. Certificate of Insurance shall provide thirty (30) day prior written notice of cancellation.

See sample certificate on the Irvine Unified School District website at www.iusd.org.

Additional Required Documents

Certificates of Insurance must be accompanied by a list of all excluded coverages under the general liability and excess/umbrella liability policies. The exclusion policy document section may be emailed or faxed to Risk Management & Insurance. The general liability and excess/umbrella liability documents must list the corresponding policy numbers referenced on the Certificate of Insurance.

Questions may be directed to Risk Management & Insurance at Insurance@iusd.org.

Email: Insurance@iusd.org

Fax: (949) 936-5019

Revised: September 2016

APPENDIX A

Project Schedule

Work hours are Monday through Friday, 7:00 am to 5:00 pm, an eight (8) hour work day.

Board Approval: April 14, 2020

Award Letter/Notice to Proceed: April 15, 2020 through April 21, 2020 (5 days)

Acquisition/Shops: April 22, 2020 through June 2, 2020 (30 business days)

Last day of school: June 5, 2020

Construction: June 15, 2020 through July 17, 2020 (24 business days)

APPENDIX B

Project Manual/Specifications

**UNIVERSITY HIGH SCHOOL
UNDERGROND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**



SPECIFICATIONS

March 2, 2020

Project Tracking No. 73650-
DSA Application No. 04-



515 Encinitas Blvd., Ste. 201, Encinitas, CA 92024
Ph. 760.753.6800 Fax 760.552.7541

00 00 00

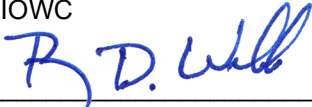
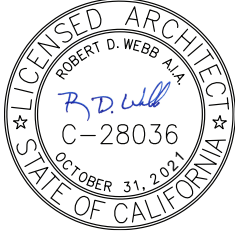
PROCUREMENT AND CONTRACTING REQUIREMENTS

IRVINE UNIFIED SCHOOL DISTRICT

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

STATE OF CALIFORNIA Department of General Services DIVISION OF THE STATE ARCHITECT San Diego Regional Office 10920 Via Frontera, Suite 300, San Diego, CA 92127 Phone: (858) 674-5400	PROJECT TRACKING NO.: DSA APPLICATION NO.: STAMP DATE:
--	--

STUDIOWC
 515 Encinitas Boulevard, Suite 201, Encinitas, CA 92024
 (760) 753-6800

ARCHITECT: STUDIOWC  <hr style="width: 80%; margin-left: 0;"/> Robert D. Webb, Architect, C-28036	
STRUCTURAL ENGINEER: FIRM NAME <hr style="width: 80%; margin-left: 0;"/> Name, Title, License #	
ELECTRICAL ENGINEER: FBA Engineering <hr style="width: 80%; margin-left: 0;"/> Steven Zajicek, Electrical Engineer, E-10372	
CIVIL ENGINEER: FIRM NAME <hr style="width: 80%; margin-left: 0;"/> Name, Title, License #	

END OF PROJECT TITLE PAGE

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

00 00 00	PROCUREMENT AND CONTRACTING REQUIREMENTS.....	1
00 01 01	Project Title Page	1
00 01 10	Table of Contents	6
01 00 00	GENERAL REQUIREMENTS	1
01 11 00	Summary of Work.....	2
01 25 00	Substitution Procedures	8
	Substitution Request FORM.....	
01 29 00	Payment Procedures	5
	Application and Certification for Payment (G702) FORM	1
	Continuation Sheet (G703) FORM	1
01 31 13	Project Coordination	3
	Request for Information (RFI) FORM	1
01 31 19	Project Meetings.....	1
01 32 16	Construction Progress Schedule	3
01 33 00	Submittal Procedures	5
	Shop Drawings / Submittal Transmittal Letter	1
01 35 16	Alteration Project Procedures.....	3
01 42 19	Reference Standards.....	5
01 45 23	Testing and Inspecting Services	8
01 50 00	Temporary Facilities and Controls.....	3
01 60 00	Product Requirements.....	3
01 74 00	Cleaning and Waste Management	3
01 77 00	Closeout Procedures	5
01 78 23	Operation and Maintenance Data	4
01 78 30	Warranties, Guarantees, and Bonds	4
01 78 39	Project Record Documents.....	4
02 00 00	SITWORK	1
02 41 19	Selective Demolition	5
26 00 00	ELECTRICAL.....	1
26 05 00	Electrical General Provisions.....	16
26 05 01	Basic Electrical Material and Methods	4
26 05 30	Conduit and Wire.....	15
26 10 05	Power Distribution	14
26 13 05	Interrupter and Sectionalizing Switches	9

01 00 00

GENERAL REQUIREMENTS

IRVINE UNIFIED SCHOOL DISTRICT

SECTION 01 11 00

SUMMARY OF WORK

PART 1 - GENERAL

1.01 SUMMARY

- A. Project: Underground High Voltage Replacement for University High School, Irvine Unified School District.
- B. Description of Work: Replacement of underground high voltage and miscellaneous sitework, as indicated in the Contract Documents prepared by StudioWC.

1.02 PERFORMANCE REQUIREMENTS

- A. All work shall conform to 2019, Title 24, California Building Code (CBC).
- B. Changes to the approved Drawings and Specifications shall be made by addenda or a construction change document (CCD) approved by the Division of the State Architect, Office of Regulation Services, as required by Section 4-338, Part 1, Title 24, California Building Code.
- C. Contractor requirements:
 - 1. Contractor shall have a valid C10 license.
 - 2. Contractor shall specialize in High Voltage Construction – 480 V to 500KV or greater.
 - 3. Contractor shall have in stock high voltage items, such as High Voltage Cables, Cable Splicing Components, Switches, and Transformers.
 - 4. Contractor must employ adequate number of master journeymen for this project as well as linemen, cable splicers, civil operators and testmen.
 - 5. Contractor must have successfully completed a minimum of 10 high voltage projects in the southern California in the last 5 years. Submit list of projects with bid documents including client, including name and phone number and project type.
 - 6. Contractor must have an excellent safety record, with a five-year EMR average of 70% or better.

1.03 WORK UNDER OTHER CONTRACTS

- A. No work is planned or scheduled to be performed by the Owner's own forces.

1.04 WORK SEQUENCE

- A. Work is to be conducted in a single phase based on a single lump-sum contract. All work shall be completed in accordance with the district's allocated number of calendar days after the date of commencement of work stipulated in the bid documents and the Notice to Proceed. The contract closeout procedure as specified in Section 01 77 00 - Closeout Procedures shall be completed within this period. Normal inclement weather for the various seasons of the year shall not be grounds for extensions of contract time, and the Contractor shall take this into account when formulating his Construction Schedule. By submitting a Bid and entering this Contract, Contractor certifies that he has adequate resources and is fully capable of completing the Work within the allotted time.

1.05 CONTRACTOR USE OF PREMISES

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- A. During the construction period the Contractor shall have full use of the premises for construction operations, including use of the site. The Contractor's use of the premises is limited only by the Owner's right to perform construction operations with its own forces or to employ separate contractors on portions of the project.
- B. Limit use of the premises to construction activities in areas indicated; allow for Owner occupancy and use by the public.
 - 1. Confine operations to areas within Contract limits indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed.
- C. Keep driveways and entrances serving the premises clear and available to the Owner and the Owner's employees at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.
- D. Use of the Existing Buildings: Maintain the existing buildings in a weather-tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.

1.06 OCCUPANCY

- A. At each phase of completion, the Owner will occupy the Project in the manner outlined in Section 01 77 00 - Closeout Procedures, and as set forth in the General Conditions. Refer to General Conditions of the contract, Article 1.02. B. (Occupancy) and Article 1.02.C. (Completion) for occupancy and completion conditions.

Partial Owner Occupancy: The Owner reserves the right to occupy and to place and install equipment in completed areas of the building, prior to Substantial Completion provided that such occupancy does not interfere with completion of the Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.

- 1. A Certificate of Substantial Completion will be executed for each specific portion of the Work to be occupied prior to Owner occupancy.
- 2. Obtain a Certificate of Occupancy from local building officials prior to Owner occupancy.
- 3. Prior to partial Owner occupancy, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Upon occupancy the Owner will provide operation and maintenance of mechanical and electrical systems in occupied portions of the building.

PART 2 - PRODUCTS
(Not Applicable)

PART 3 - EXECUTION
(Not Applicable)

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: General requirements for the proposal of substitutions.

1.02 MATERIAL

- A. Equipment, materials, and articles incorporated into the work shall be new and suitable for the purposes intended.
- B. Reference to equipment, material, article, or patented process by trade name or catalog number shall not be construed as limiting competition.
1. In cases where the Specifications designate a material, product, thing, or service by specific proprietary brand or trade name, and there is only one brand or trade name listed, the item involved is:
 - a. Used as a standard of quality which must be satisfied without compromise, or
 - b. The only brand or trade name known to the Owner and Architect.
 2. Wherever in the Contract Documents a material, article, or process is indicated or specified by trade, patent, proprietary name, or name of manufacturer, such indication shall be deemed to be followed by the words, **"or equivalent, as accepted in writing by the Architect"**.
 - a. Contractor shall submit a substitution request for Architect's written acceptance.
 3. If the phrase "NO SUBSTITUTIONS" is used, the product is required to be used since it is a unique product application.
- C. The naming of more than one manufacturer in a Section does not imply that all products of named manufacturers are acceptable for use on the Project. Where more than one proprietary name is specified, provide materials or equipment of any one of the manufacturers specified, only if full compliance with other portions of the Specifications can be provided.
- D. Construction shall be in compliance with the cited standards for the materials specified.

1.03 SUBSTITUTIONS

- A. Should the Contractor wish to substitute an item purported to be equal to the one specified, then the Contractor shall, no later than 10 days after Award of Contract, furnish to the Architect the name of the manufacturer, model number, color options and other pertinent data and information respecting the "or equivalent" item which has been proposed in the bid and which the Contractor contemplates incorporating in the work. If the "or equivalent" item is not found by the Architect to be, in fact, equivalent or better, then the item specified in the Contract Documents shall be furnished. When colors have been indicated prior to Bid, Contractor shall be required to provide a

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

custom color to match. See Section 01 33 00, Submittal Procedures.

- B. When required by the Contract Documents, or when directed by the Owner, furnish full information concerning the material or article proposed for incorporation into the work. Testing of a proposed substitute material to assure compliance with the Specifications may be required by the Owner at the Contractor's expense. When so directed, submit samples for acceptance. Equipment, material, and articles installed or used without required acceptance shall be at the risk of subsequent rejection, and replacement at Contractor's cost.
- C. Substitutions shall comply with, or exceed, requirements of dimension, function, structure, durability, and appearance without exception. Use of accepted substitutions shall in no way relieve the Contractor from responsibility for compliance with the Contract Documents after installation. It shall be incumbent upon the Contractor using accepted substitutions to assume extra costs caused by the use of such substitutions where they affect other work.
- D. Do not substitute materials, equipment, or methods unless such substitution has been reviewed and approved by the Architect. **Substitutions shall be submitted to the Division of the State Architect for approval prior to acceptance by Architect. Contractor is responsible for all costs associated with this substitution submittal. If said substitution is not accepted by the Division of the State Architect, the contractor shall provide the originally specified item at no cost to the owner and no impact to the project schedule.**
- E. "Or Equivalent":
 - 1. Where the phrase "or equivalent", "or approved equivalent", or "or equivalent as approved by the Architect" occurs in the Contract Documents, do not assume that materials, equipment, or methods will be accepted as equal unless the item has been specifically accepted, in writing, for the Work by the Architect **and by the Division of the State Architect for items which "affect health, safety or welfare" prior to installation or fabrication. Contractor is responsible for all costs associated with this substitution submittal. If said substitution is not accepted by the Division of the State Architect, the contractor shall provide the originally specified item at no cost to the owner and no impact to the project schedule.**
- F. Failure to place orders for specified equipment or material sufficiently in advance of the scheduled installation date will not be considered a valid reason upon which the Contractor may base his request for substitutions or for deviations from the Drawings and Specifications.
- G. In the event the Contractor requests changes or revisions requiring drawings or services of the Architect or the Architect's consultants, to facilitate installation or erection of any portion of the work, the Contractor shall accept the responsibility to hire and pay for the Architect's or Consultant's services. A standard hourly rate of \$150.00, shall be paid by the Contractor whether the change is accepted or rejected. In the event the change is approved, this fee shall be deducted, and paid, from the Contract Sum.
- H. Redesigning by the Contractor: Redesigning shall be by an Engineer licensed, in the State of California, to perform such work and approved the architect of record. Review of any optional redesigning by contractor by the architect shall be paid by the contractor at a standard hourly rate of \$150.00, whether the change is accepted or rejected. In the event approval is required from authorities having jurisdiction, such approval shall be obtained by the Contractor at the Contractor's expense before submitting the revised

UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT

design or substitution to the Architect. **Contractor is responsible for all costs associated with this substitution submittal. If said substitution is not accepted by the Division of the State Architect, the contractor shall provide the originally specified item at no cost to the owner and no impact to the project schedule.**

- I. Revision after Approval: When a submittal has been reviewed by the Architect, resubmittal for substitution of materials or equipment will not be considered unless accompanied by an explanation acceptable to the Architect as to the reason substitution is considered necessary. Changes in Plans and Specifications, which effect safety, health or welfare, shall be made by Addenda or Construction Change Document approved by the Division of the State Architect. **Contractor is responsible for all costs associated with this substitution submittal. If said substitution is not accepted by the Division of the State Architect, the contractor shall provide the originally specified item at no cost to the owner and no impact to the project schedule.**

1.04 SUBSTITUTION REQUEST FORM:

- A. Submittal of the requested information shall be accompanied by the attached Substitution Request Form. Submit a digital (PDF) of each request to the Architect. Architect will distribute as appropriate. Substitutions will be rejected if they are not accompanied by a completed Substitution Request Form. Incomplete forms will constitute automatic rejection. **Contractor is responsible for all costs associated with this substitution submittal. If said substitution is not accepted by the Division of the State Architect, the contractor shall provide the originally specified item at no cost to the owner and no impact to the project schedule.**
- A.

PART 2 - PRODUCTS
(Not Applicable)

PART 3 - EXECUTION
(Not Applicable)

END OF SECTION

ATTACHMENT: Substitution Request Form

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UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT

SUBSTITUTION REQUEST FORM

Re: _____
Project Name

Project Manual Section Number

Item

To: _____
Architect

From: _____
Contractor

Reviewed for timeliness and completeness by General Contractor:

We hereby submit for your consideration the following product comparisons of the specified item and the proposed substitution:

A.	Comparison	Specified Item	Substitution
	1. Product Name/Model	_____	_____
	2. Manufacturer	_____	_____
	Address	_____	
	Address	_____	
	Phone Number	_____	
	3. Product Cost	_____	
	Installation/Labor Cost	_____	
	4. Delivery Time	_____	
	Installation Time	_____	
	5. Product Characteristics	_____	
	6. Dimensions	_____	
	Effects	_____	
	7. Guarantee/Warranty	_____	
	8. ICC No.	_____	
	9. UL Rating	_____	
B.	Substantiating Data:	_____	

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

Attach manufacturer's literature for both specified item and substitution.

C. Samples: Provide samples for both specified item and substitution, if applicable.

D. Similar Projects for Reference:

1. _____
Name Date

Address

Address

Contact

Telephone

2. _____
Name Date

Address

Address

Contact

Telephone

E. Maintenance Service/Parts/Supplier:

Name

Address

Address

Telephone

F. What effect does this substitution have on applicable code requirements?

G. Change Data:

Attach complete information for changes to be made to Drawings and Project Manual.

- * Certification of equal performance and assumption of liability for equal performance.
- * The Contractor shall agree to pay for costs involved in changing the building design; including engineering, drafting and detail cost caused by the proposed substitution.

Submitted by:

Signature

Name

Title

Firm Name

Date

Address

Address

City State Zip

Telephone

Remarks:

Signature must be by persons having authority to legally bind his firm to the above terms. Failure to provide legally binding signature will result in retraction of approval.

Product substitution of _____

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

for _____

Specifications Section _____
(number) (name)

For Use by Owner's Representative:

- Accepted Not Accepted

Owner's Consultant:

By: _____

Date: _____

- Accepted Not Accepted

School District:

By: _____

Date: _____

SECTION 01 29 00

PAYMENT PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Administrative and procedural requirements governing the Contractor's Applications for Payment.
- B. Related Work:
 - 1. The Construction Progress Schedule is included in Section 01 32 16 and shall be coordinated with the work of this Section.
 - 2. **PROJECT RECORD DOCUMENTS:** All requirements for record documents, Specification Section 01 78 39, shall be completed to the Owner's satisfaction prior to Owner's processing of each month's Application for Payment.

1.02 SCHEDULE OF VALUES

- A. Coordinate preparation of the Schedule of Values with preparation of the Network Analysis Schedule.
- B. Submit the Schedule of Values to the Architect at the earliest feasible date, but in no case later than 7 days before the date scheduled for submittal of the initial Application for Payment. Include with initial submission a projected monthly payment request schedule for total cost of project, for Owner's cash flow planning.
- C. Acceptance of the Schedule of Values by the Architect and the District is required prior to approval and payment of the first application for payment.
- D. Format and Content: The Project Manual Table of Contents may be used as a general guide to format the Schedule of Values; specific item numbers may be sequentially numerical.
 - 1. The Schedule of Values shall be a detailed breakdown of the price to provide and install each item of work and material on the project.
 - 2. Each line item on the Schedule of Values shall be presented to allow the Architect to easily find that item of work within the construction during his review of the construction operations and evaluate whether that line item is 100% complete or not.
 - 3. Each line item of the Schedule of Values shall be given a value by the Contractor that, in the opinion of the Contractor, best represents the value of that work, and if required to present evidence of his opinion, the Contractor will be able to substantiate the value by the use of supplier, subcontractor written quotations, labor wages/rates, hourly estimates and/or by industry recognized cost estimating references.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

4. Each line item of the Schedule of Values shall be in such detail and coordinated with other line items of work and with the contractor's Construction Schedule, that when making application for payment each month, each line item depicts a portion of work that can be completed within one month's pay period, reviewed by the Inspector and the Architect; if that line item is 100% complete, recommended to the Owner for payment. If, in the opinion of the Architect, the line item is not 100% complete, the line item will not be recommended for payment.
5. Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed. Each sheet of the Schedule of Values shall be titled and numbered sequentially.
 - a. Line Item Number
 - b. Description of Item.
 - c. Quantity.
 - d. Unit of Measure.
 - e. Unit Price.
 - f. Value of Line Item.
 - g. Line Item Value Request this month.
 - h. Line Item Value previously completed.
 - i. At the bottom of each sheet, the Total Amount of Columns f, g, and shall be tabulated and carried forward on each page and the TOTAL AMOUNT presented at the end.
- E. Round amounts off to the nearest whole Dollar; the total shall equal the Contract Sum.
- F. Schedule Updating: Update and resubmit the Schedule of Values when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.03 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.
 1. The initial Application for Payment, the Application for Payment at the time of Substantial Completion, and the final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is the 15th day of each month. The period of construction Work covered by each Application for Payment is the period ending 15 days prior to the date for each progress payment and starting the day following the end of the preceding period.
- C. Payment Application Forms: Use AIA Document G702 and the form of Schedule of Values accepted by the Architect and approved by the District.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- D. Application Preparation: Complete each entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Owner. Incomplete applications will be returned without action.
1. Entries shall match data on the Network Analysis Schedule. Use updated schedules if revisions have been made.
 2. Include amounts of Owner-approved Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.
- E. Transmittal: Submit three (3) executed copies of each Application for Payment to the Architect by means of ensuring receipt within 24 hours; one copy shall be complete, including waivers of lien and similar attachments, when required.
1. Transmit each copy with a transmittal form listing attachments, and recording appropriate information related to the application in a manner acceptable to the Architect.
- F. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics lien from entity who may lawfully be entitled to file a mechanics lien arising out of the Contract, and related to the Work covered by the payment.
1. Submit each Application for Payment with the Contractor's waiver of mechanics lien for the period covered by the Application.
 2. Submit final Application for Payment with or precede by final waivers from entity involved with performance of Work covered by the application who could lawfully be entitled to a lien.
- G. Initial Application for Payment: Administrative actions and submittals that must precede submittal of the first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's Construction Schedule.
 4. Schedule of unit prices, if applicable.
 5. Submittal Schedule.
 6. Copies of permits as may be required to start the Work (encroachment permits, etc., may be obtained as necessary for sequence of construction).
 7. Copies of authorizations and licenses from governing authorities for performance of the Work.
 8. Initial progress report.
 9. Report of pre-construction meeting
 10. Certificates of insurance and insurance policies.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

11. Performance and payment bonds.

Note: Each preceding item shall be submitted to the Architect, accepted by the Architect and approved by the Owner prior to the certification and approval of the first payment to the Contractor.

- H. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment; this application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work. Administrative actions and submittals that shall proceed or coincide with this application include:

1. Occupancy permits and similar approvals.
2. Warranties (guarantees) and maintenance agreements.
3. Test/adjust/balance records.
4. Maintenance instructions.
5. Meter readings.
6. Start-up performance reports.
7. Change-over information related to Owner's occupancy, use, operation and maintenance.
8. Final cleaning.
9. Application for reduction of retainage, and consent of surety.
10. Advice on shifting insurance coverages.
11. Final progress photographs.
12. List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion. Each work item value shall be listed and the total amount deducted from amounts owed over and above the retention.

- I. Final Payment Application: Administrative actions and submittals which must precede or coincide with submittal of the final payment Application for Payment include the following:

1. Completion of Project closeout requirements.
2. Completion of items specified for completion after Substantial Completion.
3. Written assurance that unsettled claims will be settled.
4. Written assurance that Work not complete and accepted will be completed without undue delay.
5. Transmittal of required Project construction records to Owner.
6. Certified property survey.
7. Proof that taxes fees and similar obligations have been paid.

8. Removal of temporary facilities and services.
9. Removal of surplus materials, rubbish and similar elements.
10. Change of door locks to Owner's access.

PART 2 - PRODUCTS
(Not Applicable)

PART 3 - EXECUTION
(Not Applicable)

END OF SECTION

Attachments: Application and Certification for Payment – Form G702
Continuation Sheet – Form G702

CONTINUATION SHEET (G703)

PROJECT:

APPLICATION NO:

CONTRACT DATE:

PERIOD TO:

CONTRACT FOR:

A	B	C	D	E	F	G		H	I
ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED		MATERIALS PRESENTLY STORED (NOT IN D OR E)	TOTAL COMPLETED AND STORED TO DATE (D+E+F)	% (G+C)	BALANCE TO FINISH (C-G)	RETAINAGE
			FROM PREVIOUS APPLICATIONS (D+E)	THIS PERIOD					
TOTAL PAGE 1									

SECTION 01 31 13

PROJECT COORDINATION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Administrative and supervisory requirements required to ensure orderly progress and timely completion of the Work.
- B. Related Work Described Elsewhere:
 - 1. Additional requirements for coordination are included on Contract Drawings and other Sections of the Specifications. It is intended that all work provided under this Contract shall be complete except where otherwise specified or shown. Any drawing, document, or section, by itself, is not a complete description of the work. Cross references to related work, where given, are provided as a convenience and shall not limit the applicability of other requirements specified or shown unless specifically stated.

1.02 QUALITY ASSURANCE

- A. Familiarity With Contract Documents:
 - 1. Contractor and all Subcontractors shall conduct a study necessary to become completely familiar with all requirements. Applicable requirements indicated or described in the Contract Documents, and the publications referred to, are a part of the Work required as though repeated in each such Section.
 - 2. In the event discrepancies or conflicts are encountered, notify the Architect immediately. Where there is discrepancy between different parts of the contract documents, including referenced codes and standards, the documents requiring the higher quality, the greater quantity, or the more difficult work shall govern, unless determined otherwise by the Architect.
 - 3. Promptly distribute required information to entities concerned and ensure the needed actions are taken.
- B. Reporting: Unless otherwise noted by the Contractor in his transmittals, all of the Contractor's data transmittals to the Architect for the Architect's review will be construed as stipulating that the Contractor has thoroughly and completely reviewed and coordinated the data prior to transmittal.
- C. Interfacing: It shall be solely the responsibility of the Contractor to make sure that each Subcontractor completes in a timely manner the assigned work and that all interfaces are prepared, connected, and function as required.

1.03 REQUEST FOR INFORMATION

- A. The General Contractor shall plan, schedule, coordinate and sequence Work so Requests for Information (RFI), if necessary, may be submitted to the Architect in a timely manner so as not to delay progress of Work. Submission of and responses to RFI(s) with copies to Owner, shall be transmitted via email.

**UNIVERSITY HIGH SCHOOL
 UNDERGROUND HIGH VOLTAGE REPLACEMENT
 IRVINE UNIFIED SCHOOL DISTRICT**

- B. Telephone conversations requesting information shall be confirmed in writing for prompt reply of all RFIs. Contractor shall coordinate the timing of email and telephone conversations to be made with the Architect's office between the hours of 8:00 a.m. and noon, Monday through Friday.
- C. RFI will be unanswered until Contractor submits a "Construction Schedule". "Construction Schedule" shall be based on Specification Section arrangement, and establish starting and ending dates for Work in each section. "Construction Schedule" shall be updated monthly and delivered to Architect and Owner at "Request for Payment".
- D. If "Construction Schedule" is not received by Architect and Owner by that date, Architect's response to pending RFI(s) will be delayed by the same number of days as the days the "Construction Schedule" is late.
- E. Architect shall have the same time period to respond to RFI(s) as "shop drawing review period". When the response to a Request for Information is already contained or included within contract documents, or is based on referenced standards, or is based on established and common construction practices, Contractor shall reimburse the Architect at the following hourly rates:

Principal	\$200.00/hour
Associate Architect/Project Manager	\$150.00/hour
Project Architect	\$ 95.00/hour
CADD.....	\$ 85.00/hour
Job Captain.....	\$ 75.00/hour
Draftsperson	\$ 65.00/hour
Support Staff.....	\$ 55.00/hour

If RFI requires Architect's Consultant(s) acknowledgment, Contractor shall reimburse consultant(s), at the same hourly rates for consultant's staff; Contractor shall also pay to the Architect, a percentage for overhead and profit to the consultant's fee, equal to the markup the General Contractor adds to "Change Orders" from his "Subcontractors".

- F. Contractor shall be billed at "Request for Payment" meeting, and payment is due on the 10th day of the following month. If payment is not received by Architect by that date, Architect's response to pending RFI's will be delayed by the same number of days as the days the payment check for RFI services is late.
- G. No damages for delay due to RFI response beyond allotted time will be allowed, unless Contractor can show that RFI was not foreseeable with proper planning, scheduling, coordination, and sequencing and the Architect's late response delayed timely purchase or delivery of equipment or material, or limited construction personnel from proceeding with their task(s), within previously listed "Construction Schedule" activity period(s).

**PART 2 - PRODUCTS
 (Not Applicable)**

PART 3 - EXECUTION

3.01 PLANNING THE WORK

- A. By thorough advance planning of activities, coordinate the following in addition to other coordination activities required:

1. Materials, services, and equipment purchasing.
2. Shipping.
3. Receipt and storage at the site.
4. Installation, including interface with related items.
5. Inspection and testing, to the extent required under the Contract.
6. Assistance in initial start-up and operational tests.
7. Completion of the Work, including removal and disposal of Contractor's surplus material and equipment, and final cleaning of structures and sites.

3.02 COORDINATION

- A. Coordinate construction activities included under various Sections of these Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work.

3.03 GENERAL INSTALLATION PROVISIONS

- A. Coordination methods used by the Contractor are at the Contractor's option, except that the Architect may disapprove Work completed by the Contractor or data submitted by the Contractor when, in the Architect's judgment, coordination has been inadequate to ensure the specified quality.
- B. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect for final decision.

END OF SECTION

Attachment: Request for Information – Form RF1

REQUEST FOR INFORMATION (RFI)

SCHOOL NAME - PROJECT NAME

NOTE: AN RFI IS A REQUEST FOR INFORMATION ONLY. IF A REPLY TO AN RFI REQUIRES ADDITIONAL SERVICES BY A DESIGN CONSULTANT, OR WILL CHANGE SCOPE OF WORK OR CONTRACT TIME, SUBMIT PROPOSAL REQUEST IN ACCORDANCE WITH SECTION 01 25 00.

RFI #: _____

To: _____

Date: _____

Architect: _____

Project No.: _____

Address: _____

Drawing Ref.: _____

Phone: _____ Fax: _____

Spec. Sect. Ref.: _____

Email: _____

POSSIBLE COST IMPACT

TIME IMPACT

PRIORITY ATTENTION REQUIRED

Subject: _____

INFORMATION REQUESTED: (Attach additional sheets as required)

PLEASE RESPOND BY: _____ TRANSMITTED BY: _____

RESPONSE: (Attach additional sheets as required)

RESPONDED BY:

Name: _____ Company: _____ Date: _____

SECTION 01 31 19

PROJECT MEETINGS

PART 1 - GENERAL

1.01 SUMMARY

- A. Prior to commencement of the Work, a Preconstruction Conference will be held to discuss procedures to be followed during the progress of the Work.
- B. Location: A convenient site for all parties designed by the District.
- C. Attending the Preconstruction Conference shall be:
 - 1. District Representative
 - 2. District's Project Representative
 - 3. Architect
 - 4. District's and Architect's Consultants
 - 5. Contractor
 - 6. Contractor's Superintendent
 - 7. Major listed Subcontractors
 - 8. Others as appropriate

1.02 PROPOSED PROGRESS MEETINGS

- A. Schedule and hold weekly meetings or as required by the District Representative.
 - 1. Agenda to be prepared and submitted 48 hours prior to meeting.
- B. Location: A convenient site for all parties designed by the District.
- C. Attending Progress Meetings shall be:
 - 1. Contractor and/or fully delegated Representative
 - 2. Contractor's Superintendent
 - 3. Subcontractors, as appropriate to the Agenda.
 - 4. Others, as appropriate to the Agenda.
 - 5. Inspector of Construction
 - 6. District Representative
 - 7. Architect
- D. The Architect will record and distribute Meeting Minutes to the attendees. Attendees taking exception to anything in the meeting notes shall state same in writing, directed to the Architect within (5) five working days following receipt of meeting notes.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

(Not Applicable)

END OF SECTION

SECTION 01 32 16

CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Manually prepared construction schedule based on Gantt (bar) Charts. Prepare and maintain schedules and issue reports to assure adequate planning and execution of the Work. Complete Work within the number of calendar days allowed in the Contract. Schedule shall be in sufficient detail to assist the Architect in appraising the reasonableness of the proposed schedule and to evaluate progress of the Work.

1.02 DEFINITIONS

- A. Day: As used throughout the Contract, the work "day" means "calendar day" unless otherwise indicated.
- B. Adverse weather that is normal for the area and the season shall be taken into account in the Construction Schedule.

1.03 QUALITY ASSURANCE

- A. Qualifications of Scheduling Personnel: Employ a project scheduler thoroughly trained and experienced in compiling construction schedule data and in preparation of periodic reports.
- B. Reliance Upon Accepted Schedule:
 - 1. The construction schedule, as accepted by the Architect, shall be an integral part of the contract and will establish interim Contract completion dates for various activities.
 - 2. Should any activity fail to be completed within 15 days after the stipulated schedule date, the Owner shall have the right to order the Contractor to expedite completion of the activity by whatever means the Owner deems appropriate and necessary, without additional compensation to the Contractor, and as set forth in the General Conditions of the Contract.
 - 3. Should any activity be 30 or more days behind schedule, the Owner shall have the right to perform the activity or have the activity performed by whatever method the Owner may deem appropriate, and as set forth in the General Conditions of the Contract.
 - 4. Costs incurred by the Owner in connection with expediting construction shall be deducted from the Contract amount.
 - 5. Failure by the Owner to exercise the option to either order the Contractor to expedite an activity or to expedite the activity by other means, will not be considered a precedent for any other activities nor a waiver of the Owner's rights to exercise his rights on subsequent occasions.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

1.04 SUBMITTALS

- A. Submittal Procedure: Refer to Section 01 33 00 – Submittal Procedures and to Section 01 25 00 – Substitution Procedures.
- B. Preliminary Analysis: Within 10 days after receipt of notice to proceed, submit one reproducible copy and four prints of a preliminary Construction Schedule.
- C. Construction Schedule: Within 30 days after receipt of notice to proceed, submit one reproducible and four prints of the initial construction schedule.
- D. Periodic Reports: On the first working day of each month following submittal of the initial construction schedule, submit four prints of the updated Construction Schedule.

PART 2 - PRODUCTS

2.01 CONSTRUCTION ANALYSIS

- A. Graphically show the order and interdependence of activities necessary to complete the Work, and the sequence in which each activity is to be accomplished, as planned by the Contractor and his project field superintendent in coordination with all subcontractors whose work is shown on the diagram. Show all activities on the diagram. Each activity shall indicate work item breakdown noting duration and responsibility for each item, including, but not necessarily limited to:
 - 1. Project mobilization.
 - 2. Submittal and review of shop drawings and samples.
 - 3. Procurement of equipment and critical materials.
 - 4. Fabrication of special material and equipment. Installation and testing of each by item and by system.
 - 5. Final Cleanup.
 - 6. Final inspection and testing.
 - 7. Activities by the Architect that affect progress, required dates for completion, or both, for each part of the work.

PART 3 - EXECUTION

3.01 PRELIMINARY ANALYSIS

- A. Prepare a Preliminary Construction Schedule:
 - 1. Show all activities of the Contractor under this Contract for the period between receipt of notice to proceed and submittal of initial construction schedule.
 - 2. Show the Contractor's general approach to remainder of the Work.
 - 3. Show cost of all activities scheduled for performance before submittal and review of the Construction Schedule.

3.02 INITIAL CONSTRUCTION SCHEDULE

- A. Update the Preliminary Construction Analysis for use as the initial Construction Schedule:
 - 1. Clearly indicate the critical path and slack where it occurs.
 - 2. Meet with the Architect and review contents of proposed Construction Schedule.
 - 3. Make all revisions required by the Architect.
- 3.03 PERIODIC REPORTS
- A. On a monthly basis as specified above, submit updated Construction Schedule:
 - 1. Indicate "actual" progress in percent completion for each activity.
 - 2. Provide written narrative summary of revisions causing delay in the program. Explain corrective actions taken or proposed.
 - B. Revise accepted construction schedule only when revisions are reviewed and approved in advance by the Architect.

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
1. Wherever possible throughout the Contract Documents, the minimum acceptable quality of workmanship and materials has been defined by manufacturer's name and catalog number, reference to recognized industry and government standards, or description of required attributes and performance.
 2. To help ensure that the specified products are furnished and installed in accordance with design intent, submit design product and data in advance for review by the Architect. Review by the Architect and the design consultants in no way relieves the contractor or subcontractor or supplier from providing the products or construction as described in the Contract Documents.
 3. Make submittals required by the Contract Documents. Revise and resubmit when requested to establish compliance with the specified requirements.
- B. Related Work Described Elsewhere: Additional requirements for submittals are described in other Sections of these Specifications and the General Conditions.
- C. Submittals shall be organized by specification section number.
- D. Submittals shall be complete. All items indicated in each submittal section shall be contained within the submittal and identified by the Part, Section and subsection.
INCOMPLETE SUBMITTALS WILL BE REJECTED AND ANY DELAY WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

1.02 QUALITY ASSURANCE

- A. Coordination of Submittals: Prior to each submittal, review and coordinate each item being submitted and verify that each item and the submittal conform with the requirements of the Contract Documents. **By affixing the Contractor's signature to each submittal, certify that this coordination has been performed.**
- B. Certificates of Compliance:
1. Certify that materials used in the Work comply with specified provisions thereof. Certification shall not be construed as relieving the Contractor from furnishing satisfactory materials if, after tests are performed on selected samples, the material is found not to meet specified requirements.
 2. Show on each certification the name and location of the Work, name and address of Contractor, quantity and date or dates of shipment or delivery to which the certificate applies, and name of the manufacturing or fabricating company. Certification shall be in the form of letter or company-standard forms containing required data. Certificates shall be signed by an officer of the manufacturing or fabricating company.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

3. In addition to the above information, laboratory test reports submitted shall show the date or dates of testing, the specified requirements of which testing was performed, and results of the test or tests.

1.03 SUBMITTALS

- A. Contractor shall submit all shop drawings, samples, requests for substitutions, mix designs, and other items, in accordance with this Section. Submit schedule per Section 01 32 16, Construction Progress Schedule, indicating timing of all required submittals.
- B. Prior to submittal of the Contractor's first application for payment, submit a schedule of all submittals required by the Contract Documents.
- C. Submittals shall be submitted per the following time schedule for the following specific items. Failure to submit by these dates will be considered sufficient grounds to delay Architect's certification of Contractor's Application for Payment until these items are received in proper order.
 1. Within **10 calendar days** after Award of Contract:
 - a. **All Requests for Substitutions:** After this date, no further requests for substitution will be considered, and Contractor shall be obligated to provide the specified products - **NO EXCEPTIONS.**
 2. Within **15 calendar days** after Notice to Proceed:
 - a. Concrete mix design, steel connectors to be embedded in concrete foundations and slabs, materials for underground site plumbing, sewer, storm drainage, and underground site electrical.
 3. Within **20 calendar days** after Notice to Proceed:
 - a. Hollow metal, door hardware, fire alarm system, fire sprinkler system, glu-lam beams and other structural lumber, structural steel, miscellaneous structural connectors, mechanical, plumbing and electrical materials, and equipment and fixtures.
 - b. All materials requiring a color selection by the Owner and Architect.
 - c. All casework.
 4. Within **30 calendar days** after Notice to Proceed:
 - a. All other items not specifically mentioned in 1, 2 and 3 above.
- D. Provide required submittals for the following products to interface with other portions of the Work. Submit data to verify compliance only.
 1. For products specified only by reference standard, select product meeting that standard, by manufacturer.
 2. For products specified by naming several products or manufacturers, select one of the products or manufacturers named.

3. For products specified by naming one or more products or manufacturers and stating "or other approved", or "or approved equivalent", or other such wording on drawings or within specifications sections, submit a request for substitutions for product or manufacturer which is not specifically named, but only after submitting bid on specified products and systems.

PART 2 - PRODUCTS

2.01 SHOP DRAWINGS AND COORDINATION DRAWINGS

- A. Scale and Measurements: Make shop drawings to a scale sufficiently large to shown pertinent aspects of the item and its method of connection to the Work.
- B. Type of Prints Required: Submit shop drawings in the black and white PDF (Blue Beam Review compatible) format.
- C. Reproduction of Reviewed Shop Drawings: Printing and distribution of reviewed shop drawings for the Architect's use will be by the Architect.
- D. Review comments of the Architect will be shown in Blue Beam Review. The Contractor shall make and distribute copies required for his purposes.

2.02 MANUFACTURERS' LITERATURE

- A. General: Where submitted literature from manufacturers includes data not pertinent to the submittal, indicate which portion of the contents is being submitted for review. Submittals not clearly marked will be returned without review.
- B. Number of Copies Required: One digital PDF (Blue Beam Review compatible) copy.
- C. The Contractor shall make and distribute copies required for his purposes.

2.03 SAMPLES

- A. Accuracy of Samples: Precise article proposed to be furnished shall be labeled with a submittal number, and project name.
- B. Number of Samples Required: Submit quantity required to be returned plus one each retained by the Architect, the Inspector, D.S.A., and the Owner, unless otherwise noted.
- C. Reuse of Samples: In situations accepted by the Architect, the Architect's retained sample may be used in the construction as one of the installed items.
- D. Size of Samples: Samples shall be 6" x 6", or manufactured width by 12 inches, unless otherwise required by the pertinent Specification section.

2.04 COLORS AND PATTERNS

- A. When the precise color and pattern is not specifically described in the Contract Documents, and whenever a choice of color or pattern is available in a specified product, submit accurate color and pattern charts to the Architect for review and selection. Submit data to verify compliance only. If the color is specifically described in the Contract, submit only that color for verification and approval. Digital color submissions are acceptable within the submittal document, however, physical samples must be delivered within one day of date of submittal.

UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT

PART 3 - EXECUTION

3.01 IDENTIFICATION OF SUBMITTALS

- A. General: Consecutively number submittals within the respective specification section. Accompany each submittal with transmittal cover letters attached to the end of this Section. Fill out each transmittal cover letter completely, number sequentially, include specification section, name of supplier or installer, and contact person and telephone number.
- B. Internal Identification: On the first page of each copy of each submittal, and elsewhere as required for positive identification, indicate the submittal number.
- C. Resubmittals: When material is resubmitted, transmit under a new letter of transmittal and with same submittal number plus a "alphabetic" suffix indicating its a re-submittal, e.g. 05500-1A, 05500-1B.
- D. Submittal Log: Maintain submittal log for the duration of the Contract. Show current status of submittals, with columns showing "approved", "approved as corrected", etc, to match Architect's categories. Make the submittal log available for the Architect's review upon request. Log shall be available and will be reviewed at each project meeting.

3.02 COORDINATION OF SUBMITTALS

- A. The Contractor's Project Engineer shall be responsible to coordinate and review all submittals prior to forwarding to Architect. All submittals shall be stamped with Contractor's stamp, signed and dated, stating:
 - 1. Contractor has reviewed submittal for compliance with requirements of the Contract Documents.
 - 2. Contractor has reviewed submittal for proper interfacing with other trades.
- B. General: Prior to making submittals, coordinate materials including, but not necessarily limited to:
 - 1. Determine and verify interface conditions, catalog numbers, and similar data,
 - 2. Coordinate with other trades as required,
 - 3. **Clearly indicate deviations from requirements of the Contract Documents. Deviations which are not clearly called out as a deviation and which subsequently become a part of an approved submittal can under no circumstances be considered legitimate grounds for an additive change order.**
- C. Grouping of Submittals: Make submittals in groups containing associated items to ensure that information is available for checking each item when it is received. Partial submittals may be rejected as not complying and the Contractor shall be strictly liable for occasioned delays.
- D. Color selections for materials in the same space or same elevation shall be submitted at one time. "Piece meal" submission of the color samples or charts is unacceptable and will be returned awaiting a "complete" submission.

3.03 TIMING OF SUBMITTALS

- A. General: Make submittals far enough in advance of dates scheduled for installation to provide time required for reviews; for possible revisions and resubmittals; and for placing orders and securing delivery, and as otherwise required by Part 1.03 of this Section.
- B. Architect's Review Time: In scheduling, allow at least 20 calendar days for review by the Architect following his receipt of the submittal or as otherwise may be required under each Specification section. Allow an additional 10 days for reviews involving Architect's consultants or as otherwise may be required under each Specification section.
- C. Delays: Delays caused by tardiness in making submittals or resubmittals will not be an acceptable basis for extension of the Contract completion time.

3.04 ARCHITECT'S REVIEW

- A. General: Corrections or comments made on Shop Drawings during his review **shall not relieve the Contractor from compliance with requirements of the Drawings and Specifications**. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. The Contractor is responsible for confirming and correlating quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of other trades and performing his work in a safe and satisfactory manner.
 - 1. Authority to Proceed: The notations "Furnish as Submitted" or "Furnish as Corrected" authorize the Contractor to proceed with fabrication, purchase, or both or the items so noted, subject to the revisions, if any, required by the Architect's review comments.
 - 2. Revisions: The notation "Revise and Resubmit" or "Submit Specified Item" means make revisions required by the Architect and resubmit. If the Contractor considers required revision to be a change, he shall so notify the Architect as provided for under "Changes" or "Changes in the Work" in the General Conditions. Show each drawing revision by number, date, and subject in a revision block on the drawing. Make only those revisions directed by or accepted by the Architect.
 - 3. Rejection: The notation "Rejected" means the submission does not meet requirements of project contract documents. Make new submission meeting project contract documents.

END OF SECTION

Attachment: Contractor's Form - Shop Drawings / Submittal Transmittal Letter Cover Sheet referenced herewith.

SHOP DRAWINGS / SUBMITTAL TRANSMITTAL LETTER

School:	Specification Section:
Project:	Submittal No.:
District:	Submittal Description:
DSA Application No.:	Date:

Contractor:	Subcontractor:
Address:	Address:
Phone No.:	Phone No.:
Contact:	Contact:

FIRM NAME

Address

Phone No.

SUBMITTAL HISTORY

ARCHITECT/ENGINEER'S SHOP DRAWING STAMP

REMARKS:

SECTION 01 35 16

ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Special procedures required for alteration work.

1.02 SCHEDULING

- A. Before commencing alteration or demolition work, submit for review by the Architect and approval of the Owner, a Schedule showing the commencement, the order and the completion dates for the various parts of this work.
- B. Before starting work relating to existing utilities (electrical, sewer, water, heat, gas, fire lines, etc.) that will temporarily discontinue or disrupt service to the existing building, notify the Architect and the Owner 72 hours in advance and obtain the Owner's approval in writing before proceeding with this phase of the work.

1.03 PROTECTION

- A. Make such explorations and probes as are necessary to ascertain required protective measures before proceeding with demolition and removal. Give particular attention to shoring and bracing requirements so as to prevent damage to existing construction.
- B. Provide, erect, and maintain catch platforms, lights, barriers, weather protection, warning signs, and other items as required for proper protection of the public, occupants of the building, workmen engaged in demolition operations, and adjacent construction.
- C. Provide and maintain weather protection at exterior openings so as to fully protect the interior premises against damage from the elements until protection is provided by new construction.
- D. Provide and maintain temporary protection of the existing structure designated to remain where demolition, removal and new work is being done, connections made, materials handled, or equipment moved.
- E. Take necessary precautions to prevent dust and dirt from rising by wetting demolished masonry, concrete, plaster and similar debris. Protect unaltered portions of the existing building affected by the operations under this Section by dustproof partitions and other adequate means.
- F. Provide adequate fire protection in accordance with local Fire Authority and with Section 01 50 00, Temporary Facilities and Controls.
- G. Do not close or obstruct walkways, passageways or stairways. Do not store or place materials in passageways, stairs, or other means of egress. Conduct operations with minimum traffic interference.
- H. Be responsible for damage to the existing structure or contents by reason of the insufficiency of protection provided.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT
PART 2 - PRODUCTS**

2.01 MATERIALS

- A. Materials and workmanship employed in the alterations, unless otherwise shown or specified, shall conform to that of the original work, or to new construction as specified elsewhere in these specifications.
- B. If interior finish materials, or existing surfaces to be removed are indicated to be re-used in areas necessary to match existing surfaces. Care in removal and stockpiling shall be exercised to ensure re-use.

PART 3 - EXECUTION

3.01 WORKMANSHIP

- A. Perform demolition, removal and alteration work with due care, including shoring and bracing. Be responsible for damage which may be caused by such work to part or parts of existing structures or items designated for re-use. Perform patching, restoration, and new work in accordance with applicable technical sections of the Specifications.
- B. Materials and items designated to become the property of the Owner shall be as shown. Remove such items with care, under the supervision of the trade responsible for reinstallation; protect and store until required. Replace material and item damaged in its removal with approved similar and equal new material.
- C. Materials and items demolished and not designated to become the property of the Owner or to be reinstalled shall become the property of the Contractor and shall be removed from the Owner's property. Storage or sale of removed items on site will not be permitted.
- D. Execute the work in a careful and orderly manner, with the least possible disturbance to the public and to the occupants of the building.
- E. Where alterations occur, or new and old work join, cut, remove, patch, repair or refinish the adjacent surfaces or so much thereof as is required by the involved conditions, and leave in as a good a condition as existed prior to the commencing of the work. The alteration work shall be performed by the various respective trades which normally perform the particular items of Work.
- F. Finish new and adjacent existing surfaces as specified for new work. Clean existing surfaces of dirt, grease, loose paint, etc. before refinishing.
- G. Where existing equipment and fixtures are indicated to be re-used, repair such equipment and fixtures and refinish to put in excellent working order. Refinish as directed.
- H. Cut out embedded anchorage and attachment items as required to properly provide for patching and repair of the respective finishes.
- I. Confine cutting of existing roof areas designated to remain to the limits required for the proper installation of the new work. Cut and fold back existing built-up roofing. Cut and remove insulation. Provide temporary weathertight protection as required until new roofing and flashings are applied.
- J. Should any existing conditions, such as deterioration or non-complying construction, be

discovered which is not covered by the DSA approved documents, wherein the finished work will not comply with the current Title 24, California Building Code of Regulations, a construction change document, or a separate set of plans and specifications, detailing and specifying the required repair work, shall be submitted to, and approved by DSA, before proceeding with the repair work.

3.02 CLEANING UP

- A. Remove debris as the work progresses. Maintain the premises in a neat and clean condition.

END OF SECTION

SECTION 01 42 19

REFERENCE STANDARDS

PART 1 - GENERAL

1.01 SUMMARY

- A. Throughout the Contract Documents, reference is made to codes and standards which establish qualities and types of workmanship and materials, and methods for testing and reporting on the pertinent characteristics.
- B. Provide materials and workmanship which meet or exceed the specifically named code or standard.
- C. Deliver to the Architect required proof that the materials or workmanship, or both, meet or exceed the requirements of the specifically named code or standard. Such proof shall be in the form requested by the Architect and will generally be required to be copies of a certified report of tests conducted by a testing agency acceptable for that purpose to the Architect.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Specific naming of codes or standards occurs on the Drawings and in other Sections of these Specifications. Comply with laws, ordinances, and regulations of authorities having jurisdiction. Proof of compliance with laws, ordinances, and regulations shall be by the signed approval of the respective authorities having jurisdiction. Costs relative thereto shall be borne by the Contractor.

1.03 QUALITY ASSURANCE

- A. Familiarity with Pertinent Codes and Standards: Verify the requirements of the specifically named codes and standards as well as requirements mandated by law, ordinance and authority. Verify that the items procured and installed in this Work meet or exceed the specified requirements.
- B. Rejection of Noncomplying Items: The Architect reserves the right to reject items incorporated into the Work which fail to meet such minimum requirements.

1.04 APPLICABLE CODES

- A. Work of the project shall conform to the following list of the **2019, Title 24, California Code of Regulations (CCR)**, a List of Codes, copies of which shall be maintained at the job site by the Contractor throughout the duration of the work.
- B. **Partial List of Applicable Codes as of January 1, 2020:**
 - 1. **2019 California Building Standards Administrative Code (CAC)**, Part 1, Title 24, California Code of Regulations (CCR).**
 - 2. **2019 California Building Code (CBC)**, Part 2, Title 24, California Code of Regulations (CCR) [2018 International Building Code (IBC) Volumes 1-2 and 2019 California Amendments].

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

3. **2019 California Electrical Code (CEC)**, Part 3, Title 24, California Code of Regulations (CCR) [2017 National Electrical Code and 2019 California Amendments].
4. **2019 California Mechanical Code (CMC)**, Part 4, Title 24, California Code of Regulations (CCR) [2018 Uniform Mechanical Code and 2019 California Amendments].
5. **2019 California Plumbing Code (CPC)**, Part 5, Title 24, California Code of Regulations (CCR) [2018 Uniform Plumbing Code and 2019 California Amendments].
6. **2019 California Energy Code**, Part 6, Title 24, California Code of Regulations (CCR).
7. **2019 California Historical Building Code**, Part 8, Title 24, California Code of Regulations (CCR).
8. **2019 California Fire Code (CFC)**, Part 9, Title 24, California Code of Regulations (CCR) [2018 International Fire Code and 2019 California Amendments].
9. **2019 California Existing Building Code**, Part 10, Title 24, California Code of Regulations (CCR).
10. **2019 California Green Building Standards Code**, Part 11, Title 24, California Code of Regulations (CCR).
11. **2019 California Reference Standards Code**, Part 12, Title 24, California Code of Regulations (CCR).
12. Title 19, CCR, Public Safety, State Fire Marshal Regulations.
13. 2016 ASME A17.1 (w/A17.1a/CSA B44a-08 addenda) Safety Code for Elevators and Escalators.

C. Partial List of Applicable Standards:

Reference code section for NFPA Standards, 2019 CBC (SFM)

NFPA 13	Automatic Sprinkler Systems, 2019 Edition (CA Amended)
NFPA 14	Standpipes and Hose Systems, 2019 Edition (CA Amended)
NFPA 17	Dry Chemical Extinguishing Systems, 2017 Edition
NFPA 17a	Wet Chemical Extinguishing Systems, 2017 Edition
NFPA 20	Stationary Pumps for Fire Protection, 2019 Edition
NFPA 22	Water Tanks for Private Fire Protection, 2018 Edition
NFPA 24	Private Fire Service Mains & their Appurtenances, 2019 Edition
NFPA 25	Standard for Inspection, Testing & Maintenance of Water-based Fire Protection Systems, 2020 Edition

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

NFPA 37	Installation & Use of Stationary Combustion Engines & Gas Turbines, 2018 Edition
NFPA 72	National Fire Alarm & Signaling Code, 2019 Edition (CA Amended)
NFPA 80	Fire Doors and Other Opening Protectives, 2019 Edition
NFPA 92	Standard for Smoke Control Systems, 2018 Edition
NFPA 101	Life Safety Code, 2018 Edition
NFPA 110	Emergency & Standard Power Systems, 2019 Edition
NFPA 170	Standard for Fire Safety & Emergency Symbols, 2018 Edition
NFPA 221	Standard for High Challenge Fire Walls, Fire Walls & Fire Barrier Walls, 2018 Edition
NFPA 253	Critical Radiant Flux of Floor Covering Systems using a Radiant Heat Energy Source, 2019 Edition
NFPA 2001	Clean Agent Fire Extinguishing Systems, 2018 Edition
ICC 300	ICC Standards on Bleachers, Folding and Telescoping Seating and Grandstands, 2017 Edition
ICC-ES AC77	Acceptance Criteria for Smoke Containment Systems used with Fire-Resistance-Rated Elevator Hoistway Doors & Frames,
SFM Std. 12-10-1	Power Operated Exit Doors, 2019 Edition
SFM Std. 12-10-2	Single-Point Latching or Locking Devices, 2019 Edition
SFM Std. 12-10-3	Emergency Exit & Panic Hardware, 2019 Edition
SFM Std. 12-7A	Materials and Construction Methods for Exterior Wildfire Exposure, 2019 Edition
UBC Std. 15-2	Test Standard for Determining the Fire Retardancy of Roof-Covering Materials
UL 38	Manual Signaling Boxes for Fire Alarm Systems, 2008 Edition
UL 268	Smoke Detectors for Fire Protective Signaling Systems, 2009 Edition
UL 268A	Smoke Detectors Duct Applications, 2016 Edition
UL 294	Access Control Systems Units, 2018 Edition
UL 300	Fire Testing of Fire Extinguishing Systems for Protection of Commercial Cooking Equipment, 2019 Edition
UL 305	Standard for Panic Hardware, 2012 Edition

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

UL 346	Waterflow Indicators for Fire Protective Signaling Systems, 2016 Edition
UL 464	Audible Signal Devices for Fire Alarm & Signaling Systems, including Accessories, 2016 Edition
UL 521	Heat Detectors for Fire Protective Signaling Systems, 1999 Edition (Amended with Revision through July 20, 2005)
UL 864	Control Units and Accessories for Fire Alarm Systems, 2014 Edition
UL 2034	Single & Multiple Station Carbon Monoxide Alarms, 2017 Edition

Reference code section for NFPA Standards – 2019 CBC (SFM) Chapter 35. See Chapter 35 for State of California amendments to NFPA Standards

**** California Administrative Code, Part 1, Chapter 10, Administrative Regulations for the California Energy Commission (CEC).**

1.05 REFERENCE STANDARDS

- A. Standards referenced in the Specifications are usually referred to by the abbreviation of the organization's name and the designation of the document (e.g., ASTM A36). Documents in common use may be referred to by their own designation (e.g., the California Electrical Code is published by the National Fire Protection Association as NFPA-70 but is referred to as CEC, and is part of a series of documents or standards referred to as the National Fire Code). References are to the latest issue of the publication available on the date stipulated for the receipt of bids.

STANDARDS ORGANIZATIONS

AA	Aluminum Association
AAMA	American Architectural Manufacturer's Association
ASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGA	American Gas Association
AISC	American Institute of Steel Construction
AITC	American Institute of Timber Construction
AMCA	Air Movement and Control Association, Inc.
ANSI	American National Standards Institute, Inc.
APA	APA-The Engineered Wood Association
ARI	Air-Conditioning and Refrigeration Institute
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

ASTM	American Society for Testing and Materials
AWPA	American Wood Protection Association
AWPB	American Wood Preservers' Bureau
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
CBC	California Building Code, 2019
CDA	Copper Development Association
CEC	California Electrical Code
CEQA	California Environmental Quality Act
CGA	Compressed Gas Association
CISPI	Cast Iron Soil Pipe Institute
CMC	California Mechanical Code - See IAPMO
CPC	California Plumbing Code - See IAPMO
CPSC	Consumer Product Safety Commission
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard of U.S. Dept. of Commerce
CTIOA	Ceramic Tile Institute of America (former CTI)
CSMA	Chemical Specialties Manufacturing Association
FGMA	Flat Glass Marketing Association
FM	Factory Mutual Global (former FMS)
FS	Federal Specification
GA	Gypsum Association
HI	Hydraulic Institute
HRI	Hydraulics Research Institute
IAPMO	International Association of Plumbing and Mechanical Officials
ICC	International Code Council (former ICBO)
IEEE	Institute of Electrical and Electronics Engineers

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

IES	Illuminating Engineering Society of North America
MIL-STD	Military Specifications (former MIL)
ML/SFA	Metal Lath/Steel Framing Association
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers
NIST	National Institute of Standards and Technology (former NBS)
NEBB	National Environmental Balancing Bureau
NEMA	National Electrical Manufacturers Association
N FLUID PA	National Fluid Power Association
NFPA	National Fire Protection Association
NRCA	National Roofing Contractors Association
NSF	National Sanitation Foundation
NWWDA	National Wood Window and Door Association
PS	Voluntary Product Standard (of NIST former NBS)
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SDI	Steel Deck Institute
SJI	Steel Joist Institute
SSPC	The Society for Protective Coatings (former SSPC)
TCNA	Tile Council of North America, Inc. (former TCA)
TSIB	Technical Services Information Bureau (former WLPDIA)
UL	Underwriters Laboratories, Inc.
WI	Woodwork Institute (former WIC)
TITLE	Title 24, California Code of Regulations, Part 1, 2, 3, 4, 5, 6, 8, & 9
TITLE	Title 19, California Code of Regulations

1.06 REFERENCE COPIES

- A. A minimum of one copy of Codes, Regulations, and Standards referenced in the drawings or the specifications, or applicable to the work, shall be furnished to the Owner's Representative at least (2) two weeks prior to the commencement of work affected by such codes, regulations or standards.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

(Not Applicable)

END OF SECTION

SECTION 01 45 23

TESTING AND INSPECTING SERVICES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Cooperate with the Owner's selected testing agency, the Owner's assigned Inspector, and others responsible for testing and inspecting the Work, and assist the Owner by coordinating such testing and inspecting services as specified in this Section and/or elsewhere in the Contract Documents.
- B. Related Work Specified Elsewhere:
 - 1. Requirements for testing may be required in other Sections of these Specifications.
 - 2. Where no testing requirements are specified or required by reference standards or authorities having jurisdiction, the Owner may require such testing to be performed under current pertinent standards for testing. Payment for such testing will be made as described herein.
- C. Work Not Included:
 - 1. The Owner will select a pre-qualified independent testing laboratory and Inspector as approved by the Division of the State Architect (DSA), Department of General Services, Architect and Structural Engineer.
 - 2. The Owner will pay for initial services of the testing laboratory as further described hereinafter.

1.02 QUALITY ASSURANCE

- A. The Owner will select an independent testing laboratory to conduct the tests. Selection of the material required to be tested shall be by the laboratory or the Owner's representative and not by the Contractor.
- B. Qualifications of Testing Laboratory: The testing laboratory, approved by DSA, shall be qualified to the Owner's acceptance in accordance with ASTM E329. The testing laboratory shall be qualified by the Division of the State Architect.
- C. Codes and Standards: Testing, when required, will be in accordance with pertinent codes and regulations and with selected standards of the American Society for Testing and Materials and other organizations or agencies which publish recognized codes, standards, or tests. Refer to Article 3.04 - Required Testing of this Section.

1.03 TEST REPORT DISTRIBUTION

- A. Promptly process and distribute required copies of test reports and related instructions to ensure necessary retesting and/or replacement of materials with the least possible delay in progress of the Work.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- B. One copy of Test Reports shall be forwarded to the Project Inspector by the testing agency. Such reports shall include tests made, regardless of whether such tests indicate that the material is satisfactory or unsatisfactory. Samples taken but not tested shall also be reported. Records of special sampling operations as required shall also be reported. The reports shall show that the material or materials were sampled and tested in accordance with the requirements of Title 24 and with the approved specifications. Test reports shall show the specified design strength. They shall also state whether or not the material or materials tested comply with requirements.
- C. Each Testing Agency shall submit to the Division of the State Architect a verified report in duplicate covering tests which are required to be made by that agency during the progress of the project. Such report shall be furnished each time that work on the project is suspended, including tests up to that time, and at the completion of the project. For additional information, refer to DSA PR13-01.

1.04 PAYMENT FOR TESTING SERVICES

- A. Initial Services: The Owner will pay for initial testing and inspection except as specifically modified herein- after or as specified otherwise in technical sections, provided the results of inspection indicate compliance with the Contract Documents.
- B. Retesting: When initial tests or inspection indicate noncompliance with the Contract Documents, subsequent retesting or re-inspection occasioned by the noncompliance shall be performed by the same testing laboratory or Inspector and the costs thereof will be deducted by the Owner from the Contract Sum. Retesting and re-inspection will continue until test or inspection results indicate compliance.
- C. Code Compliance Testing: Inspections and tests required by codes or ordinances, or by authorities having jurisdiction and made by a legally constituted authority, shall be the responsibility of and shall be paid for by the Owner, but backcharged to the Contractor in case of retesting due to non-compliance.
- D. Specified Inspections and Tests: Tests and inspections specified in the Specifications, directly or by reference, shall be coordinated by the Contractor at his expense and paid for by the Owner. Corrections of noncompliance and test failures shall be paid for by the Owner but shall be backcharged to the Contractor. Re-inspection and retesting shall be in accordance with paragraph 1.04-B.
- E. Contractor's Convenience Testing: Inspecting or testing performed exclusively for the Contractor's convenience shall be the sole responsibility of and at the expense of the Contractor.

1.05 INSPECTION BY THE OWNER

- A. The Owner and his representatives will have access, for the purpose of inspection, to parts of the work and to the shops wherein the work is in preparation, and the Contractor shall maintain proper facilities and provide safe access for such inspection.
- B. The Owner shall have the right to reject materials and workmanship which are defective, and to require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without charge to the Owner. If the Contractor does not correct such rejected work within a reasonable time, fixed by written notice, the Owner may correct rejected work and charge the expense to the Contractor.

- C. Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire work to make an examination of work already completed by removing or tearing out the same, the Contractor shall on request promptly furnish necessary facilities, labor and materials. If such work is found to be defective in respect due to fault of the Contractor or his subcontractor, he shall defray expenses of such examinations and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, the additional cost of labor and material necessarily involved in the examination and replacement will be allowed the Contractor.

1.06 OWNER'S INSPECTOR

- A. An Inspector employed by the Owner, approved by DSA in accordance with the requirements of the State of California Administrative Code, Title 24, Part 1, and qualified in accordance with Division of the State Architect will be assigned to the work. Reference DSA IR A-7 and IR A-8 for project Inspector certification and approval and duties and performance rating by DSA. The inspector duties are specifically defined in Title 24, Part 1, Section 4-342, reprinted herein:

" 4-342 Duties of the Project Inspector

- (a) **General.** The project inspector shall act under the direction of the architect or registered engineer and under the supervision of the enforcement agency.
- (b) **Duties.** The general duties of the project inspector in fulfilling project inspection responsibilities are as follows:
 - 1. **Continuous inspection requirement.** The project inspector must have actual personal knowledge obtained by personal and continuous inspection of the work of construction in all stages of its progress that the requirements of the approved plans and specifications are being completely executed.

Continuous inspection means complete inspection of every part of the work. Work, such as concrete work or masonry work which can be inspected only as it is placed, shall require the constant presence of the inspector. Other types of work which can be completely inspected after the work is installed may be carried on while the inspector is not present. In any case, the inspector must personally inspect every part of the work. In no case shall the inspector have or assume any duties that will prevent the inspector from giving continuous inspection. DSA may require verification from the project inspector of time spent at the construction site during all phases of the work.

The project inspector may obtain personal knowledge of the work of construction, either on-site or off-site, performed under the inspection of special inspectors and/or assistant inspectors (Section 4-333). The project inspector may obtain personal knowledge that materials used in the construction conform to the DSA approved documents by verifying test reports performed by DSA accepted testing facilities, verifying materials certifications shipped with the materials, or other means as specified in the DSA approved documents and referenced codes and standards. The project

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

inspector shall be responsible for monitoring the work of the special inspectors and testing laboratories to ensure that the testing program is satisfactorily completed. The project inspector shall be responsible for supervising the work of all assistant inspectors in accordance with Section 4-333(d). The exercise of reasonable diligence to obtain the facts shall be required.

2. **Relations with the architect or engineer.** Any uncertainties in the inspector's comprehension of the plans and specifications or inconsistencies or seeming errors in the approved construction documents shall be reported promptly to the architect or registered engineer for interpretation and instructions. In no case shall the instruction of the architect or registered engineer be construed to cause work to be done which is not in conformity with the DSA approved documents.
3. **Job file.** The project inspector shall always keep and maintain a file on the job with all of the following:
 - A. DSA approved plans and specifications including DSA approved addenda and all construction change documents.
 - B. Applicable parts of the edition of Title 24, C.C.R. referred to in the plans and specifications, and any pertinent reference standards.
 - C. DSA approved statement of structural tests and special inspections.
 - D. Copies of the project inspector's semi-monthly reports.
 - E. Copies of all deviation notices and a log of all deviation notices. The log shall reference all applicable details and specification sections related to nonconforming materials and workmanship including field change documents, change orders, addenda and deferred submittals. The log shall describe all corrective actions taken whether performed in accordance with DSA approved documents or not, the current status of each deviation issue and the resolution for each issue.
 - F. Log documenting all significant communications with the design professionals, contractors, DSA representatives and other persons involved in the project. Significant communications include, but are not limited to, interpretations, clarifications or directions from the design professionals, issues identified by DSA representatives, directives from the school district, and start notices from the contractor.
 - G. Laboratory test and inspection reports.
 - H. Contractor's request for information (RFI) and responses to the RFIs.
 - I. Interpretations and clarifications from the design professional in

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

general responsible charge.

- J. Special inspection reports.
- K. Concrete placing operation records showing the time and date of placing concrete and the time and date of removal of forms in each portion of the structure.
- L. Welding operation records including identification marks of welders, lists of defective welds, manner of correction of defects, etc.
- M. Pile driving operation records including penetration under the last 10 blows for each pile when piles are driven for foundations.
- N. Verified reports for all persons required by this code for file verified reports.
- O. Any other applicable documents required to provide a complete record of construction.

The job file shall be kept on the job site until the completion of the project and shall be readily accessible to DSA personnel during site visits. A copy of the job file shall be made available to DSA upon request. The job file, with exception of building codes and reference standards, shall be made a part of the permanent school district records.

- 4. **Project inspector's semimonthly reports.** The project inspector shall keep the architect or registered engineer thoroughly informed as to the progress of the work by making semimonthly reports in writing as required in Section 4-337.
- 5. **Notifications to DSA.** The project inspectors shall notify DSA by email at the following times:
 - A. When construction work on the project is started or restarted if previously suspended per Item D below.
 - B. At least 48 hours in advance of the time when foundation trenches will be complete, ready for footing forms.
 - C. At least 48 hours in advance of the first placement of foundation concrete and 24 hours in advance of any subsequent and significant concrete placement.
 - D. When all work on the project is suspended for a period of more than one month.
- 6. **Deviations.** The project inspector shall notify the contractor, in writing, of any deviations from the approved plans and specifications which are not immediately corrected by the contractor when brought to the contractor's attention. Copies of such notice shall be forwarded immediately to the architect or registered engineer, and to DSA.

Failure on the part of the project inspector to notify the contractor of deviations from the approved plans and specifications shall in no way

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

relieve the contractor of any responsibility to complete the work covered by his or her contract in accordance with the approved plans and specifications and all laws and regulations.

7. **Inspector verified reports.** The project inspector shall make and submit directly to DSA verified reports (see Section 4-336). The project inspector shall prepare and deliver to DSA detailed statements of fact regarding materials, operations, etc., when requested.
 8. **Performance of duties.** The inspector shall perform all duties and render all services with honesty. Inspectors who fail to carry out their duties in an ethical manner or who engage in illegal activities may be subject to disciplinary action as defined in Section 4-342(d).
- (c) **Violations.** Failure, refusal or neglect on the part of the inspector to notify the contractor of any work which does not comply with the requirements of the approved plans and specifications, or failure, refusal or neglect to report immediately, in writing, any such violation to the architect or registered engineer, to the school board, and to DSA shall constitute a violation of the Act and shall be cause for DSA to take action which may result in withdrawal of the inspector's approval. The State Architect or designee may take appropriate action as described in Section 4-342(d) when any of the following conditions exist:
1. The inspector has failed to fulfill any of the relevant requirements of this code.
 2. The inspector has been convicted of a crime considered to be substantially related to the qualifications, functions or duties of an inspector in a manner consistent with the public health, safety or welfare.
- (d) **Disciplinary actions.** Failure to satisfactorily perform inspector duties identified in this code may be cause for DSA to take action(s) which included but are not limited to the following:
1. Requiring the inspector to meet with DSA in the regional office for counseling.
 2. Requiring the inspector to attend training classes.
 3. Withdrawal of the inspector's approval for the project.
 4. Downgrading of the inspector's class of certification.
 5. Suspension of the inspector's certification.
 6. Withdrawal of the inspector's certification.
- (e) **Notice of disciplinary actions.** Notice of disciplinary action shall specify the grounds for the actions taken.
- (f) **Criteria for reinstatement.** When considering reversal of any disciplinary action taken pursuant to Section 4-342(d), the State Architect or designee evaluating the reinstatement of an inspector's approval for a project, or certification, may consider the following criteria:

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

1. Nature and severity of the act(s) or offense(s).
2. The time that has elapsed since the commission of the act(s) or offense(s).
3. If applicable, evidence of expungement proceedings pursuant to Section 1203.4 of the Penal Code.

(g) Filing an appeal.

1. The State Architect or his/her designee has the discretion to immediately order that approval of a project inspector for a project, or certification, be temporarily invalidated or to seek additional information, pending a final determination by the State Architect or his/her designee pursuant to Section 4-342©. The decision to temporarily invalidate approval of a project inspector for a project, or certification, will be made on a case by case basis, as necessary to ensure public health, safety and welfare.
2. The State Architect or his/her designee shall provide the appellant with written notice that their approval for a project, or certification, has been temporarily invalidated as of a specific date or is subject to suspension or denial pursuant to Section 4-342(d), pending a final determination. The written notice shall include the reasons for the action being taken or investigated, as applicable, and provide a summary of the facts and allegations. Service of the written notice of the proposed action shall be confirmed by certified mail.
3. Written notice of the final determination by the State Architect or his/her designee shall be confirmed by certified mail within 60 days from the initial written notification. The time to render his/her determination may be extended an additional 30 days, as necessary, to consider any additional supporting documentation provided to the State Architect relevant to the issue being investigated.
4. An appeal of an action by the State Architect or his/her designee to suspend approval of a project inspector for a project, or certification, or to deny renewal of a certification must be filed in wiring with DSA within 60 days of the date posted on the certified service of the written notice of the final determination from the State Architect. Unless a hearing is specifically requested as provided in Section 4-342(g)6 the appeal will be based on an analysis of the materials available.
5. Within 60 days from the date of receipt of the appeal the State Architect or his/her designee shall render his/her determination on the appeal. The time to render the determination may be extended an additional 30 days, as necessary to conclude any research or investigation required, at the discretion of the State Architect or his/her designee.
6. Should an individual submit a written request for a hearing, the

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- State Architect may designate an appropriate hearing officer to conduct the hearing. Written notice of the date and time of the hearing and the reasons for the action being taken or investigated, as applicable, shall be provided to the appellant. The hearing shall be limited in scope to the actions stated in the written notice. The appellant may bring a representative of his/her choice.
7. The appellant shall be notified in writing of the determination made by State Architect or his/her designee regarding the appeal. Service of the written notice of the decision shall be confirmed by certified mail.
 8. Any appeal of a decision rendered by the State Architect or his/her designee to rescind approval for a project or certification may be appealed to the Superior Court.

Authority: Education Code Sections 17310 and 81142.

Reference: Education Code Sections 17309, 17311, 81141 and 81143. "

- B. The work of construction in stages of progress shall be subject to the personal continuous observation of the Inspector as continuous observation is defined by Title 24. He shall have free access to all parts of the work at any time. The Contractor shall furnish the Inspector reasonable facilities for obtaining such information as may be necessary to keep him fully informed respecting the progress and manner of the work and the character of the materials. Inspection of the work shall not relieve the Contractor from obligation to fulfill this Contract.

1.07 OWNER'S OTHER PERSONNEL

- A. From time to time, other personnel in the employ of the Owner may inspect the Work when the Work is in progress but shall have no authority to direct the Contractor or request changes in the Work except as may be provided elsewhere in the Contract Documents.

1.08 REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT

- A. Architect shall have access to the site in accordance with Title 24.
- B. Field Engineers and Inspectors from DSA. Structural Safety Section, Fire & Life Safety Review and Access Compliance shall have access to the site in accordance with Title 24.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.01 COOPERATION WITH TESTING LABORATORY AND INSPECTORS

- A. Inspectors and representatives of the testing laboratory shall have access to the work. Provide facilities for such access in order that the testing, inspection, and the obtaining of samples may be done properly.
- B. Contractor shall deliver material specimens to the Owner's testing lab, which must by terms of the Contract be tested prior to inclusion in the Project, at least 45 days prior to scheduled delivery to the job site.
- C. Material shipped by the Contractor from the source of supply prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said representative that such testing and inspection will not be required shall not be incorporated in the job.

3.02 TAKING SPECIMENS

- A. Field specimens and samples for testing, unless otherwise provided in these Contract Documents, shall be selected and taken by the Testing Laboratory or Inspector and not the Contractor. Sampling equipment and personnel will be provided by the testing laboratory. Deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory. Soil samples for approval of import fill shall be delivered to the Testing Laboratory by the Contractor, as directed by the Testing Laboratory.

3.03 SCHEDULES FOR TESTING

- A. Establishing Schedule:
 - 1. By advance discussion with the testing laboratory selected by the Owner, determine the time required for the laboratory to perform its tests and to issue each of its findings.
 - 2. Provide required time within the Construction Schedule.
- B. Revising Schedule: When changes of construction schedule are necessary during construction, coordinate such changes of schedule with the testing laboratory as required.
- C. Adherence to Schedule: When the testing laboratory is ready to test according to the determined schedules, but is prevented from testing or taking specimens due to incompleteness of the work, extra charges for testing attributable to the delay may be back-charged to the Contractor and will be deducted by the Owner from the Contract Sum.

3.04 REQUIRED TESTING

All Testing and Inspection requirements shall comply with the Stamped Approved DSA-103, in accordance with California Building Code, Title 24, Part 2.

END OF SECTION

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: General requirements for delivery, storage, and handling of materials and equipment applicable to the product sections of this specification and necessary for the construction of the Project.
- B. Related Sections:
 - 1. Section 01 25 00 – Substitution Procedures
 - 2. Section 01 33 00 – Submittal Procedures

1.02 GENERAL

- A. Material and Equipment Incorporated into the Work:
 - 1. Conform to applicable specification and standards.
 - 2. Comply with size, make, type, and quality specified.
- B. Manufactured and Fabricated Products:
 - 1. Design, fabricate and assemble in accordance with the best engineering and shop practices.
 - 2. Manufacture like parts of duplicate units to standard sizes and gages for interchangeability.
 - 3. Two or more items of the same kind shall be identical, by the same manufacturer.
- C. Reused Materials: Where the contract documents indicate that existing materials may be reused, such materials shall be cleaned and reincorporated in the work.
 - 1. Materials to be reused shall be approved for reuse by the Inspector.
- D. Supplementary materials not specifically described in each Section, but required for a complete and proper installation of the Work, shall be new, first quality of their respective kinds, and subject to review and acceptance by the District.

1.03 DELIVERY

- A. Arrange deliveries of products in accordance with construction schedules and in ample time to facilitate inspection prior to installation. Notify the Inspector of Record, in writing, when items are delivered to the site, so he may inspect and verify quality and quantities delivered are as intended.
- B. Coordinate deliveries to avoid conflict with work and conditions at site, taking into consideration:
 - 1. Work of the Contractors, or Owner.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

2. Limitations of storage space.
 3. Availability of equipment and personnel for handling products.
 4. Owner's use of premises.
- C. Deliver products in undamaged condition in original containers or packaging, and with identifying labels intact and legible.
- D. Partial deliveries of component parts of equipment shall be clearly marked to identify the equipment, to permit easy accumulation of parts, and to facilitate assembly.
- E. Immediately on delivery, inspect shipment to ensure:
1. Product complies with requirements of Contract Documents and reviewed submittals.
 2. Quantities are correct.
 3. Containers and packages are intact, and labels are legible.
 4. Products are undamaged and properly protected.
- F. The District reserves the right to observe delivered materials, to review the accompanying bills of lading, and to reject the following:
1. Materials not identifiable as accepted products of the accepted manufacturer.
 2. Materials exhibiting shelf-lives in excess of those stipulated by the manufacturer.
 3. Materials not bearing the appropriate label of Underwriters Laboratories (UL), where applicable.
 4. Materials in opened or excessively damaged containers.
 5. Materials exhibiting evidence of moisture, organic matter, or other adulterants.
- G. In the event of damage or rejection by the District for stipulated cause, immediately make repairs and replacements necessary to the acceptance of the Architect and at no additional cost to the Owner.

1.04 STORAGE

- A. Payment will not be made by the Owner for materials stored off-site, until such time as the materials are incorporated into the Work.
- B. Store products immediately on delivery, store in accordance with manufacturer's instructions and as further required by the Owner's Storm Water Pollution Prevention Plan and protect until installed in the Work.
- C. Store products subject to damage by elements in weather tight enclosures.
1. Maintain temperatures within limits recommended by manufacturer's instructions.
 2. Provide humidity control for sensitive products, as required by manufacturer.
 3. Store unpacked products in a manner accessible for inspection.

- D. Exterior Storage:
1. Provide substantial platforms, blocking, or skids to support fabricated products above ground and prevent soiling or staining.
 - a. Cover products subject to discoloration or deterioration from exposure to the elements, with impervious sheet coverings. Provide adequate ventilation to avoid condensation.
 - b. Comply with requirements of Owner's, Storm Water Pollution Prevention Plan.
 2. Store loose granular materials on solid paved surfaces or provide plywood platforms to prevent mixing with foreign matter.
 - a. Provide surface drainage to prevent flow or ponding of rainwater.
 - b. Prevent mixing of refuse or chemically injurious materials or liquids.
 - c. Comply with requirements of Owner's Storm Water Prevention Plan.

1.05 MAINTENANCE OF STORAGE

- A. Maintain periodic system of inspection of stored products on scheduled basis to assure that:
1. State of storage facilities is adequate to provide required conditions.
 2. Required environmental conditions are maintained on a continuing basis.
 3. Surfaces of products exposed to elements are not adversely affected.
- B. Mechanical and electrical equipment which requires servicing during long term storage shall have complete manufacturer's instructions for servicing accompanying each item, with notice of enclosed instructions shown on exterior of package.

1.06 PROTECTION AFTER INSTALLATION

- A. Provide protection of installed products to prevent damage from subsequent operations. Remove protection materials when no longer needed, prior to completion of work.
- B. Control traffic to prevent damage to equipment and surfaces.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

(Not Applicable)

END OF SECTION

SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Operations and submittals required to establish Substantial Completions, Project Acceptance, and filing of Notice of Completion.
- B. Contract Completion Date is the day established by the Agreement, the Special Conditions, and the Notice to Proceed as the calendar date by which all Work must be completed in accordance with the Contract Documents. Once established, the Contract Completion Date can only be altered by Change Order. If Work is not complete in accordance with the Contract Documents by the Contract Completion Date, Contractor is obligated to pay liquidated damages to the Owner. In accordance with the terms of the Contract.
- C. Substantial Completion: The Date of Substantial Completion is the date on which the Architect certifies to the Owner that construction is sufficiently complete, in accordance with the Contract Documents, that the District may occupy the Project for the use intended, and all agencies and authorities have provided written acceptance of the portions of the Work over which they have jurisdiction.
- D. Project Acceptance: The District will accept completion of the Contract after the entire Work shall have been completed to the satisfaction of the District and after issuance of the Certificate of Substantial Completion. The Work may only be accepted as complete by formal action of the Governing Board of the School District. Acceptance of the Project by the Governing Board establishes the formal and official Completion Date for the Project, to be compared against the Contract Completion Date. Project Acceptance must occur prior to Contract Completion Date to preclude assessment of liquidated damages.
- E. Notice of Completion: The date of record for the Notice of Completion shall be the date stamped on the Notice by the County Recorder at the time the County Recorder registers the Notice (note: this is normally not the same date as the date the Owner actually files the Notice of Completion with the Recorder office).

1.02 CLOSEOUT SCHEDULE AND PROCEDURE

- A. Requirements Preparatory to Project Acceptance:
 - 1. Contractor shall deliver certifications to Architect that no new materials containing asbestos have been included in the work.
 - 2. Temporary facilities shall be removed from site as specified in Section 01 50 00, Temporary Facilities and Controls.
 - 3. Entire site shall be thoroughly cleaned of all construction debris.
 - 4. Record drawings shall be completed, signed by Contractor and Inspector and submitted to Architect as specified in Section 01 78 39 – Project Record Documents.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

5. Guarantees and warranties shall be submitted to Architect as specified in General conditions and Section 01 78 30 – Warranties.
 6. Contractor's Final Verified Report (Form DSA-6) and other Reports and Affidavits required by the Division of State Architect shall be submitted.
 7. Operating and maintenance data shall be submitted and instruction sessions completed as outlined in Section 01 78 23 – Operating and Maintenance Data and as required in CBC 2019 Section 110.3.10.2.
 8. Contractor to provide a copy of cleaning and maintenance recommendations for countertops to the underneath side of furniture, in addition to requirements listed above and outlined in Section 01 78 23 – Operating and Maintenance Data.
- B. Project Acceptance Requirements, Division of the State Architect:
1. Upon completion of construction of the project, the following reports are required to be submitted before the Division of the State Architect will issue a letter to certificate of compliance of the work:
 - a. A copy of the Notice of Completion filed by the School District.
 - b. Final Verified Report Form DSA 6 AE and DSA 6 C certifying all work is 100% complete from the Architect, Structural Engineer, Mechanical Engineer and the Electrical Engineer. Final retention payment shall not be released until DSA 6 C is uploaded into the DSA project file.
 - c. Contractor's Documents and Field Reports:
 - 1) Final Verified Report Form DSA 6 C, certifying all work is 100% complete, from the Contractors (or Contractors), the Inspector of Record, and Special Inspector(s).
 - 2) Verified Reports of Testing and Inspection as specified on the approved drawings and specifications (i.e., Final Laboratory Report, Welding, Glued-laminated Timber, etc.).
 - 3) Weighmaster's Certificate (if required by approved drawings and specifications).
 - 4) If responsibility was changed in any area during construction, the change must be supported by appropriate documentation and termination reports filed by the individuals originally charged with responsibility.
- C. Procedure for Project Acceptance:
1. Contractor shall complete all Work as required by the Contract Documents, to the best standards of the industry and the trades involved. It shall be the Contractor's responsibility to provide a new, complete, properly operating, professionally finished, detailed, cleaned, high-quality project. There shall be no loose, untrue, or ill-fitting materials, unsightly gaps, voids, or holes, misalignments, mis-adjustments, shoddy workmanship, or damaged, missing, inoperable, or incomplete work. Work shall be free of smudges, spots, stains, dirt, nicks, tears, cracks, scratches, paint runs, flaws, over sprays, and all other unsightly blemishes.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

2. Completion lists and correction lists for items described in the paragraph above, as opposed to short lists of a few minor corrective items that may have inadvertently been missed by the Contractor, shall be the responsibility of the Contractor, and not the Architect, Inspector, or District. By entering into this Contract, Contractor agrees that quality control is the responsibility of the Contractor. "Punch" list generated by the Architect is under no circumstances to be considered a vehicle to compel subcontractors to complete contract work.
3. Contractor shall prepare a comprehensive and complete list of corrective items for himself and his subcontractors and shall verify that these items have been corrected prior to notifying the Architect of completion. Copies of the Contractor's list(s) shall be made available to the Architect and Inspector upon request.
4. Contractor shall notify the Architect *in writing* when Contractor, with concurrence of Inspector, feels the project is one-hundred percent complete and is ready to leave the Project. Architect shall then commence the construction review and prepare a "Punch List", or list of minor corrective items to be issued to Contractor. For convenience, reviews may be phased for various portions of the work, as each distinct portion becomes one hundred percent (100%) complete.
5. Architect will arrange for Engineering Consultants to make their construction reviews, to be completed before Architect will make his construction review. Contractor and his principal superintendent, authorized to act in behalf of the Contractor, as well as principal subcontractors that the Architect may request to be present, shall accompany the Architect/Engineers during the construction reviews.
6. Excessive amounts of corrective ("punch list") items, as judged by the Architect, shall be grounds to terminate the construction review until such time as the Contractor is deemed sufficiently complete to once again start the review. As a rule of thumb, more than four minor items per typical room will be considered excessive.
7. If Owner elects to occupy the Project after the Contract Completion Date, but before the Contractor has completed the Work, Architect must make a comprehensive construction review prior to Owner's occupancy. Contractor shall reimburse Architect and Engineers for their time in conducting such review, and for the time of their clerical staffs in preparing the review documents, at the Architect's/Engineer's standard hourly rates for extra services. Contractor will be billed at the time of Contractor's Application for Payment. Payments to the Architect not received within 30 days will be deducted from subsequent Contractor's Applications for Payment in accordance with the General Conditions.
8. After completion of "Punch List" work, Contractor shall notify Architect in writing to perform an acceptance tour. Notice shall be issued at least seven (7) days in advance of the time the acceptance tour is to be performed.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

9. Contractor and his principal superintendent, authorized to act in behalf of Contractor, as well as principal subcontractors that Architect may request to be present, shall accompany Architect and Inspector on acceptance tour.
 - a. If work has been completed in accordance with Contract Documents, and no further corrective measures are required, Architect will issue a Certificate of Substantial Completion, and recommend that Owner accept Project and file Notice of Completion.
 - b. If work is judged to be substantially completed in accordance with Contract Documents, and only a few corrective measures are required, Architect will issue a Certificate of Substantial Completion, (Article 64 of the General Conditions), and recommend that Owner conditionally accept Project and file Notice of Completion. Owner may conditionally accept project and withhold amount for completion per Article 64 of the General Conditions, Contractor shall issue a written notice of intent to complete the corrective measures by a specific named date agreed to by District.
 - c. If work has not been substantially completed in accordance with Contract Documents, and several or many corrective measures are still required, Architect will recommend that Owner not accept project and not file Notice of Completion. Instead, based on information gathered from acceptance tour, Contractor will be required to complete corrective measures and then call for another project acceptance tour following procedure outlined above. Contractor will compensate Architect and Inspector for additional acceptance tour and deduct amount paid from final payment to Contractor.
10. After Substantial Completion, Contractor shall issue an Application for Payment in accordance with Specification Section 01 29 00, Part 1.03, H. All administrative actions and submittals, including conditions, outlined therein outlined must be complete prior to Owner's release of payment, **and MUST BE COMPLETED PRIOR TO AGENDIZING FOR PROJECT ACCEPTANCE BY THE OWNER'S GOVERNING BOARD.**
11. Upon Contractor completing all administrative actions and submittals, and meeting all conditions, Owner will agendize acceptance of the Work for the next official meeting of the Governing Board. Official action by the Governing Board shall constitute Project Acceptance. Upon acceptance, Contractor shall immediately remove trailers and other remaining temporary facilities.
12. District shall file Notice of Completion with the County Recorder as soon as practicable following Project Acceptance. The date of record for the Notice of Completion shall be the date stamped on the Notice by the Recorder at the time the County Recorder registers the Notice.

13. The date stamped on the Notice of Completion by the County Recorder shall be the date for commencement of all warranties and guarantees, and the date the Owner becomes responsible for security, maintenance, heating and cooling, utilities, damage to the work (unless done by Contractor's forces working on corrective items), and insurance.

Contractor shall remain responsible for these items prior to this date.

The Owner will inform the Contractor by letter immediately after receiving confirmation in writing from the Recorder's office of registration of the Notice of Completion. Contractor is hereby notified that the process of registering, stamping, and receipt of confirmation from the County has been known to take as much as four weeks from the time of filing.

14. Upon acceptance of Project by Owner, Contractor shall submit his request for final payment in accordance with Specification Section 01 29 00 – Payment Procedures, Part 1.03, I. Payment of retention will not be made by Owner until 35 days after Notice of Completion has been registered by the County Recorder.

In addition, retention payment will not be made until Contractor has filed the required Form DSA 6 with Division of the State Architect, with copy to the Architect.

PART 2 - PRODUCTS
(Not Applicable)

PART 3 - EXECUTION
(Not Applicable)

END OF SECTION

SECTION 01 78 23

OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.01 SUMMARY:

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplemental Conditions and Division 1 Specifications Sections, apply to this section, and including all Technical Specifications Sections, and the Operating and Maintenance Requirements of Division 21 through Division 28.
- B. Section Includes:
 - 1. Compilation of product data and related information appropriate for Owner's maintenance and operation of products and equipment furnished under the Contract per CBC Section 110.3.10.2.
 - 2. Instruction of Owner's personnel in the maintenance of products and in the operation of equipment and systems.

1.02 SUBMITTAL PROCEDURES

- A. Preliminary: Submit one copy of proposed manuals to Architect at least 15 days prior to final inspection or acceptance.
- B. Final: Following the indoctrination and instruction of the Owner's operating and maintenance personnel, review proposed revisions to the manual with the Architect.
 - 1. Submit three copies of accepted data in final form 10 days after final inspection. Approval of submittal is a pre-requisite at Substantial Completion prior to Owner's agendaizing project for acceptance by the Governing Board.

PART 2 - PRODUCTS

2.01 FORMAT

- A. Size: Minimum 4 inch, three-ring binders for 8-1/2" x 11" punched pages, completely clear plastic covered for insertion of labels on spines and covers.
- B. Provide identifying tabbed pages. Classify by Division and by Section. All tabbing shall be in numerical order.
- C. Drawings:
 - 1. Provide reinforced punched binder tab. Bind drawings with text.
 - 2. Fan fold larger drawings to size of text pages, for easy foldout.
- D. Cover: Identify each volume with typed or printed label, List:
 - 1. Title of Project
 - 2. Identity of separate structures as applicable.
 - 3. Identity of general subject matter covered in the manual.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- E. Spine: Identify each volume with typed or printed label stating OPERATING AND MAINTENANCE INSTRUCTIONS, GUARANTEES AND SERVICE CONTRACTS and the following information:
1. Title of Project.
 2. Divisions and Sections included within volume.
 3. Volume number (i.e. "1 of 4")

PART 3 - EXECUTION

3.01 CONTENT OF MANUAL

- A. Table of Contents:
1. List of each product indexed to the content of the volume.
 2. List with each product the name, address, and the telephone number of:
 - a. Subcontractor and installer.
 - b. Maintenance contractor, as appropriate.
 - c. Local sources of supply for parts and replacement.
- B. Product Data: Annotate each sheet to clearly identify the data applicable to the installation. Delete references to inapplicable information.
- C. Drawings:
1. Supplement product data with Drawings as necessary to illustrate the following:
 - a. Relationship of component parts of equipment and systems.
 - b. Control and flow diagrams.
 2. Do not include Project Record Drawings as maintenance drawings.
- D. Instructions: Provide written text, as required to supplement product data for the particular installation.
- E. Warranties, Guaranties, Bonds, and Service Contracts: Include a copy of each warranty, guaranty, bond, and service contract issued.
1. Provide information sheet for Owner's personnel describing the following:
 - a. Proper procedures in the event of failure or emergencies.
 - b. Circumstances under which the validity of warranties, guaranties, or bonds might be compromised.

3.02 MANUAL FOR MATERIALS AND FINISHES

- A. Instructions for Care and Maintenance: Include Manufacturer's data as follows:
1. Recommendations for types of cleaning agents and methods.
 2. Cautions against cleaning agents and methods which are detrimental to the product:

3. Recommended schedule for cleaning and maintenance.

B. Energy Conservation Features:

1. Provide a list of energy conservation features, materials, components, and mechanical devices installed in the building.

3.03 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Content, for each unit of mechanical equipment and system, as appropriate:

1. Description of unit and component parts:

- a. Function, normal operating characteristics, and limiting conditions.
- b. Performance curves, engineering data, and tests.
- c. Complete nomenclature and commercial number of replaceable parts.

2. Operating Procedures:

- a. Start-up, break-in, routine, and normal operating instructions.
- b. Regulation, control, stopping, shut-down, and emergency instructions.
- c. Summer and winter operating instructions.

3. Maintenance Procedures:

- a. Routine operations.
- b. Guide to "trouble-shooting".
- c. Disassembly, repair, and reassembly.
- d. Alignment, adjusting, and checking.

4. Servicing and lubrication schedule including list of lubricants required.

5. Manufacturers' printed operating and maintenance instructions.

6. Description of sequence of operation by control manufacturer.

7. Original manufacture's parts list, illustrations, assembly drawings, and diagrams required for maintenance, including:

- a. Predicted life of parts subject to wear.
- b. Items recommended to be stocked as spare parts.

8. Control diagrams by manufacturer of controls as installed in project.

9. Coordination drawings and color coded piping diagrams.

10. Charts of valve tag numbers, with the location and function of each valve.

B. Content, for each electric and electronic system as appropriate.

1. Description of system and component parts:

- a. Function, normal operating characteristics, and limiting conditions.
- b. Performance curves, engineering data, and tests.
- c. Complete nomenclature and commercial number of replaceable parts.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

2. Circuit directories of panelboards:
 - a. Electrical service.
 - b. Controls.
 - c. Communications.
3. As-installed color coded wiring diagrams.
4. Operating procedures:
 - a. Routine and normal operating instructions.
 - b. Sequences required.
 - c. Special operating instructions.
5. Maintenance procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting."
 - c. Disassembly, repair and reassembly.
 - d. Adjustment and checking.
6. Manufacturer's printed operating and maintenance instructions.
7. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.

3.04 INSTRUCTION OF OWNER'S PERSONNEL

- A. Prior to final inspection or acceptance, fully instruct Owner's designated operating and maintenance personnel in the operation, adjustment and maintenance of all products, equipment, and systems installed in project.
 1. Provide services of factory trained instructors from the manufacturer of each major item of equipment or system.
 2. Provide for each instruction session or "in-service", a DVD Camcorder operator and **DVD Camcorder** to record the session. DVD recordings shall be clearly labeled as to project, subject, and date. Submit DVDs in triplicate.
- B. Operating and maintenance manual shall constitute the basis of instruction.
 1. Review contents of manual with personnel in full detail to explain all aspects of operation and maintenance.
 2. Review instructions on how to efficiently use state required energy conservation features, materials, components, and mechanical devices.

END OF SECTION

SECTION 01 78 30

WARRANTIES, GUARANTEES, AND BONDS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: General requirements for written warranties, guaranties, and bonds required by the Contract Documents.
- B. Referenced Sections:
 - 1. Section 01 77 00 – Closeout Procedures: Submittal of Final Verified Reports and Notice of Completion, as a condition of project acceptance and payment.
 - 2. Section 01 78 39 – Project Record Documents as a condition of project acceptance and payment.
 - 3. Section 01 78 23 – Operation and Maintenance Data: Incorporation of warranties, guaranties, and bonds into instruction manuals.
- C. **Approval of the warranties, guaranties, and bonds by the Owner is a prerequisite to payment at Substantial Completion and agendizing for acceptance by the Governing Board of the Owner.**

1.02 TIME PERIOD

- A. Deliver manufacturers' warranties, guaranties, and bonds required by Contract Documents, with Owner named as beneficiary. Where manufacturers' warranty or guaranty extends for a longer time period than the Contractor's warranty and guaranty, deliver manufacturer's warranties or guaranties in same manner.

1.03 WARRANTY/GUARANTY FORM

- A. Submit written warranties and guaranties, except manufacturer's standard printed warranties and guaranties, on the Contractor's, subcontractors', material suppliers', or manufacturers' own letterhead, addressed to Owner, in the form attached to this Section.
- B. Submit warranties and guaranties in duplicate, and in the form indicated, signed by cognizant entities, and by Contractor in every case, with modifications as approved by Owner to suit the conditions pertaining to the warranty or guaranty.

1.04 SUBMITTALS

- A. Collect and assemble written warranties and guaranties into bound booklet form, and deliver bound books to Architect for delivery to Owner for final review and approval.
 - 1. See Sections 01 77 00 and 01 78 23 for additional submittal requirements.

ATTACHMENT: Warranty/Guaranty Form

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WARRANTY/GUARANTY FORM

FOR _____ WORK

We, the undersigned, do hereby warranty and guaranty that the parts of the work described above which we have furnished or installed for:

(PROJECT NAME)

are in accordance with the Contract Documents and that all said work as installed will fulfill or exceed all the Warranty and Guaranty requirements. We agree to repair or replace work installed by us, together with any other work which is displaced or damaged by so doing, that proves to be defective in workmanship, material, or operation within a period of _____ () year(s) from the date Notice of Completion is registered with the San Diego County Recorder, ordinary wear and tear and unusual neglect or abuse excepted.

In the event of our failure to comply with the above-mentioned conditions within a reasonable time period determined by the Owner, after notification in writing, we, the undersigned, all collectively and separately, hereby authorize the Owner to have said defective work repaired and/or replaced and made good, and agree to pay to the Owner upon demand all moneys that the Owner may expend in making good said defective work, including all collection cost and reasonable attorney fees.

Date: _____
(Subcontractor, Sub-subcontractor, Manufacturer or Supplier)

By: _____

Title: _____

State License No: _____

Local Representative: For maintenance, repair, or replacement service, contact:

Name: _____

Address: _____

Phone Number _____

END OF SECTION

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SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for Record Documents.
- B. Throughout progress of the work of the contract, maintain an accurate record of changes in the Contract Documents, as described below.
- C. Upon completion of the work of this Contract, transfer the recorded changes to a set of Record Documents, as described herewith.

1.02 QUALITY ASSURANCE

- A. General: Delegate the responsibility for maintenance of Record Documents to one person on the Contractor's staff as accepted in advance by the Architect.
- B. Accuracy of Records: Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of drawings and other documents where such entry is required to properly show the change. Accuracy of records shall be such that future searches for items shown in the Contract Documents may reasonably rely on information obtained from the accepted Record Documents.
- C. Timing of Entries: Make entries within 24 hours after receipt of information.

1.03 PAYMENT WITHHELD

- A. The Architect reserves the right to withhold certification of payment requests for failure on the part of the Contractor to maintain Record Drawings in conformance with this Section.

1.04 SUBMITTALS

- A. General: The Architect's review of the current status of Record Documents will be a prerequisite to the Architect's review of requests for progress payment and request for final payment under the contract.
- B. Progress Submittals: Prior to submitting each request for progress payment, secure the Architect's review of the Record Documents as currently maintained.
- C. Final Submittal: Prior to submitting request for final payment, submit the final Record Documents to the Architect and secure his acceptance.

1.05 PRODUCT HANDLING

- A. Maintain the job set of Record Documents protected from deterioration and from loss and damage until completion of the work and transfer of the recorded data to the final Record Documents.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- B. In the event of loss of recorded data, use means necessary to again secure the data to the Architect's acceptance; such means shall include, if necessary in the opinion of the Architect, removal and replacement of concealing materials and, in such case, replacements shall be to the standards originally specified in the Contract Documents.

PART 2 - PRODUCTS

2.01 RECORD DOCUMENTS

- A. Job Set: Secure from the Owner, at no charge to the Contractor, one complete set of Documents comprising the Contract.
- B. Contractor shall provide the architect a pdf copy of all as-builts after the project is completed. As-builts shall include all posted CCDs and RFIs and any other documents issued during construction. As-builts shall be maintained during construction on a daily basis. Any adjustments in location of any item on the plans shall be accurately recorded on the as-built plans.
- C. Before commencing backfilling of utilities or any other underground pipes, ducts, conduits, or structures, take photographs showing relationship of below ground utilities to structure(s) or other physical reference point. Provide three-ring binder containing 3-1/2" x 5" mounted and numbered prints of photos, plus the negatives, categorized by locations and indicating utilities shown. Provide a photo(s) of all connections, crossings, stubs, or other critical points. If the Contractor neglects to take such photographs, Contractor shall uncover, at the Contractor's expense, the area(s) so neglected in order to provide the requisite photos.

Provide a hard copy and pdf copy composite Utility Site Plan with the number of each photograph placed on the plan at the location the photo was taken from, and a mark indicating which way the camera was pointed. All numbers and marks shall be in ink, and shall be clear, legible, and neatly done. Photo binder and photo plan shall be considered part of the Record Documents.

- D. Survey file, in both PDF format and CAD format with all improvements indicated and certified that all items are constructed to line and grade in accordance with the approved plans.

PART 3 - EXECUTION

3.01 MAINTENANCE OF JOB SET

- A. Identification: Upon receipt of the job set, identify each of the documents with a title "RECORD DOCUMENTS-JOB SET".
- B. Preservation:
 - 1. Considering the contract completion time, the probable number of occasions upon which the job set must be taken out for new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the job set for the review of the Architect.
 - 2. Use the job set for no purpose other than entry of new data and for review by the Architect, until start of transfer of data to final Record Documents.

3. Maintain the job set at the site of work as that site is designated by the Architect.
- C. Making Entries on Drawings: Using an erasable colored pencil (not ink nor indelible pencil), clearly describe the change by note and by graphic line, as required. Date entries. Call attention to the entry by a "cloud" around the area or areas affected. In the event of overlapping changes, different colors may be used for each of the changes. In the event of superseding changes to any area of the drawing, erase only that portion of the preceding change that is affected by the subsequent change before entering the subsequent change.
- D. Making Entries on Other Documents:
1. Where changes are caused by directives issued by the Architect, clearly indicate the change by note in ink, colored pencil, or rubber stamp, and reference Division of the State Architect approved addenda and change orders.
 2. Where changes are caused by Contractor originated proposals reviewed by the Architect, including inadvertent errors by the Contractor which have been accepted by the Architect, clearly indicate the change by note in erasable colored pencil.
 3. Make entries in the pertinent documents as reviewed by the Architect.
 4. Reference specifications section 01 77 00, Closeout Procedures, 1.02 (Closeout Schedule and Procedure) paragraph 4. Project Acceptance Requirements, Division of the State Architect for list of documents required at closeout.
- E. Conversion of Schematic Layouts:
1. In most cases on the Drawings, arrangement of conduits and circuits, piping, ducts, and other similar items, is shown schematically and is not intended to portray precise physical layout. Final physical arrangement shall be as determined by the Contractor, subject to the Architect's review. However, design of future modifications of the facility may require accurate information as to the final physical arrangement of items and location of utilities which are shown only schematically on the Drawings.
 2. Show on the job set of record Drawings, by dimension accurate to within 1 inch, the centerline of each run of items such as are described in the preceding paragraph above. Clearly identify the item by accurate note such as "cast-iron drain", "galvanized water pipe", etc. Show, by symbol or note, the vertical location of the item ("under slab", "in ceiling plenum", "exposed", etc.). Make identification sufficiently descriptive that it may be related reliably to the Specifications.
 3. The Architect may waive the requirements for conversion of schematic layouts where, in the Architect's judgment, such conversion serves no beneficial purpose. However, do not rely upon waivers being issued except as specifically issued in writing by the Architect.
 4. Timing of Entries: Be alert to changes in the work from how it is shown in the Contract Documents: Promptly, and in no case later than 24 hours after the change has occurred and been made known to the Contractor, make the entry or entries required.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- F. Accuracy of Entries: Use means necessary, including proper instruments or tools for measurement, to determine actual locations of the installed items.

3.02 FINAL RECORD DOCUMENTS

- A. General: The purpose of the final Record Documents is to provide factual information regarding the work, both concealed and visible, which will enable future modification of design to proceed without lengthy and expensive site measurement, investigation, and examination.
- B. Review of Recorded Data Prior to Transfer: Following receipt of the pdf (Blue Beam Review compatible) as-builts described here-in-above, and prior to start of transfer of recorded data thereto, secure a review by the Architect of recorded data. Make required revisions.
- C. Transfer of Data to Drawings: Carefully transfer change data shown on the job set of Record Drawings to corresponding sepias, coordinating the changes as required, and clearly indicating at each affected detail and other drawing the full description of changes made during construction and the actual location of items described above. Call attention to each entry by drawing a cloud around the area or areas affected. Make change entries on the as-builts neatly, consistently, and in ink or crisp black pencil.
- D. Transfer of Data to Other Documents: If the documents other than drawings have been kept clean successfully during progress of the work, and if entries have been sufficiently orderly thereon and reviewed by the Architect, the job set of those documents (other than drawings) will be accepted by the Architect as the final portion of the record documents. If any such document is not so accepted by the Architect, secure a new copy of that document from the Architect at the Architect's usual charge for reproduction carefully transfer the change data to the new copy and obtain the acceptance of the Architect.
- E. Review and Approval: Submit the completed total set of Record Documents in both hard copy and in pdf format to the Architect as described above. Participate in review meeting or meetings as required by the Architect, make required changes in the Record Documents, and promptly deliver the final Record Documents to the Architect.

3.03 CHANGES SUBSEQUENT TO ACCEPTANCE

- A. The Contractor shall have no responsibility for recording changes in the work subsequent to acceptance of the work by the Owner, except for changes resulting from replacements, repairs, and alterations made by the Contractor as a part of his guarantee. No changes will be allowed without approval of the Division of the State Architect.

END OF SECTION

02 00 00

SITE WORK

IRVINE UNIFIED SCHOOL DISTRICT

SECTION 02 41 19

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes: Project site and building demolition work to prepare for addition of new improvements, as indicated on the Drawings and specified herein. General and Special Conditions and Division 1 specification sections apply to this section.
- B. Related Sections:
 - 1. Section 01 73 29, Cutting and Patching
 - 2. Section 01 50 00, Temporary Facilities and Controls
 - 3. Section 01 77 00, Closeout Procedures
 - 4. Section 31 20 00, Earth Moving
 - 5. Section 33 44 19, Utility Storm Water Treatment
 - 6. Section 32 91 00, Planting Preparation

1.02 DEFINITIONS

- A. "Remove": Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the Owner's property.
- B. "Removed and Salvaged": Items to remain the Owner's property shall be removed, cleaned, and packed or crated to protect against damage.
 - 1. Identify contents of containers and deliver to Owner's designated storage area.
- C. "Existing to Remain" Protect construction indicated to remain against damage and soiling during demolition. When permitted by the Architect, items may be removed to a suitable, protected storage location during demolition and then cleaned and reinstalled in their original locations.
- D. "Remove and Reinstall": Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in locations indicated.
- E. Salvaged Materials (not wanted by Owner): Items which the Owner does not want and is of salvable value to Contractor may be removed from structure as work progresses. Owner and CBC require a minimum of 50% (by weight) of all non-hazardous construction materials be recycled, composted and/or salvaged. Salvage shall conform to the following:
 - 1. Contractor shall submit salvage plan showing how all materials are to be sorted, salvaged and recycled. Plan must include all final destinations for each type of material.
 - 2. Salvaged items must be transported from site as they are removed, unless materials are to be reused on site.
 - 3. Storage or sale of removed items on site will not be permitted, unless materials are to be reused on site.
 - 4. Contractor shall provide certification for all salvaged materials. Certifications

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

may take the form of receipts from recycling facilities, manufacturers, or any other legitimate form of certification. Certification types shall be outlined in salvage plan and approved by Owner.

1.03 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition by the Contractor(s) in a legal disposal area appropriate to the materials being disposed.

1.04 SUBMITTALS

- A. Submit each item in this Article according to the Conditions of the Contract and Specifications Section 01 33 00, unless otherwise indicated.
- B. Proposed Dust Control Measures.
- C. Proposed Noise Control Measures.
- D. Schedule of demolition activities indicating the following:
 - 1. Detailed sequence of demolition, salvage, and removal work, with starting and ending dates for each activity.
 - 2. Dates for shutoff, capping, and continuation of utility services.
- E. Salvage Plan - Inventory of items to be removed and salvaged. Salvage plan shall show how all materials are to be sorted, salvaged and recycled. Plan must include all final destinations for each type of material.
- F. Inventory of items to be removed and salvaged and deliver to Owner's designated storage area.
- G. Photographs or videotape, sufficiently detailed, of existing conditions of adjoining construction and improvements that might be misconstrued as damage caused by demolition operations.
- H. Record drawings at project closeout according to specifications section 01 77 00 - Closeout Procedures shall identify and accurately locate capped utilities and other subsurface structural, electrical, or mechanical conditions.

1.05 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Engage an experienced firm that has successfully completed demolition work similar to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before starting demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Pre-demolition Conference: Conduct conference at Project site with Owner, Architect and Construction Manager.

1.06 PROJECT CONDITIONS

- A. Building, where partial wall will be demolished, will be vacated and its use discontinued before start of the Work.
- B. Conditions, existing at time of inspection for bidding purpose, will be maintained by Owner as far as practical.
- C. Hazardous Materials: If applicable, a Hazardous Materials Study was performed on site and a specification for removal of said materials is incorporated into the project documents.

1.07 SCHEDULING

- A. Arrange demolition and salvage schedule so as not to interfere with Owner's on-site operations.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of demolition required.
- C. Inventory and record the conditions of items to be removed and reinstalled and items to be removed and salvaged.
- D. Survey condition of the building to determine whether removing any element might result in a structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during demolition.
- E. Perform surveys as the Work progresses to detect hazards resulting from demolition activities.

3.02 UTILITY SERVICES

- A. Maintain existing utilities indicated to remain in service and protect them against damage during demolition operations.
- B. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by Owner, and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to governing authorities.
- C. Provide not less than 72 hours notice to Owner if shutdown of service is required during changeover.
- D. Utility Requirements: Refer to Division 21 through Division 26 sections for shutting-off, disconnecting, removing, and sealing or capping utility services. Do not start demolition work until utility disconnecting and sealing have been completed and verified in writing.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

3.03 PREPARATION

- A. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- B. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around demolition area.
 - 1. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways.
 - 2. Protect existing site improvements, appurtenances, and landscaping to remain.
- C. Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of building to remain.
 - 1. Strengthen or add new supports when required during progress of demolition.

3.04 EXPLOSIVES

- A. The use of explosives will not be permitted.

3.05 POLLUTION CONTROLS

- A. Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and dirt. Comply with governing environmental protection regulations.
 - 1. Do not create hazardous or objectionable conditions, such as flooding, and pollution, when using water.
- B. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 1. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level.
- C. Clean adjacent buildings and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before start of demolition.

3.06 DEMOLITION

- A. Demolish partial building wall, concrete and/or asphalt paving, interior finishes, fixtures and accessories, as required to prepare for new construction, and remove from the site.
- B. Locate demolition equipment throughout the building and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- C. Dispose of demolished items and materials promptly. On-site storage or sale of removed items is prohibited.

- D. Fill below-grade areas and voids resulting from demolition of building elements and pavements and soil materials according to requirements specified in Section 31 20 00 – Earth Moving and/or geotechnical report.
- E. Promptly repair damages to adjacent facilities caused by demolition operations.

3.07 DISPOSAL OF DEMOLISHED MATERIALS

- A. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Burning demolished materials is not allowed.
- C. Transport demolished materials off Owner's property and legally dispose of these materials.

END OF SECTION

26 00 00

ELECTRICAL

IRVINE UNIFIED SCHOOL DISTRICT

SECTION 26 05 00

ELECTRICAL GENERAL PROVISIONS

PART 1 - GENERAL

1.01 SCOPE

- A. Work Included: All labor, materials, appliances, tools, equipment, facilities, transportation and services necessary for and incidental to performing all operations in connection with furnishing, delivery and installation of the work of this Section, complete, as shown on the Drawings and/or specified herein. Work includes, but is not necessarily limited to, the following:
 - 1. Examine all other Sections for work related to those other Sections and required to be included as work under this Section.
 - 2. Electrical General Provisions and Requirements for electrical work.
 - 3. Division-1; General Requirements; General Conditions.
- B. Organization of the Specifications into Divisions, Sections and Articles, and arrangement of Drawings shall not control the Contractor in dividing the Contract Work among Subcontractors or in establishing the extent of work to be performed by any trade.

1.02 GENERAL SUMMARY OF ELECTRICAL WORK

- A. The Specifications and Drawings are intended to cover a complete installation of systems. The omission of expressed reference to any item of labor or material for the proper execution of the work in accordance with present practice of the trade shall not relieve the Contractor from providing such additional labor and materials.
- B. Refer to the Drawings and Shop Drawings of other trades for additional details, which affect the proper installation of this work. Diagrams and symbols showing electrical connections are diagrammatic only. Wiring diagrams do not necessarily show the exact physical arrangement of the equipment.
- C. Before submitting a bid, the Contractor shall become familiar with all features of the Site Drawings, which may affect the execution of the work. No extra payment will be allowed for failure to obtain this information.
- D. If there are omissions or conflicts between the Drawings and Specifications, clarify these points with the Owner's Representative before submitting bid and before commencing work.
- E. Provide work and material in conformance with the Manufacturer's published recommendations for respective equipment and systems.

1.03 LOCATIONS OF EQUIPMENT

- A. The Drawings indicate diagrammatically the desired locations or arrangements of conduit runs, outlets, equipment, etc., and are to be followed as closely as possible. Proper judgment must be exercised in executing the work so as to secure the best possible installation in the available space and to overcome local difficulties due to space limitations or interference of structure conditions encountered.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- B. In the event changes in the indicated locations or arrangements are necessary, due to developed conditions in the building construction or rearrangement of furnishings or equipment, such changes shall be made without cost to the Contract, providing the change is ordered before the conduit runs, etc., and work directly connected to same is installed and no extra materials are required.
- C. The location of the existing utilities, building, equipment and conduit shown on the Drawings is approximate.
- D. The locations of existing underground utilities, where shown on Drawings, are shown diagrammatically and have not been independently verified by the Owner, the Owner's Representative, the Architect/Engineer. The Owner, the Owner's Representative, and the Owner's Architect/Engineer are not responsible for the location of underground utilities or structures, whether or not shown or detailed and installed under this or any other Contracts.

1.04 QUALITY ASSURANCE

- A. Work and materials shall be in full accordance with the latest Rules and Regulations. The publications shall be included in the Contract Documents Requirements. If a conflict occurs between the following publications and any other part of the Contract Documents, the Requirements describing the more restrictive provisions shall become the applicable Contract definition:
 - 1. California Code of Regulations Title 24.
 - 2. California Part 3 "California Electrical Code" CEC, Title 24 and Title 8 "Division of Industrial Safety".
 - 3. California Building Code – CBC.
 - 4. California Fire Code – CFC
 - 5. The National Electrical Code – NEC/NFPA 70.
 - 6. The Life Safety Code – NFPA 101.
 - 7. The Uniform Building Code – UBC.
 - 8. International Building Code – IBC.
 - 9. National Fire Protection Agency – NFPA.
 - 10. National Fire Alarm Code – NFAC/NFPA 72.
 - 11. Underwriter's Laboratory – UL.
 - 12. Other applicable State and Local Government Agencies laws and regulations.
 - 13. Electrical Installation Standards National Electrical Contractors Association (NECA) and National Electrical Installation Standards (NEIS):
 - a. NECA/NEIS-1: Standard of Practices for Good Workmanship in Electrical Contracting.
 - b. NECA/NEIS-101: Standard for Installing Steel Conduit (Rigid, IMC, etc.).
 - c. NECA/NEIS-111: Recommended Practice Installing Nonmetallic Raceways.

- d. NECA/NEIS-331: Standards for Installing Building and Service Entrance Grounding.
 - e. NECA/NEIS-400: Recommended Practice for Installing and Maintaining Switchboards.
 - f. NECA/NEIS-407: Recommended Practice for Installing Panelboards.
- B. All material and equipment shall be new and shall be delivered to the site in unbroken packages. All material and equipment shall be listed and labeled by Underwriters Laboratories or other recognized Testing Laboratories, where such listings are available. Comply with all Installation Requirements and Restrictions pertaining to such listings.
- C. Work and material shown on the Drawings and in the Specifications is new and included in the Contract unless specifically indicated as existing or N.I.C. (not in Contract).
- D. Keep a copy of all applicable Codes and Standards available at the job site at all times for reference while performing work under this Contract. Nothing in Plans or Specifications shall be construed to permit work not conforming to the most stringent of Building Codes.
- E. Where a conflict or variation occurs between applicable Codes, Standards and/or the Contract Documents, the provisions of the most restrictive provision shall become the Requirement of the Contract Documents.

1.05 SUBMITTALS (ADDITIONAL REQUIREMENTS)

A. General

1. Review of Contractor's submittals is for General Conformance with the design concept of the Project and General Compliance with the information given in the Contract Documents. Any action shown is subject to the Requirements of the Plans and Specifications. Contractor is responsible for quantities; dimensions which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of work with that of all other trades and satisfactory performance of their work.
2. The Contractor shall review each submittal in detail for compliance with the Requirements of the Contract Documents prior to submittal. The Contractor shall "Ink Stamp" and signs each item of the submittal with a statement "CERTIFYING THE SUBMITTAL HAS BEEN REVIEWED BY THE CONTRACTOR AND COMPLIES WITH ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS". The Contractor shall clearly and specifically identify each individual proposed substitution, substitution of equal or proposed deviation from the Requirements of the Contract Documents with a statement "THIS ITEM IS A SUBSTITUTION".

The burden of research, preparation of calculations and the furnishing of adequate and complete Shop Drawings information to demonstrate the suitability of Contractor's proposed substitutions and suitability of proposed deviations from the Contract Documents is the responsibility of the Contractor.
3. Departure from the submittal procedure will result in resubmittals and delays. Failure of the Contractor to comply with the Submittal Requirements shall render void any acceptance or any approval of the proposed variation. The Contractor shall then be required to provide the equipment or method without variation from the Contract Documents and without additional cost to the Contract.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

4. The Contractor at no additional cost or delays to the Contract shall remove any work, material and correct any deficiencies resulting from deviations from the Requirements of the Contract Documents not approved in advance by the Owner prior to commencement of work.
5. Shop Drawings submitted by the Contractor, which are not specifically required for submittal by the Contract Documents, or Contractor Shop Drawings previously reviewed and resubmitted without a written resubmittal request to the Contractor, will not be reviewed, considered, or commented on. The respective Shop Drawing submittal/resubmittal will not be returned to the Contractor and will be destroyed without comment or response to the Contractor. The respective submittal shall be considered null and void as being not in compliance with the Requirements of the Contract Documents.
6. Refer to Division-1 for Additional Requirements.

B. Material Lists and Shop Drawings

1. Submit Material list and Equipment Manufacturers for review within 35 days of award of Contract. Give name of Manufacturer and where applicable, brand name, type and/or catalog number of each item. Listing of more than one Manufacturer for any one item of equipment, or listing items "as specified", without both make and model or type designation, is not acceptable. Shop Drawings shall not be submitted before review completion of Manufacturers list. The right is reserved to require submission of samples of any material whether or not particularly mentioned herein.
2. After completion of review of the Material and Equipment Manufacturers list, submit Shop Drawings for review. Shop Drawings shall be submitted in completed bound groups of materials (i.e., all lighting fixtures or all switchgear, etc.). The Contractor shall verify dimensions of equipment and be satisfied as to fit and that they comply with all Code Requirements relating to clear working space about electrical equipment prior to submitting Shop Drawings for review. Submittals, which are intended to be reviewed as substitution or departure from the Contract Documents, must be specifically noted as such. The Requirements of the Contract Documents shall prevail regardless of the acceptance of the submittal.
3. Shop Drawings shall include catalog data sheets, instruction manuals, Dimensioned Plans, elevations, details, wiring diagrams, and descriptive literature of component parts where applicable. Structural calculations and mounting details, signed by a Structural Engineer registered by the State of California, shall be submitted for all equipment weighing over 400-pounds, and shall be in compliance with Title 21 of the California Code of Regulations.
4. Each Shop Drawing item shall be identified with the Specification Section and paragraph numbers, lighting fixture types and Drawing sheet numbers; the specific Shop Drawing is intended to represent. Shop Drawings 11-inches by 17-inches or smaller in size shall be bound in 3-ring binders. Divider tabs shall be provided in the 3-ring binders identifying and separating each separate Shop Drawing submittal item. Shop Drawings larger than 11-inch by 17-inch, Shop Drawing pages/sheets submittals shall be sequentially numbered with unique alphanumeric numbering system to facilitate correspondence referencing identification of individual sheets.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

5. The time required to review and comment on the Contractor's submittals will not be less than 14 calendar days, after receipt of the submittals at the office of FBA Engineering. The review of Contractor submittals and return to Contractor of submittals with review comments will occur in a timely manner conditioned upon the Contractor complying with all of the following:
 - a. The submittals contain complete and accurate information, complying with the Requirements of the Contract Documents.
 - b. Contractor's submittals are each marked with Contractor's approval "stamp", and with Contractor signatures.
 - c. The submittals are received in accordance with a written, Shop Drawing submittal schedule for each submittal. The Contractor distributes the schedule not less than 35-day calendar days in advance of the Shop Drawing submittals, and the schedule identifies the calendar dates, the Contractor will deliver the various submittals for review.
6. Shop Drawings shall include the Manufacturers projected days for shipment from the factory of completed equipment, after the Contractor releases the equipment for production. It shall be the responsibility of the Contractor to insure that all material and equipment is ordered in time to provide an orderly progression of the work. The Contractor shall notify the Owner's Representative of any changes in delivery, which would affect the Project completion date.
7. Submittal Identification
 - a. Each submittal shall be dated: with submittal transmission date; sequentially numbered and titled with submittal contents identification and applicable Specification/Drawing references (*i.e., Submittal dated: 5/12/19 Submittal #4 Contents: Branch Circuit Panelboards Sheet #E5.1 and Transformers Specification Section 260500 Paragraph 2.11, etc.*).
 - b. Each resubmittal shall be dated: with original submittal date and resubmittal transmission dates; sequentially numbered with original submittal number and sequential resubmittal revision number and titled with submittal contents identification and applicable Specifications/ Drawing references (*i.e., Original Submittal Date: 5/12/19 Resubmittal Date: 10/9/19 Original Submittal #4 resubmittal Revision R2 Contents: Transformer Resubmittal Specification Section - 260500 Paragraph 2.11, etc.*).
 - c. Contractor shall provide a written response narrative with each resubmittal. Describe each response-action, resubmittal addition, change and deletion. Correspond to each response to A/E specific review comment.
- C. The Contractor shall be responsible for incidental, direct and indirect costs resulting from the Contractor's substitution of; or changes to; the specified Contract Materials and Work.
- D. The Contractor shall pay, upon request by the Owner's Representative, a fee for the Owner's Representative time involved in the review of substitution submittals and design changes resulting from the Contractor's requested substitutions. The fee shall be not less than \$125.00 per hour but, in no case, less than stated in Division-1, whichever is greater.
- E. Maintenance and Operating Manuals
 1. The Contractor shall furnish three copies of type-written maintenance and operating manuals for all electrical equipment to the Owner.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

2. Maintenance and operating manuals shall be bound in three-ring, hard-cover, plastic binders with table of contents. Manuals shall be delivered to the Owner's Representative, with an itemized receipt.

F. Portable or Detachable Parts: The Contractor shall retain in his possession, and shall be responsible for all portable and detachable parts or portions of the installation such as fuses, keys, locks, adapters, locking clips, and inserts until final completion of Contract Work. These parts shall then be delivered to the Owner's Representative with an itemized receipt.

G. Record Drawings (Additional Requirements)

1. Provide and maintain in good order a complete set of Electrical Contract "Record" prints. Changes to the Contract to be clearly recorded on this set of prints. At the end of the project, transfer all changes to one set of transparencies to be delivered unfolded to the Owner's Representative.
2. The actual location and elevation of all buried lines, boxes, monuments, vaults, stub-outs and other provisions for future connections shall be referenced to the building lines or other clearly established base lines and to approved bench marks. If any necessary dimensions are omitted from the Record Drawings, the Contractor shall, at the Contractor's own expense, do all excavation required to expose the buried work and to establish the correct locations.
3. The Contractor shall keep the "Record" prints up to date and current with all work performed.
4. Refer to Division-1 for Additional Requirements.

1.06 CLEANING EQUIPMENT, MATERIALS, PREMISES

All parts of the equipment shall be thoroughly cleaned of dirt, rust, cement, plaster, etc., and all cracks and corners scraped out clean. Surfaces to be painted shall be carefully cleaned of grease and oil spots and left smooth, clean and in proper condition to receive paint finish.

1.07 JOB CONDITIONS - PROTECTION

Protect all work, materials and equipment from damage from any cause whatever and provide adequate and proper storage facilities during the progress of the work. Provide for the safety and good condition of all the work until final acceptance of the work by the Owner and replace all damaged or defective work, materials, and equipment before requesting final acceptance.

1.08 IDENTIFICATION

A. Equipment Nameplates

1. Circuit breakers and other apparatus used for the operation or control of feeders, circuits, appliances, or equipment shall be properly identified by means of descriptive nameplates or tags permanently attached to the apparatus and wiring.
2. Provide nameplate label on electrical service entrance equipment describing available short circuit information calculated by the Contractor, including:
 - a. Calculation date, month-day-year.
 - b. Calculate maximum available short circuit fault current.
 - c. Description of parameters and changes affecting the Requirements for recalculation of the fault current information.

3. Electrical equipment including switchboards shall each be labeled by the Manufacturer with "Electric-Arc-Flash" warning signs. The signs shall explain a hazard to Personnel may exist if the equipment is worked on while energized or operated by Personnel while energized. The sign shall instruct Personnel to wear the correct protective equipment/clothing (PPE) when working "Live", or operating "Live" electrical equipment and circuits.
 4. Nameplates shall be engraved laminated phenolic. Shop Drawings with dimensions and format shall be submitted before installation. Attachment to equipment shall be with escutcheon pins, rivets, self-tapping screws or machine screws. Self-adhering or adhesive backed nameplates shall not be used.
 5. Provide black-on-white laminated plastic nameplates engraved in minimum ¼-inch high letters to correspond with the designations on the Drawings. Provide other or additional information on nameplates where indicated.
- B. For equipment and access doors or gates to equipment containing or operating on circuits of more than 100 volts AC or DC nominal. Provide red-on-white laminated warning signs engraved in ½-inch high letters to read: "DANGER - 480 (*or applicable voltage*) VOLTS KEEP OUT AUTHORIZED PERSONNEL ONLY".
- C. Wire and Cable Identification
1. Provide identification on individual wire and cable for electrical power systems (each individual phase, neutral and ground), empty conduit pull ropes and controls circuit.
 2. Permanent identification shall be provided at each termination location, splice location, manholes and equipment enclosure.
 - a. Individual wire and cable larger than #6 AWG or 0.25 inch diameter shall be provided with polypropylene identification tag holders, with yellow polypropylene tags interchangeable black alphanumeric characters, character height 0.25 inch. Attach identification tags with plastic "tie" wraps, minimum of two for each tag. As manufactured by Almetek Industries-"EZTAG" Series; or TECH Products - "EVERLAST" Series.
 - b. Individual wire and cable #6 AWG and smaller than 0.25 inch diameter shall be provided with water and oil resistant, flexible, self-laminating pressure sensitive machine embossed plastic tags that wrap a minimum of 360 degrees around the wire/cable diameter. The entire tag shall then be covered with a clear flexible waterproof plastic cover wrapped a minimum of 540 degrees around the wire/cable diameter and completely covering the identification. As manufactured by: Brady Identification; or 3M; or Panduit.
 - c. Each identification tag location shall indicate the following information: circuit number, circuit phase, source termination and destination termination equipment name (or outlet number as applicable).
 3. Install permanent identification after installation/pulling of wire/cable is complete, to prevent loss or damage to the identification.

1.09 TESTING

- A. The Contractor shall obtain an independent Testing Laboratory, provide all instrumentation and perform tests on the electrical system and equipment as hereinafter described and further directed by the Owner's Representative. The test shall be

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

performed after the completion of all electrical systems included in the Contract Scope of Work. All tests shall be recorded and documented and submitted to the Owner's Representative for review.

1. All Equipment and Personnel required for set-up and testing shall be provided by the Contractor.
- B. Test for Phase to Ground and Neutral Condition:
1. Open main service disconnects.
 2. Isolate the system neutral from ground by removing the neutral disconnects link located in the service switchboard.
 3. Close all submain disconnects.
 4. Close all branch feeder circuit breakers.
 5. Turn all switches to "on" position, unplug all portable equipment from outlet receptacles.
 6. Measure the resistance of each phase to ground and phase to neutral. A properly calibrated "megger" type test instrument shall be used. The test voltage shall be a nominal 500 volts.
 7. Record all readings after 1-minute duration and document into a complete report.
 8. Isolating Grounds: In the event that low resistance ground neutral connections are found in the system, they shall be isolated and located by testing each circuit individually as outlined above. Make proper corrections to restore the resistance values to an acceptable value.
- C. Method of obtaining ground resistance shall be in accordance with the latest edition of the James G. Biddle (Plymouth Meeting, Pennsylvania) manual published on this subject.
1. Perform "Fall-of-Potential Method" 3-point tests on the main grounding electrode of system per IEEE Standard No. 81, Section 8.2.1.5. when suitable locations for test rods are not available, a low resistance dead earth or reference ground shall be utilized.
 2. Perform the "Two-Point Method (Ammeter-Volt-Meter Method)" test per IEEE Standard No. 81, Section 8.2.1.1, to determine the ground resistance between the main grounding system and all major electrical equipment frames, system neutral, and/or derived neutral points.
- D. The testing, calibrating, and setting of all ground and ground fault equipment, circuit breakers, circuit device protection relays, and meters adjustable settings shall be by an independent Testing Laboratory. Set as recommended by the respective Manufacturer and coordination study so as to be coordinated with other protection devices within the electrical design. Bound and tabulated copies of the test and settings shall be sent to the Owner's Representative.
- E. Ampere and Voltage Measurements
1. Measure and record ampere and line voltage measurements under full load on all panel feeders, switchboard, and switchgear feeders, motor control centers and motor circuits provided in the Contract. Record measurements at the equipment tested and submit to the Owner's Representative for review.

2. Ampere voltage readings shall be:
 - a. Phase A-B, A-C and B-C.
 - b. Phase A-Neutral, B-Neutral and C-Neutral.
 3. The ampere and voltage readings shall be not less than 20 minutes duration for each test. Record and submit the measured minimum, maximum and 20 minute average for each ampere and voltage value and test location. Voltage and ampere measurements shall occur at the connected load end of each respective feeder, not at the source of supply end of each feeder.
 4. Test equipment shall be accurate within plus or minus 1%.
 5. Branch circuit devices 40-amp or less and motor loads 10 horsepower or smaller are excluded from Ampere and Voltage Testing Requirement.
 6. If, in the opinion of the Owner's Representative, the voltages and regulations are not met within acceptable limits, make arrangements with the serving utility for proper electrical service. Retest feeder line voltages, and submit to Owner's Representative for review, after the utility company has completed corrective actions. Reset "voltage taps" on transformers provided or modified as part of the Contract Work, to adjust line volt-ages to within acceptable values, as directed by the Owner's Representative.
- F. The Contractor shall complete the following work before any electrical equipment is energized.
1. All equipment shall be permanently anchored.
 2. All bus connections and conductor/wire connections shall be tightened per Manufacturer's instructions and witnessed by the Owner's Representative.
 3. All ground connections shall be completed and identified. Perform and successfully complete all required megger and ground resistance tests.
 4. Feeders shall be connected and identified.
 5. The interiors of all electrical enclosures including busbars and wiring terminals shall be cleaned of all loose material and debris, paint, plaster, cleaners or other abrasive's over spray removed and equipment vacuumed clean. The Owner's Representative shall observe all interiors before covers are installed.
 6. Electrical spaces and rooms shall not be used as storage rooms after power is energized.
 7. Outdoor electrical equipment enclosures and housings shall be weather protected.
 8. The electrical system time current coordination and Arc-Fault study shall be complete for circuit breakers, ground relays sets, and circuit relay sets, fuses; set-up, tested and calibrated accordingly.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

1.10 COMMISSIONING - CX

A. General

1. The Commissioning shall verify the electrical systems for the term of the Contract, by observation; and by calibration; and by testing. The Commissioning shall ensure the electrical systems perform interactively and correctly, according to the Contract and Operational Requirements.
2. Commissioning shall provide startup, testing and documented confirmation of the Contract constructed systems, materials and work, functions in compliance within the criteria set forth in the Contract Documents to the satisfaction of the Owner's needs. The Commissioning Scope shall encompass each system identified as requiring "Commissioning" by the Contract Documents, including but not limited to:
 - a. Electrical circuits' protection, short circuit, overcurrent, and ground fault devices.
 - b. Additional systems described in the Contract Documents.
3. Commissioning Process shall review all of the Shop Drawing submittals, including:
 - a. Controls, Operation and Maintenance Requirements.
 - b. Facility performance testing compliance.
 - c. Project Contract Requirements compliance.
 - d. Compliance with basis for design and operational descriptions provided in the Contract.
4. Commissioning shall be the process of ensuring all the systems described in the Contract Documents comply with the Contract Document design; all systems are installed properly; all systems are functional, tested and capable of being operated and maintained to perform within the Contract Requirements and design intent.
5. Functional setup, recalibration, correcting deficiencies, retesting and the associated costs, for system(s) that fail Commissioning, shall be the responsibility of the Contractor. The Contractor shall include all Commissioning Costs in the Contract Scope of Work.
6. Complete all Commissioning functions prior to the occupancy of the facility by the Owner, unless directed otherwise by the Owner's Representative.
7. Submit six copies of Commissioning Documentation to Owner's Representative.
8. Commissioning, unless specifically indicated otherwise, shall be performed by factory-trained Technician(s) authorized and certified by the Manufacturers of the respective equipment/systems. Where specifically indicated, Commissioning shall be performed by Independent Test Lab.

B. Commissioning Procedures

1. Prepare a Commissioning Matrix identifying components and systems included in the Commissioning Scope; the status; actions completed and actions to be completed.

2. Verify Contractor compliance with Contract Document Requirements Manufacturer's recommendations and approved Shop Drawings.
3. Perform startup, functional tests, reports, and document results.
4. Evaluate and document the setup parameters, software, operating condition and performance of each system at the time of functional test completion. Document and record each performance parameter and condition, in the Commissioning Report.
5. Schedule testing and prepare descriptions of testing.
6. Describe measures performed to correct deficiencies.
7. Verify that instructions to Owner's Representatives, operations, and maintenance manuals comply with Contract Documents.
8. Prepare warranty matrix identifying the start dates, expiration dates, routine preventative maintenance dates and the Owner's responsibility for performing preventative maintenance and keeping logs for each maintenance function and warranty claims.
9. Confirm completion of all punch list items that have been acceptably accomplished and a list of what has not been acceptably completed.
10. Describe uncorrected deficiencies accepted by the Owner.

C. Commissioning Phasing

The Commissioning Phases of work shall include the following activities:

1. SDQ – Shop Drawing Qualification shall verify complete and correct Shop Drawings have been submitted.
2. IQ – The Installation Qualification of Contract work shall verify systems are correctly and properly installed.
3. OQ – Verify systems interfaces and software are correctly and properly operational.
4. ITM – Verify the Contract Inspection, Testing and Procedures for Maintenance are complete.
5. PQ – Performance Qualification complete the functional performance testing to validate each building system.

1.11 POWER OUTAGES

- A. All electrical services in all occupied facilities of the Contract Work are to remain operational during the entire Contract period. Any interruption of the electrical services for the performance of this work shall be at the convenience of the Owner and performed only after consultation with the Owner's Representative. Work involving circuit outages shall be only at such a time and of such a duration as approved in writing. Work involving circuit outages for the work required to connect new equipment and disconnect existing equipment shall be performed at the convenience of the Owner.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- B. Contract Work involving outages or disruption of normal function in electrical power systems, telephone/communication systems, fire alarms, shall be performed during the following time periods. The Contract Work shall be phased to limit outages in the respective systems to the stated periods:
 - 1. 11:30 p.m. Friday to 11:30 p.m. Sunday of the same weekend. Work shall occur on multiple weekend periods if a single weekend is not sufficient time to complete the work.
 - 2. The Contract Work involving outages shall be phased in multiple work time units, to comply with the permitted outage limitations.
- C. Work involving system outages to the building fire alarm system shall be performed only after consultation with the Owner and shall be only at such a time and of such duration as approved in writing. Contractor shall provide continuous "Fire-Watch" during fire alarm system outages and comply with AHJ "Fire-Watch" Requirements.
- D. Provide overtime work; double shift work; night time work; Saturday, Sunday, and holiday work to meet outages schedule.
- E. Provide temporary electrical power to meet the Requirements of this Article.
- F. Any added costs to Contractor due to necessity of complying with this Article shall be included in the Contract Scope of Work.
- G. When electrical work involving power disruptions to existing areas is initiated, the work shall proceed on a continuous basis without stopping until electric power is restored to the affected areas.
- H. The Contractor shall request in writing to the Owner's Representative a minimum of 3-weeks in advance, for any proposed electrical outage.

1.12 TEMPORARY ELECTRICAL POWER

- A. Provide temporary electrical power if work requiring power outages cannot be completed in time permitted and approved by the Owner's Representative.
- B. Temporary electrical power shall be a standby diesel engine generators. Voltage, Frequency, Regulation, etc. shall be equal to that of normal utility source. Exhaust system shall have a critical silencing muffler. Generator voltage shall match the existing secondary voltage required at the site. The Contractor shall furnish all necessary cables, switches, etc., to make all required connections to existing panels, feeders, etc. Generator shall be sized to adequately carry the demand load. If record of demand load is not available, size generator to match corresponding transformer, maximum capacity circuit as directed by the Owner's Representative.
- C. After completion of required usage of the temporary generators, prior to completion of the Project, the Contractor shall remove the generators. All temporary cables, switches, etc. shall be removed and all permanent equipment left in satisfactory condition.
- D. Each generator shall be housed in security type sound attenuated housing to prevent access by unauthorized personnel. Temporary power cables, connections, etc. shall be protected from unauthorized personnel.
- E. The Contractor shall be responsible for complete operation of the generator including Personnel, fuel supplies, proper safety precautions, etc. Generator shall not be left unattended while in operation.

- F. The Contractor shall provide temporary construction lighting and power as required in areas where work is being performed. Temporary power arrangements, outages, installation, work schedules, etc., shall be submitted in writing 3-weeks prior to requested outage date and approved by the Owner's Representative prior to start of work.
- 1.13 ASBESTOS, POLYCHLORINATED BIPHENYL (PCB) OR HAZARDOUS WASTE:
It is understood and agreed that this Contract does not contemplate the handling of asbestos, PCB or any hazardous waste material. If asbestos, PCB or any hazardous waste material is encountered, notify the Owner's Representative immediately. Do not disturb, handle or attempt to remove.
- 1.14 TIME/CURRENT COORDINATION, SHORT CIRCUIT, ARC-FLASH AND SERIES RATED EQUIPMENT
- A. Series Rated Equipment.
1. Circuit protective Devices identified as "Series Rated" or "Current Limiting" (i.e., CLCB - Current Limiting Circuit Breaker; CLF - Current Limiting Fuse, etc.) shall be series rated and tested (UL 489 and CSA5) by the Manufacturer with all equipment and circuit protective devices installed downstream of the identified series rated or current limiting device.
 2. Provide nameplates on all equipment located downstream, including the CLCB and CLF devices, to comply with CEC/NEC paragraphs 110-22 and 240-83 "CAUTION SERIES RATED SYSTEM - NEW DEVICE INSTALLATIONS AND REPLACEMENTS SHALL BE THE SAME MANUFACTURER AND MODELS".
- B. Short Circuit, Coordination and Arc-Flash
1. Perform Engineering Analysis and submit engineered settings for each equipment location, fuse and circuit breaker device, showing the correct time and current settings to provide the selective coordination within the limits of the specified equipment. Shall comply with the latest application Standards of IEEE and ANSI. Provide electrical system short circuit worst case bolted-fault analysis, both 3-phase line-to-line and 1-phase line-to-ground calculations as part of the coordination analysis recommendations. Provide Electric Arc-Flash calculations as part of the coordination analysis recommendations.
 2. The information shall be submitted in both tabular form and on time current log-log graph paper, with an Engineering Narrative. Written narrative describing data, assumptions, analysis of results and prioritized recommendations, six copies.
 3. The goal is to minimize an unexpected but necessary electrical system outage and Personnel exposure to the smallest extent possible within the fault occurrence location, using the specified Contract Equipment. Shall comply with, but not limited to:
 - a. IEEE-242, Recommended Practices for Protection and Coordination of Industrial and Commercial Distribution.
 - b. IEEE-399, Recommended Practices for Industrial and Commercial Power System Analysis.
 - c. IEEE-1584, Guide for Performing Arc-Flash Hazard Calculations.
 - d. CEC/NEC

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

4. Provide permanent warning labels on each equipment location. The labels shall describe Arc-Flash, Short-Circuit and Time/Current Coordination, including safety precautions and protective clothing. Also described actions to be taken if any circuit changes or equipment modifications occur.
5. Shall be submitted with the Shop Drawing submittals for the respective equipment.
6. The Contractor shall independently contact the Serving Utility Company to obtain the current system short circuit amps or available fault current.
7. The Contractor shall independently obtain As-Built Drawings for the existing infrastructure to establish lengths. If As-Built Drawings are no available, the contractor shall research existing conditions and make reasonable but conservative estimates of conductor length. Where existing conductors have been re-used, the Contractor shall confirm conductor quantity, size and conduit type.

1.15 INDEPENDENT TESTING LABORATORY

A. Testing Laboratories Definition

1. The Testing Laboratory shall meet Federal OSHA criteria for accreditation of Nationally Recognized Testing Laboratories (NRTL) Title 29 Part 1907 and 29 CFR-1910.
2. Membership in the National Electrical Testing Association (NETA) shall also constitute acceptance of meeting said criteria, for testing of electrical systems.

1.16 EQUIPMENT SEISMIC AND WIND LOAD REQUIREMENTS (ADDITIONAL REQUIREMENTS)

A. Seismic Performance and Seismic Restraint Requirements

1. Shall be based on the following:
 - a. Soil Site Class: ***
 - b. Design Spectral Response Acceleration: ***
 - c. Seismic Design Category: ***
 - d. Building Component Importance Factor: ***
 - e. Building Occupancy Category: ***
 - f. Mapped Spectral Accelerations: ***
 - g. Damped Design Spectral Response Accelerations: ***]
2. ***Refer to Structural, Architectural, and Soils Report Contract Documents for Additional Requirements.

B. General

1. Equipment supports and anchorage's provided as part of the Contract shall be designed, constructed and installed in accordance with the Earthquake Regulations of the California Building Code (CBC), International Building Code (IBC).
2. Provide equipment anchorage details, coordinated with the equipment mounting provision, prepared, signed and "stamped" with PE registration in good standing, by a Civil or Structural Engineer licensed as a Professional Engineer (PE) in the State of California.

3. Mounting Recommendations shall be provided by the Manufacturer based upon approved shake-table tests used to verify the seismic design of that type of equipment.
4. The Equipment Manufacturer shall document the details necessary for proper wind-load and seismic mounting, anchorage, and bracing of the equipment for floor, ceiling and wall/back installation location.
5. Seismic Performance shall be based on actual install location of the respective equipment in the building and height above or below grade.
6. The Seismic Requirements are typical for each equipment item exceeding 19 pounds, including but not limited to the following:
 - a. Switchgear, switchboards and motor control equipment

C. Certification

1. Electrical Equipment Manufacturers and Contractor shall provide Special Seismic Certification (SCC) for each specific equipment configuration with shake-table verification, all furnished as part of the Contract Documents Requirements. The SCC shall include the specific installation location characteristics of the respective equipment including ground or floor attachment.
2. Wind Loading

Electrical equipment and anchorages shall withstand the wind-load imposed at the install location. Wind Loading Withstand Requirements shall apply to all electrical equipment installed in outdoor locations and to all electrical equipment exposed to the weather. The equipment shall be tested and certified by the Manufacturer and Contractor. The Wind-Load Withstand Qualification of the equipment and anchorages shall be verified by the following methods:

 - a. Aerodynamic wind tunnel test method.
 - b. Analytical calculation method, for oversized equipment too large for wind tunnel test method.
3. The Wind-Load Withstand Rating and the SCC shall comply with the Requirements of the Authority Having Jurisdiction (AHJ), and include the latest revisions, but not limited to the following:
 - a. American Society of Civil Engineers; ASCE-7
 - b. CBC/IBC; including but not limited to Sections 1702, 1708, 1709, 1708A and 1709A.
 - c. California Office of Statewide Health Planning and Development OSHPD; OPA-Pre-approval of Anchorage; Code Application Notice CAN 2-1708A.5 and OSP-Special Seismic Certification Approval.
 - d. US Department of Homeland Security; FEMA (installing seismic restraints for electrical equipment).

1.17 ELECTRICAL WORK CLOSEOUT

- A. Prepare the following items and submit to the Owner's Representative before final acceptance.
 1. Two copies of all test results as required under this Section.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

2. Two copies of Local and/or State Code Enforcing Authorities' Final Inspection Certificates.
3. Copies of Record Drawings as required under the General Conditions, pertinent Division One Sections and Electrical General Provisions.
4. Two copies of all receipts transferring portable or detachable parts to the Owner's Representative when requested.
5. Notify the Owner's Representative in writing when installation is complete and that a final inspection of this work can be performed. In the event any defect or deficiencies are found during this final inspection they shall be corrected to the satisfaction of the Owner's Representative before final acceptance can be issued.
6. Prior to energizing, retighten to the proper torque, each circuit conductor lug landing, each bus bar (phases, neutral and ground) and circuit protection device threaded connections in switchboards after the equipment is installed/connected and prior to energizing the equipment. The torque values shall comply with Manufacturer's recommendations.

END OF SECTION 26 05 00
030520/1125074

SECTION 26 05 01

BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.01 SCOPE

- A. Work Included: All labor, materials, appliances, tools, equipment, facilities, transportation and services necessary for and incidental to performing all operations in connection with furnishing, delivery and installation of the work of this Section, complete as shown on the Drawings and/or specified herein. Work includes, but is not necessarily limited to the following:
1. Examine all other Sections for work related to those other Sections and required to be included as work under this Section.
 2. General Provisions and Requirements for electrical work.

1.02 SUBMITTALS (ADDITIONAL REQUIREMENTS)

- A. Submit product data sheets for all outlet boxes and disconnects fuses.
- B. Submit detailed Shop Drawings including Dimensioned Plans, elevations, details, schematic and point-to-point wiring diagrams and descriptive literature for all component parts for transformers.

PART 2 - PRODUCTS

2.01 OUTLET AND JUNCTION BOXES

- A. General:
1. Flush or concealed outlet boxes and junction boxes.
 - a. Non-masonry and/or non-concrete locations provide pressed steel boxes. Steel thickness not less than 0.062-inch, hot-dip galvanized. Knockout (KO) type with conduit entrances and quantities size to match conduits shown connecting to respective junction box and outlet box.
 - b. UL-514 listed and labeled.
 - c. Minimum required box depth is exclusive of extension-ring depth.
 - d. Provide all boxes with matching cover plates. Cover plates shall be gasketed water-tight in wet and outdoor locations.
 - e. Boxes installed in masonry or concrete shall be UL "concrete-tight" approved for installation in concrete, and shall allow the placing of conduit without displacing reinforcing bars.
 2. Provide outlet boxes of proper code size for the number of wiring devices, connecting conduits, and conductors/cables or conduits passing through or terminating therein. In no case shall outlet box be less than 4.0-inches square by 2.125-inches deep. Unless specified elsewhere or noted otherwise on the Drawings, 2.5-inches minimum depth for box width's exceeding 2-gang.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

3. Increase the minimum outlet box size to 4.69-inches square by not less than 2.125-inches deep, where one or more of the following conditions occurs:
 - a. More than two conduits connect to the outlet box.
 - b. Circuit "Homerun" or Conduit "Homerun" connects to outlet box.
4. Junction boxes shall be sized to comply with the following:
 - a. Code Requirements size based on the conduit quantities, conduit sizes and wire-fill connected to the junction box.
 - b. Junction box minimum size shall not be less than 4.69-inches square by 2.5-inches deep, but not less than size indicated on the Drawings or required by Code.
5. Outlet boxes installed in outdoor locations, or in wet locations, or in concrete/masonry, shall be cast-iron or cast-bronze, with threaded conduit hubs. UL rated for wet locations.
 - a. Aluminum boxes shall NOT be in contact with concrete or masonry. Die-cast aluminum or cast aluminum water-tight electrical outlet boxes with threaded hubs may be provided as an alternate to cast-iron or cast-bronze outlet boxes, only where one or more of the following conditions occur:
 - 1) Outdoor locations above finish grade.
 - 2) Indoor wet locations surface or flush in walls or ceilings.
 - 3) Not in contact with concrete or masonry.

B. Surface Outlet Boxes

1. Surface mounted outlet boxes, cast iron Type FS or FD, with threaded hubs as required. Box interior dimensions and interior volume capacity not less than required for "press steel boxes", and "sheet steel boxes". Provide plugs in all unused openings. Provide weatherproof gaskets for all exterior boxes.

2.02 STRUCTURAL AND MISCELLANEOUS STEEL

Structural and miscellaneous steel used in connection with electrical work and located out-of-doors or in damp locations, shall be hot-dip galvanized unless otherwise specified. Included are underground pull box covers and similar electrical items. Galvanizing averages 2.0 ounce per square foot and conforms to ASTM A123.

2.03 CONCRETE WORK (ADDITIONAL REQUIREMENTS)

A. Portland Cement

1. ASTM C33-(latest revision), Type II, Low Alkali Cement. Composed of Portland cement, coarse aggregate, fine aggregate, and water.
 - a. Concrete for use as electrical equipment footings and equipment slabs on grade, concrete shall attain minimum 28-day compressive strength of 4000psi, using not less than 5.75 sacks of cement per cubic yard of wet concrete.
 - b. Mix shall obtain a 6-inches slump, measured with standard slump cone per ASTM C143/C143M (latest revision).

2. Coarse Aggregate: Uniformly graded between maximum size not over 1½-inch and not less than 0.75-inch and minimum Size #4, crushed rock or washed gravel. For concrete encased conduit only, maximum aggregate size shall be ½-inch.
 3. Fine Aggregate: Clean, natural washed sand of hard and durable particles varying from fine to particles passing ¾-inch screen, of which at least 12% shall pass fifty mesh screens.
- B. Water: Clean and free from deleterious quantities of acids, alkalis, salts, or organic materials.
- C. Reinforcement
1. Bars: Intermediate Grade Steel conforming to ASTM A615/A615M grade 60, with pattern deformations.
 2. Welded Wire Fabric: ASTM A185/A185M.
 3. Bending: Conform to Requirements of ACI 318.
- D. Form Material: For exposed work, use PS 1-66 "B-B Concrete Form" plywood forms, or equal. Elsewhere, forms may be plywood, metal, or 1-inch by 6-inch boards. Forms for round lighting pole bases shall be sono-tube.

PART 3 - EXECUTION

3.01 GROUNDING (ADDITIONAL REQUIREMENTS)

- A. Grounding shall be executed in accordance with all applicable Codes and Regulations, both of the State of California and Local Authorities Having Jurisdiction.
- B. Each pull box or any other enclosure in which several ground wires are terminated shall be equipped with a ground bus secured to the interior of the enclosure. The bus shall have a separate lug for each ground conductor. No more than one conductor shall be installed per lug.
- C. The Maximum Resistance to Ground shall not exceed 5 ohms.

3.02 OUTLET AND JUNCTION BOXES

- A. General:
 1. Accurately place boxes and securely fastens to structural members. Where outlets are shown at same location but at different mounting heights, install outlets in one vertical line. Where outlets are shown at same location and mounting height, mount outlets as close together in a horizontal row as possible. Where the outlet boxes for switches and receptacles are shown at the same location and mounting height, mount in common out-let box with barriers between devices. Provide single piece multi-gang cover plate for close mounted outlet boxes. Where switches are shown on wall adjacent to hinge side of doors, box shall be installed to clear door when door is fully opened.
 2. Surface mounted outlets shall be attached to concrete or masonry walls by means of expansion shields.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

3. Provide metal outlet box for each device. Install devices in metal outlet boxes. Typical for all wiring devices including, switches, receptacles, line voltage devices, and low volt-age/signal system devices.

3.03 CONCRETE WORK

A. Form:

1. Space forms properly with spreaders and securely tie together. Do not use twisted wire form ties. Keep forms wet to prevent joints from opening up before concrete is placed. Replace improper construction as directed. Do not use wood inside forms.
2. Build in and set all anchors, dowels, bolts, sleeves, iron frames, expansion joints and other materials required for the Electrical Work. Place all items carefully, true, straight, plumb, and even.
3. Carefully remove all exposed forms. Cut nails and tie wires below face of concrete and fill all holes. Rubbish will not be allowed to remain in, under, or around concrete.

B. Mixing: Use batch machine mixer of approved type. After ingredients are in mixer, mix for at least 1½-minutes.

C. Transit Mixing: In lieu of mixing at site, transit mixing may be used if rate of delivery, haul time, mixing time, and hopper capacity is such that concrete delivered will be placed in forms within 90-minutes from time of introduction of cement and water to mixer.

D. Placing of Concrete

1. Before placing concrete, remove wood, rubbish, vegetable matter and loose material from inside forms. Thoroughly wet down wood forms to close joints.
2. Clean reinforcement; remove paint, loose rust, scale and foreign material. Bars with bends not called for will be rejected. Hold securely in place to prevent displacement. Lap bar splices 24-diameters, min; lap fabric one mesh min. Tie intersections, corners, splices with 16-gallon annealed wire, or as otherwise called for.
3. Place concrete immediately after mixing. Do not use concrete that has begun to set; no tempering will be allowed. If chuting is used, avoid segregation. In placing new concrete against existing concrete, use bonding agent per Manufacturer's directions.
4. Give careful and thorough attention to curing of concrete. Keep concrete and forms wet for a minimum of 10-days, after placing concrete.

E. Concrete Finish

1. Finish of Exposed Concrete: Horizontal surfaces, steel troweled monolithic finish; vertical surfaces, smooth and free of fins, holes, projection, etc.
2. Remove concrete pour-forms.

END OF SECTION 26 05 01
030920/1125074

SECTION 26 05 30

CONDUIT AND WIRE

PART 1 - GENERAL

1.01 SCOPE

- A. Work Included: All labor, materials, appliances, tools, equipment, facilities, transportation and services necessary for and incidental to performing all operations in connection with furnishing, delivery and installation of the work of this Section, complete as shown on the Drawings and/or specified herein. Work includes, but is not necessarily limited to the following:
1. Examine all other Sections for work related to those other Sections and required to be included as work under this Section.
 2. General Provisions and Requirements for electrical work.

1.02 SUBMITTALS (ADDITIONAL REQUIREMENTS)

- A. Submit product data sheets for all wire, supports, conduit, fittings and splicing materials.
- B. Submit material list for all conduit and conduit fittings.
- C. Submit details and structural engineering calculations for conduit support systems.

PART 2 - PRODUCTS

2.01 CONDUIT

- A. General
1. The interior surfaces of conduits and fittings shall be continuous and smooth, with a constant interior diameter. Conduits and conduit fittings shall provide conductor race-ways of fully enclosed circular cross section. The interior surfaces of conduits and fittings shall be without ridges, burrs irregularities or obstructions. Conduits and fittings of the same type shall be of the same uniform weight and thickness.
 2. Type of conduit, type of conduit fittings and conduit supports shall be suitable for the conditions of use and the conditions of location of installation, based on the Manufacturer's recommendations and based on applicable Codes.
 3. All fittings for metal conduit shall be suitable for use as a grounding means, pursuant to the applicable Code Requirements. All metal conduit and metal conduit fittings shall provide 3 second duration ground fault current carrying ratings, when installed and connected to the respective conduit, as follows:
 - a. RMC and EMT conduit fittings.
 - 1) 0.5 inch through 1.5 inch conduit/fitting size - 10,000 amp RMS.
 - 2) 2.0 inch and larger conduit/fitting size - 20,000 amp RMS.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- b. FMC and LTFMC Conduit Fittings
 - 1) 0.5 inch through 1.25-inch conduit/fitting size-1,000 amp RMS (without external bonding jumper).
 - 2) 1.5 inch through 4.0-inch fitting size-10,000 amp RMS with bonding jumper.
 - 4. Protective corrosion resistant finish for metal conduit fabricated from steel and metal conduit fittings fabricated from steel, shall be as follows:
 - a. Clean all metal surfaces (including metal threads) with acid bath “pickle” prior to coating, to remove dirt, oil and prepare surfaces for galvanizing.
 - b. Hot-dip galvanized zinc coating on all interior and exterior steel surfaces. Minimum finish zinc coating thickness shall not be less than 0.002 inches.
 - c. Threads shall be hot-dip zinc coated after machine fabrication.
 - d. Exterior metal surfaces shall be finished with clear organic polymer topcoat layer, after galvanizing.
 - e. The inner metal surfaces of conduit fittings shall be finished with a lubricating top-coat after galvanizing, to facilitate conductor pulling through the conduit/fitting.
 - 5. Threads for metal conduit and metal conduit fittings shall be taper-pipe-thread, National Pipe Standards (NPS) and shall comply with ANSI-B1.20.1.
 - 6. Metal conduit termination connector fittings shall be provided with a Manufacturer installed, insulating throat bushing inside the fitting. The bushing shall protect the wire conductor insulation from cutting, nicks and abrasion during conductor installation and electrical load “cycling” after installation is complete. The bushing shall comply with UL 94V-0 flammability.
 - 7. Provide conduit bonding/grounding jumper from metal enclosures with “concentric ring” knockouts, to positively ground/bond each respective conduit(s) to the metal enclosure.
 - 8. Metal conduit fittings connecting to PVC coated metal conduit shall be PVC coated to match the conduit.
 - 9. The conduit and fittings shall be watertight and airtight without cracks and pinholes.
- B. Rigid Metal Conduit (RMC)**
- 1. Rigid metal, round tubing, machine threaded at both ends.
 - a. The conduit and conduit fittings shall comply with the requirements for an equipment grounding conductor, pursuant to applicable Codes.
 - 2. RMC raceway types shall be as follows:
 - a. Rigid Galvanized Steel conduit (RGS), minimum yield strength shall be 35,000 PSI. Shall comply with NEMA standard 5-19 (latest revision); ANSI C80.1 and ANSI-C80.4 (latest revision); UL 514-B and UL 6 (latest revisions); National Pipe Standard Specification (latest revision).
 - b. Intermediate Steel Conduit (IMC). Shall comply with NEMA Standard 5-19 (latest revision) ANSI-C80.6 (latest revision); UL 2142 (latest revision).

3. RMC fittings:
- a. Fittings shall be compatible with RGS and IMC.
 - b. Fittings shall be rated "liquid tight".
 - c. Fittings imbedded in concrete shall be rated "liquid tight" and "concrete tight".
 - d. Connectors and couplings for terminating, connecting and coupling to RMC conduit shall be threaded metal.
 - e. Fittings shall comply with ANSI C80.4 and ANSI C33-84 (latest revision); NEMA FB1 (latest revision); UL 514 (latest revision).
 - f. Conduit seal fittings:
 - 1) Conduit seals shall prevent the passage of gasses, liquids and vapors past the location of the seal installation in the conduit.
 - 2) Conduit seals shall be suitable for installation in both vertical and horizontal conduit locations.
 - 3) Conduit seals shall be visible and accessible for inspection after installation is complete.
 - 4) Conduit seals shall be rated for the following locations:
 - a) Wet locations
 - b) Classified hazardous location materials NEC Class 1 Division 1.
 - c) Temperature ranges from 0 degrees centigrade through 90 degrees centigrade.
 - 5) Conduit seals, sealing compound and sealing compound dam shall be the products of the same Manufacturer.
4. RMC fittings as manufactured by:
- a. For threaded enclosure, termination connection.
 - 1) Thomas & Betts - 106 Series bonding locknut, 5302 Series sealing ring with stainless steel retainer.
 - b. For non-threaded enclosure, termination connector.
 - 1) Thomas & Betts - 370 Series watertight threaded sealing hub, 106 Series threaded bonding locknut, Sta-Con Series enclosure bonding jumper and 3870 Series threaded ground bushing.
 - 2) OZ/Gedney-CHMT/CHT watertight threaded hub with bonding locknut and GH50G Series enclosure bonding jumper.
 - c. For RMC to RMC conduit-to-conduit coupling
 - 1) Erickson - 674 (threaded) Series
 - 2) OZ/Gedney Type 4 (threaded) Series
 - 3) Threaded RMC conduit couplings, product of the same Manufacturer as the RMC conduit.
 - d. For RMC Conduit Seals
 - 1) OZ/Gedney-EYA and EYAM (threaded) Series
 - 2) Appleton-EYF and EYM (threaded) Series

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- C. Electrical Metallic Tubing (EMT)
1. Rigid metal round tubing, "thin wall" steel construction, with non-threaded ends.
 - a. The conduit and conduit fittings shall comply with the Requirements for an equipment grounding conductor pursuant to applicable Codes.
 - b. The conduit shall be watertight and airtight without cracks and pinholes.
 2. EMT shall be allowed for conduit size ranges from 0.5-inch through 4.0-inch.
 3. Comply with ANSI C80.3, C80.4, and ANSI C33.98 (latest revisions); UL 594 and UL 797 (latest revisions); CEC Section 12500 (latest revision).
 4. EMT fittings:
 - a. Connectors and couplings for terminating, connecting and coupling to EMT conduit shall be non-threaded steel fabrication.
 - b. EMT termination connector fittings shall be as follows:
 - 1) Set screw type "concrete tight" when installed in dry interior locations.
 - 2) Compression types "raintight" and "concrete tight" when installed in wet or damp locations, outdoors and in concrete or masonry construction.
 - c. Fittings shall comply with ANSI C33.84 (latest revision); UL 514 (latest revision); NEMA FB-1.
 5. EMT fittings as manufactured by:
 - a. For threaded and non-threaded enclosure, termination connector
 - 1) Thomas & Betts-TC5031 (set screw type) Series (with locknuts).
 - 2) OZ/Gedney-4000ST (set screw type) Series.
 - 3) Thomas & Betts-5123 (compression type) Series (with two locknuts).
 - 4) OZ/Gedney-7000ST (compression type) Series (with locknut).
 - 5) Thomas & Betts-4240 (compression type) Series (90 degree angle with locknut).
 - 6) OZ/Gedney-8000WT (compression type) Series (90 degree angle with locknut).
 - b. For EMT to EMT conduit-to-conduit coupling:
 - 1) Thomas & Betts-TK121 (set screw type) Series (with locknut).
 - 2) OZ/Gedney-5000 (set screw type) Series (with locknut).
 - 3) Thomas & Betts-5120 (compression type) Series.
 - 4) OZ/Gedney-6000S (compression type) Series.
 - c. For EMT to RMC conduit to conduit combination coupling:
 - 1) Thomas & Betts-HT221 (set screw type) Series.
 - 2) OZ/Gedney-ESR (set screw type) Series.
 - 3) Thomas & Betts-530 (compression type) Series.
 - 4) OZ/Gedney-ETR (compression type) Series.

D. Flexible Metal Conduit (FMC)

1. Round flexible conduit, fabricated from a single continuous steel strip. The steel shall be factory formed into continuous interlocking convolutions to form a complete lock between steel strips and provide raceway flexibility.
2. Metal to metal grounding contact shall be maintained throughout the length of the FMC conduit.
3. FMC shall be allowed for conduit size ranges from 0.5 inch through 4.0-inches.
4. FMC shall comply with ANSI-C.33.84 and ANSI C33.92; NEMA FB-1; CEC 12-1100.
5. FMC Fittings
 - a. FMC fittings shall be malleable iron construction or steel construction.
 - b. Fitting shall automatically cause the FMC raceway throat opening to be centered with respect to the fitting throat opening.
 - c. Straight and angled connector termination fittings shall be threaded on one end and shall include a threaded locknut, suitable for connection to threaded and unthreaded enclosures.
 - d. The attachment of the fittings to FMC shall be angled saddle type, to engage and interlock with the FMC spiral groove, and shall be unaffected by vibration. Direct bearing screw type fittings shall not be used.
 - e. Direct FMC conduit-to-FMC conduit coupling of FMC shall not be permitted.
 - f. Shall comply with ANSI C33.9, and ANSI C33.92 (latest revision); NEMA FB1 (latest revision); UL 514.
6. FMC fittings as manufactured by:
 - a. Straight Termination Connectors
 - 1) Thomas & Betts-3110 Series (with locknut)
 - b. 45 and 90 Degree Angle Connectors
 - 1) Thomas & Betts-3130 Series (with locknut)
 - c. FMC to EMT conduit combination coupling:
 - 1) Thomas & Betts 503TB Series.

E. Liquid Tight Flexible Metal Conduit (LTFMC)

1. The metal conduit core of LTFMC shall comply with the same requirements as FMC conduit, with the addition of a thermoplastic exterior flexible jacket over the metal core.
2. The exterior jacket shall be positively locked to the metal core to prevent jacket "sleeving".
3. The LTFMC shall be rated for installation and operating service temperatures of between minus 20 degrees centigrade through plus 90 degrees centigrade.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

4. The LTFMC jacket shall be suitable for continuous exposure to sunlight, rainwater, water vapor, mineral oils and liquid solvents, without penetrating into the conduit and without deteriorating the jacket.
5. LTFMC sizes from 0.5-inch through 1.25-inches shall include an additional internal ground conductor, fabricated by the Manufacturer, as an integral part of the conduit core.
6. Direct LTFMC conduit-to-LTFMC conduit coupling of LTFMC shall not be permitted.
7. LTFMC shall be allowed for conduit size ranges from 0.5-inch through 4.0-inches.
8. In addition to the Requirements for FMC conduit, LTFMC shall also comply with ANSI C-33.84 (latest revision); NEMA-FB1 (latest revision); CEC 12-1400 (latest revision).
9. LTFMC fittings
 - a. Fittings shall include an external mechanical ground/bond wire connector.
 - b. The attachment of the fitting to LTFMC shall be threaded compression type onto the conduit core with locknut and liquid tight jacket compression seal. The fitting shall automatically prevent “sleeving” of the jacket.
 - c. Straight and angled termination connector fittings shall be threaded on one end and shall include locknut suitable for connection to threaded and unthreaded enclosures.
10. LTFMC fittings as manufactured by:
 - a. Termination connector fittings:
 - 1) Straight
Thomas & Betts-5331 GR Series.
 - 2) 45 and 90 Degree Angle Connectors
Thomas & Betts-5341GR and 5351GR Series
 - 3) Straight
Appleton-STB Series; STN-L Series for use with preformed “knockouts”.
 - 4) 45 and 90 Degree Angle Connectors
Appleton-STB-L Series; STN-L Series for use with preformed “knockouts”.
 - 5) Straight
OZ/Gedney-4QLT Series.
 - 6) 45 and 90 Degree Angle Connectors
OZ/Gedney-4QLT Series
 - b. LTFMC to RMC conduit to conduit combination coupling fittings:
 - 1) Thomas & Betts-5271 GR Series.
 - 2) OZ/Gedney-4QFML Series

F. Rigid Non Metallic Conduit (RNMC)

1. General

- a. Conduit and fittings shall be 90 degree centigrade conductor rated. Fabricated from homogeneous material, free from visible cracks, holes or foreign inclusions, with integral "end-bell". The conduit and conduit fittings shall be watertight and airtight.
- b. Conduit, conduit fittings and conduit fitting assembly "solvent cement" shall all be the product of the same Manufacturer. Conduit fittings shall be solvent cement welded watertight.
- c. Conduit and fittings shall be identified with legible markings showing ratings, size and Manufacturers name.
- d. RNMC and fitting shall be corrosion resistant, watertight.
- e. Conduit shall be suitable for conductor operating temperatures from minus 20 degrees centigrade to 90 degrees centigrade.
- f. RNMC shall comply with NEMA TC-2 (PVC 40 conduit, latest revision) NEMA TC-6 (EB conduit latest revision) and NEMA TC-3 (fittings, latest revision); UL 514 and UL 651 (latest revision).

2. Polyvinyl Chloride (PVC)-RNMC

- a. PVC-Schedule 40 heavy wall construction.
- b. PVC-Schedule 80 extra heavy wall construction.
- c. PVC-Type EB.

3. RNMC fittings connecting to metallic raceways shall be provided with a ground / bond jumper connection.

G. Conduit Bodies Conduit Fitting

1. Conduit bodies shall provide conductor access with a removable conduit body cover and wiring area enclosed in metal housing. The conduit body shall facilitate pulling conductors.
2. In-line form "C" conduit bodies shall be prohibited.
3. The interior space "length" of 90 degree "elbow" conduit bodies shall not be less than six times the diameter size of the largest conduit connecting to the conduit body.
4. Conduit body covers shall be removable, gasketed; watertight "domed" metal covers "Mogul-Type" with threaded screw attachment to the conduit body.
5. Lubricated, reusable, wire roller guards inside the conduit body shall protect wire from insulation damage during wire "pulling".
6. Conduit body fittings shall comply with UL 514.
7. Conduit bodies as manufactured by:
 - a. For RMC Conduit
 - 1) Hubbell/Killark – LB/Mogul (90-degree elbow) Series – threaded body.
 - 2) OZ/Gedney – LB 6X/Mogul (90 degree elbow) Series - threaded body.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- 3) Appleton – LB/Mogul (90 degree elbow) Series - threaded body.
- b. For EMT Conduit
 - 1) Same as for RMC conduit. Provide EMT to RMC conduit combination coupling fitting for each outlet body connection.

2.02 CONDUIT SUPPORTS

A. General

1. Conduit Supports, hangers and fasteners for metal conduit shall be steel, hot dip zinc galvanized.
2. Conduit supports, hangers and fasteners for PVC coated conduit shall be PVC coated to match the conduit PVC coating.
3. Threaded hardware shall be continuous, free running threads.
4. Conduit support systems, including support channels, pipe clamps, braces, anchors, hard-ware, fasteners, shall be sized to support the full capacity circuit conductors weight, plus the installed conduit weight, plus the conduit fitting weight and support hardware weight, plus a 300% additional weight capacity safety factor.
5. Provide lock washer at each “bolted”/threaded connection.
6. Conduit supports, fasteners, channels, braces, hardware, anchors, pipe clamps and hangers as manufactured by Unistrut or Kindorf.
7. Supports shall be free of “BURRS” and sharp edges.
8. Metal supports cut in the field shall be zinc galvanized after cutting to prevent rust.

B. Conduit Support Channels

1. “C” channels shall be factory preformed with a minimum 12 gauge thickness metal. The channel shall be factory “punched” with regularly spaced slotted holes for fastener attachments along the length of the channel.
2. The “C” channel shall not deflect more than 0.1 inches between channel supports at maximum installed design load, including required safety factor.
3. Channels shall comply with ANSI-1008 (latest revision) and ASTM-A569 (latest revision).
4. Channels shall provide “turned lips” at longitudinal edges to hold (lock-in) fasteners.
5. Conduit support channels suspended from conduit hangers shall attach to conduit hangers with treaded connections. Provide a minimum of two hangers (trapeze style) connected to each channel.
6. Non-suspended conduit support channels shall connect to structure fasteners with threaded connectors.

2.03 ELECTRICAL POWER WIRE AND CABLE

A. General

1. All wire and cable shall be single-conductor, annealed copper, insulated 600 volt, #12 AWG minimum unless specifically noted otherwise on the Drawings.
2. Conductors #10 AWG and smaller shall be solid. Conductors #8 AWG and larger shall be stranded.
3. Insulation of conductor connected to circuit protection devices required to be "100%" rated, shall be 90 degree centigrade rated insulation.
4. Insulation of conductors installed outdoors, on grade or underground, insulation shall be rated for wet locations.
5. Insulation of conductors installed outdoors, installed exposed to the sun, installed in exposed conduits, insulation shall be rated for high-temperature 90 degrees centigrade.
6. Conductor exposed to oil, insulation and jacket shall be oil resistant, complying with "Oil Resistant-1" and "Oil Resistant-2" UL 83.

B. Conductor Insulation

600 Volt AC and/or DC insulated conductors installed entirely inside conduits, or enclosed inside wireways, or enclosed inside raceways, insulation shall be rated as follows.

1. Indoor above grade locations either concealed or exposed.
 - a. Dual rated THHN and THWN
 - b. Individually rated THHN-2
 - c. Individually rated THWN-2
 - d. XHHW-2
2. Outdoor above grade either concealed or exposed.
 - a. XHHW-2
 - b. THWN-2
 - c. THW-2
3. Outdoor below grade or outdoor on grade.
 - a. XHHW-2
 - b. THWN-2
 - c. THW-2
4. All other enclosed raceway locations not described above.
 - a. XHHW-2
 - b. THWN-2
 - c. THW-2

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

C. Insulation Color Coding and Identification

1. The following color code for branch circuits:
 - a. Neutral . . . White (Tape feeder neutrals with white tape near connections)
 - b. Normal Power

<u>120/208 Volt</u>	<u>480/277 Volt</u>
Ground Green	Ground Green
Phase A Black	Phase A Brown
Phase B Red	Phase B Orange
Phase C Blue	Phase C Yellow
2. When individual neutral conductors are shown for each branch circuit, the color code for the neutral conductors shall be as follows:
 - a. 120/208 volt; Phase A - White with Black stripe; Phase B - White with Red stripe; Phase C - White with Blue stripe.
 - b. 277/480 volt; Phase A - White with Brown stripe; Phase B - White with Orange stripe; Phase C - White with Yellow stripe.
3. Feeders identified as to phase or leg in each, switchboard, switchgear, panelboard and junction location with printed identifying tape.

D. Electrical circuits and feeders, copper:

1. Wire size shown on the Drawings is for copper conductors. Aluminum conductors shall not be permitted.

PART 3 - EXECUTION

3.01 GROUNDING

- A. Grounding shall be executed in accordance with all applicable Codes and Regulations, both of the State and local authorities having jurisdiction.
- B. Where nonmetallic conduit is used in the distribution system, the Contractor shall install the proper sized copper ground wire in the conduit with the feeder for use as an equipment ground. The electrical metallic raceway system shall be grounded to this ground wire.
- C. The maximum ground/bond resistance to the grounding electrode shall not exceed 1 ohms from any location in the electrical system. The maximum ground resistance of the grounding electrode to earth shall not exceed 5 ohms.
- D. Ground/Bond Conductors
 1. Provide an additional, dedicated, green insulation equipment ground/bond wire inside each conduit type and raceway as follows. Size the ground/bond conductors to comply with CEC Requirements. The metal conduit or raceway shall not be permitted to serve (function) as the only (exclusive) electrical ground return path:
 - a. All types of nonmetallic conduit and all types of non-metallic raceways including but not limited to: RNMC - Rigid Nonmetallic Conduit.
 - b. FMC – Flexible Metal Conduit.
 - c. LTFMC – Liquid Tight Flexible Metal Conduit.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- d. Metal and non-metal raceways.
 - e. RMC – Rigid Metal Conduit.
 - f. EMT – Electrical Metal Tubing.
2. The equipment ground/bond wire shall be continuous from the electrical circuit source point of origin to the electrical circuit end termination utilization point as follows:
- a. Every conduit and raceway path containing any length of the above identified conduits or raceway.
 - b. Every conduit path and raceway path connected to any length of the above-identified conduits and raceways.
3. The equipment ground/bond wire shall be sized as follows, but in no case smaller than indicated on the Drawings. Install equipment ground/bond wire in each conduit/race-way, with the respective phase conductors:
- | <u>Feeder, Subfeeders and
Branch Circuit Protection</u> | <u>Minimum Equipment
Ground Wire Size</u> |
|---|---|
| 15 amp | #12 |
| 20 amp | #12 |
| 30 to 60 amp | #10 |
| 70 to 100 amp | #8 |
| 101 to 200 amp | #6 |
| 201 to 400 amp | #2 |
| 401 to 600 amp | #1 |
| 801 to 1000 amp | 2/0 |
| 1001 to 1200 amp | 3/0 |
| 1201 to 1600 amp | 4/0 |
| 1601 to 2000 amp | 250 MCM |
| 2001 to 2500 amp | 350 MCM |
| 2501 to 4000 amp | 500 MCM |
4. Splices in ground/bond wires shall be permitted only at the following locations:
- a. Ground buses with listed and approved ground lugs.
 - b. Where exothermic welded ground/bond wire splices are provided.
5. Provide ground/bond wire jumpers for conduit fittings with ground lugs, expansion and deflection conduit fittings at conduit fittings connecting between metallic and non-metallic raceways and to bond metal enclosures to conduit fittings with ground lugs.
- E. Where conductors are run in parallel in multiple raceways, the grounding conductor shall be run in parallel. Each parallel equipment-grounding conductor shall be sized on the basis of the ampere rating of the overcurrent device protecting the circuit conductors in the raceway. When conductors are adjusted in size to compensate for voltage drop, grounding conductors, where required, shall be adjusted proportionately in size.
- F. Ground conductors for branch circuit wiring shall be attached at each outlet to the back of the box using drilled and tapped holes and washer head screws, 6-32 or larger.
- G. Each panelboard, switchboard, pull box or any other enclosure in which several ground wires are terminated shall be equipped with a ground bus secured to the interior of the enclosure. The bus shall have a separate lug for each ground conductor. No more than one conductor shall be installed per lug.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

3.02 CONDUIT

A. General

1. The sizes of the conduits for the various circuits shall be as indicated on the Drawings, but not less than the conduit size required by Code for the size and quantity of conductors to be installed in the conduit.

B. RMC Installation Locations

RGS, IMC Conduits and RGS, IMC fittings shall be installed in the following locations:

1. Embedded in floors, walls, ceilings, roofs, foundations, and footings constructed with concrete.
2. Embedded in walls and foundations constructed with brick and masonry.
3. Interior of buildings, within 9-feet of finish floor lines for exposed conduit locations.
4. Exterior of building for exposed conduit locations.
5. Damp or wet locations, exposed or concealed locations.
6. Exposed on roofs.
7. In hazardous materials areas and locations; below hazardous materials areas and locations; above hazardous materials areas and locations.
8. Exposed on utility service poles, for pole risers less than 9-feet above finish grade.
9. RMC conduit and RMC fittings may be installed in any location where EMT and FMC conduit is permitted to be installed.

C. EMT Installation Locations

EMT conduit and EMT fittings may be installed in the following locations, for circuit conductors operating below 600 volts to ground; locations containing only "non-hazardous materials"; only dry locations:

1. Concealed in hollow non masonry/non-concrete, metal stud frame and wood stud frame walls and floors.
2. Concealed above ceilings.
3. Exposed inside interior enclosed crawl spaces.
4. Exposed interior locations placed 9-feet or higher above finished floors (except as described in paragraph below at lower heights).
5. Exposed on walls and ceilings (any height) in the following dedicated function areas, interior enclosed room locations:
 - a. Indoor enclosed electrical equipment rooms and closets.
 - b. Indoor enclosed data and telecommunication terminal rooms and closets.
 - c. Indoor enclosed HVAC equipment rooms and closets.

6. Any location where FMC is described to be installed, except as the final connection to rotating or vibrating equipment.

D. FMC Installation Locations

FMC conduit and FMC fittings may be installed in the following locations for circuit conductors operating below 600 volts to ground; locations containing only “non-hazardous materials”; only dry, interior locations:

1. Concealed in hollow non-masonry metal stud frame and wood stud frame fully enclosed walls.
2. Concealed above fully enclosed ceiling spaces.
3. FMC conduit shall be installed in continuous lengths between termination points. FMC shall not be “spliced” or coupled directly to FMC or any other conduit type under any circumstance.
4. The maximum continuous length of FMC that shall be installed between termination end points is 15-feet. Circuits requiring continuous conduit lengths exceeding 15 feet between termination end points shall be installed using either RMC or EMT conduits. FMC lengths shorter than 16-inches are prohibited.
5. The minimum size FMC conduit shall be as shown on the Drawings but not be less than the following:
 - a. FMC lengths of 6-feet or less, minimum FMC conduit size shall be 0.50-inch.
 - b. FMC lengths exceeding 6-feet, minimum FMC conduit size shall be 1.0-inch.

E. LTFMC Installation Locations

LTFMC conduit and LTFMC fittings shall be installed in the following locations for circuit conductors operating below 600 volts to ground; locations containing only “non-hazardous materials”:

1. Final electrical connection to vibrating or rotating equipment; control and monitoring devices mounted on vibrating and rotating equipment including the following. Minimum conduit length shall not be less than 24-inches:
 - a. Motor, engines, boilers, solenoids, and valves.
 - b. Fixed mounted “shop” (manufacturing) production equipment.
 - c. Fixed mounted food preparation equipment and “kitchen” equipment.
2. All locations where exposed flexible conduit connections are required, both indoor and outdoor.
3. Final connection to indoors electrical transformers. Minimum conduit length shall not be less than 24-inches; maximum conduit length shall not exceed 72-inches.
4. Do not install LTFMC located in environmental air plenums.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

F. RNMC Installation Locations

RNMC conduit and RNMC fittings shall be installed in the following locations containing only "non-hazardous material":

1. Underground, concealed below earth grade, unless specifically noted or specified other-wise.
2. Exposed on utility service poles, for pole risers at 9-feet or higher above finish grade, Schedule 80 PVC only.
3. RNMC type "EB" conduit(s) shall be concrete encased along the entire length of the conduits for all installation locations.
4. Non-metal type raceways and RNMC type conduit shall not be installed inside buildings.

G. Conduit Installation

1. Conduit Supports

- a. Securely and rigidly support all raceways/conduits from the building structure. Raceways/Conduits shall be supported independent of all piping, air ducts, equipment ceiling hanger wires, and suspended ceiling grid systems. Secure conduit to structural element by means of UL listed and approved hangers, fasteners, "C" channels and pipe clamps.
- b. Provide conduit supports spaced along the length of the conduit as follows:
 - 1) RMC and EMT conduit, maximum not to exceed 96-inches on center; within 24-inches of each conduit bend and conduit termination location.
 - 2) FMC and LTFMC conduit, maximum not to exceed 24-inches on center; within 6-inches of each conduit bend and conduit termination location.

3.034 WIRE AND CABLE

- A. Branch circuit and fixture joints for #10 AWG and smaller wire shall be made with UL-approved connectors listed for 600 volts, approved for use with copper and/or aluminum wire. Connector to consist of a cone-shaped, expandable coil spring insert, insulated with a nylon shell and two wings placed opposite each other to serve as a built-in wrench or shall be molded one-piece as manufactured by 3M-"Scotchlok".
- B. Branch circuit joints of #8 AWG and larger shall be made with screw pressure connectors made of high strength structural aluminum alloy and UL-approved for use with both copper and/or aluminum wire as manufactured by Thomas & Betts. Joints shall be insulated with plastic splicing tape, tapered half-lapped and at least the thickness equivalent to 1.5-times the conductor insulation. Tapes shall be fresh and of quality equal to Scotch.
- C. Use UL listed pulling compound for installation of conductors in conduits.
- D. Correspond each circuit to the branch number indicated on the panel schedule shown on the Drawings except where departures are approved by the Owner's Representative.
- E. All wiring, including low voltage, shall be installed in conduit.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- F. All splices in exterior pull boxes shall be cast resins encapsulated.
1. Power conductor splices - 3M Scotchcast Series 82/85/90; Plymouth or equal.

END OF SECTION 26 05 30
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SECTION 26 10 05

POWER DISTRIBUTION (OVER 600 VOLTS)

PART 1 - GENERAL

1.01 SCOPE

- A. Work Included: All labor, materials, appliances, tools, equipment, facilities, transportation and services necessary for and incidental to performing all operations in connection with furnishing, delivery and installation of the work of this Section, complete as shown on the Drawings and/or specified herein. Work includes, but is not necessarily limited to the following:
 - 1. Examine all other Sections for work related to those other Sections and required to be included as work under this Section.
 - 2. General Provisions and Requirements for electrical work.
- B. Additional Requirements for Conductors and Raceways of Circuits Greater than 600 volts.

1.02 SUBMITTALS (ADDITIONAL REQUIREMENTS)

- A. Submit Product Data Sheets for all Wire, Conduit, Fittings, Splicing, and Terminating Materials.
- B. Submit Material List for all Conduit and Fittings.
- C. Perform Factory High Voltage AC and DC and Corona Level Conductor Tests per ICEA Standards on each length of cable. Submit Certified Reports of Factory Tests, together with all data necessary to determine that cable is as specified, including type of conductor, AWG size and stranding; type and thickness of insulation and jacket; type of shielding; insulation resistance constant corrected to standard temperature; voltage rating. Use standard ICEA terminology in reports.
- D. Submit the AEIC Qualification Test Reports Data.

1.03 FACTORY TESTING

- A. Final Testing on Shipping Reel
Each completed length of conductor shall be subjected to a 1-minute AC test voltage prior to shipping after the conductor's have been placed on the shipping reels. AC test voltage shall be 25kV for 5/8kV insulated conductors and 34kV for 15kV insulated conductors.
- B. Conductors, which fail the specified Factory Tests, are unacceptable and shall not be used. Submit eight copies of Factory Test Reports for review. Conductors shall not be installed until the Architect has reviewed the Factory Test Reports.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

PART 2 - PRODUCTS

2.01 CONDUCTORS

A. General

1. Cables conductor sizes and quantity as indicated on Drawings.
2. Cable shall be in compliance with the latest applicable Requirements of UL, OSHA, NEMA, NEC, ASTM, AEIC and ICEA for installations indicated.
3. All cable must have been manufactured within 1-year of Award of Contract. As manufactured by Okonite "Okoguard-Okoseal"; or Prysmian Cable Systems; or Kerite Company.
4. The following minimum information shall be factory imprinted on the cable jacket, a minimum of 36-inches on center.
 - a. Manufacturers name.
 - b. Insulation type and voltage level.
 - c. Date of manufacture.
 - d. Conductor size and material.
 - e. Jacket type.
5. Cable shall be shipped and stored on cable reels and cable ends shall be sealed water-tight at all times. Cables not so shipped, stored and sealed shall be rejected.
6. The cable shall be rated 105 degrees C for normal operation, 140 degrees C for emergency overload operation, and 250 degrees C for short circuit conditions.
7. UL listed as type MV-105 per UL-1072.
8. Jacket shall be oil resistant, complying with "Oil Resistant-1" and "Oil Resistant-2" UL 1072.

B. Power Cable Construction (Phase to Phase System Operating, Voltage, 2000 volt thru 5000 volt)

1. Conductor – single conductor copper, Compact Stranded per ASTM B496, ICEA S-68-524, NEMA WC-8 and UL-1072.
2. Conductor Strand Screen – continuous extruded layer over the conductor per ICEA S-68-516, AEIC CS-6, NEMA WC-8, and UL-1072.
3. Insulation – continuous Ethylene Propylene Rubber (EPR). 115 mil for 8 KV 100% insulation level, 5KV 133% insulation levels. Extruded over and bonded to conductor strand screen meeting or exceeding ICEA S-68-516, NEMA WC-8, AEIC CS-6, and UL 1072.
4. Insulating Screen – continuous, extruded, semi-conducting screen over the insulation meeting or exceeding ICEA S-68-516, AEIC CS-6 and UL-1072.
5. Shield – 5-mil copper tape shield applied with not less than a 12.5% overlap and full 100% coverage over insulation screen. Per UL-1072, ICEA S-68-516, and NEMA WC-8 (shield shall be omitted on cable utilized as a neutral conductor).

6. Jacket – non-metallic black sunlight resistant PVC (polyvinylchloride) extruded over shield, per ICEA S-68-516, NEMA WC-8, and UL-1072.
- C. Power Cables Construction (Phase to Phase System Operating Voltage 5001 volt thru 13000 volt).
1. Conductor - single conductor copper, Compact Stranded per ASTM B496, ICEA S-68-524, NEMA WC-8, and UL-1072.
 2. Conductor strand screen - continuous extruded layer over conductor per ICEA S-68-516, AEIC CS-6, NEMA WC-8, and UL-1072.
 3. Insulation - continuous Ethylene Propylene Rubber (EPR). 220 MIL for 15KV, 133% insulation levels. Extruded over and bonded to conductor strand-screen meeting or exceeding ICEA S-68-516, NEMA WC-8 AEIC CS-6, and UL- 1072.
 4. Insulating screen - continuous, extruded, semi-conducting screen over the insulation meeting or exceeding ICEA S-68-516, AEIC CS-6, and UL- 1072.
 5. Shield - 5-mil copper tape shield applied with not less than a minimum of 12.5% overlap and 100% coverage over insulation screen. Per UL 1072, ICEA S-68-516, NEMA WC-8.
 6. Jacket - non-metallic black sunlight resistant PVC (polyvinylchloride) extruded over shield, per ICEA S-68-516, NEMA WC-8, and UL- 1072.

2.02 CONDUCTOR SPLICING AND TERMINATIONS

A. General

1. All material used shall be compatible with specific cable installed and shall be rated for 90 degrees centigrade normal operation, 130 degrees centigrade emergency overload operation, and 250 degrees centigrade for short circuit conditions.
2. Shall be in compliance with Manufacturer's standard recommendations. Splices shall be suitable for continuous immersion in water.
3. Splices and terminations shall meet Class-1 Requirements.
4. The splices and terminations shall match and be compatible with the respective cable type, insulation, shielding and jacket.
5. Ground cable shield at each splice and termination.

B. Splices - (Built-Up Tape Type, for PVC Jacket Cables)

1. General

- a. Conductors shall be joined by "T" type, "Y" type or inline (as applicable) compression, tinned copper sleeves connectors, installed with hydraulic "die" compression tool. Sleeves shall have chamfered ends, and cable stops to properly center on conductor. Ampacity equal to conductor. 3M-"Scotchlok", Burndy-"144 splice".

**UNIVERSITY HIGH SCHOOL
 UNDERGROUND HIGH VOLTAGE REPLACEMENT
 IRVINE UNIFIED SCHOOL DISTRICT**

- 2. Built-up tape type for PVC jacket cables
 - a. Individual splices shall be hand laid built-up self-vulcanizing, insulating tape, with stress relief. Splice kits as manufacturing by Kerite, 3M or Plymouth.
 - 3. Polymeric cable splices kits:
 - a. Heat shrink or mechanical preshrink (cold shrink) uniform cross section, with linear stress relief and dielectric insulating layers; metallic shielding across splice with ground lead out; overall jacket sleeve.
 - b. Comply with IEEE 48 and 404; seal environmental to provide ANSI C119.2 water immersion test, latest revisions.
 - c. Outdoor weather tight construction, anti-tracking ultraviolet solar radiation overall jacket protection. As manufactured by Raychem or 3M.
- C. Terminations (Indoor built-up tape type, or polymeric termination kit for PVC jacket cables where cable terminator is not specified with equipment).
- 1. General
 - a. Conductor shall be terminated with compression tinned copper seamless, barrel terminal lugs installed with hydraulic "die" compression tool. Terminal lug shall be 4-bolt spade lug type for bus connections or stud type for other locations. Burndy- "Hylug" or 3M- "Scotchlok".
 - 2. Individual cable terminations shall be hand laid, built-up self-vulcanizing insulating tape with stress relief. Termination kits as manufactured by Kerite, 3M or Plymouth.
 - 3. Polymeric cable termination kits:
 - a. The incoming line feeders shall be provided with premolded insulated primary conductor termination kits. The termination kits shall conform properly to compatible with the conductors shown on the Drawings, including out of round cables as defined on AEIC and ICEA heat shrink or mechanical preshrink. The termination shall environmentally seal the cable jacket. Stress relief and feeder insulation shield grounding. Provide anti-tracking skirts on terminations.
 - b. Provide 4-bolt copper spade lug cable connector compression connectors, and bolt each termination to respective phase lug landings. Grade 5 Hex head bolts and Belleville washers. As manufactured by 3M or Raychem.
 - 4. Terminations shall comply with IEEE-48- (latest revision) Class 1 conductor terminations shall all be 15kV Class:
 - a. AC withstand input (kV)..... 50
 - b. DC withstands, 15-minute (kV)..... 75
 - c. Partial discharge, minimum kV for 3pC or less 15.6
 - d. BIL basic impulse withstand 1.2 x 50 micro seconds crest
kV (outdoor) 110
 - e. BIL basic impulse withstand 1.2 x 50 micro seconds crest
kV (indoor) 95
 - f. Continuous current rating (normal, overload,
emergency)..... equal to connected cable
 - g. Nominal overall length (inch)..... 15.5

- h. Wet withstand, 10 seconds (kV rms).....45
- i. Dry withstand, 6 hours (kV rms).....35
- j. To match connected cable and type.

- 5. Provide a minimum of two conductor cable landings for each incoming line phase termination.
- 6. Provide removable, electrically insulated, "boots" to completely cover each termination connection bolted lug landing and bus connection.
- 7. Primary cable supports shall be provided to eliminate any strain on cable terminations.

2.03 SEPARABLE INSULATED CONNECTOR, ELBOW CABLE TERMINATORS AND APPARATUS BUSHING WELLS

A. General

- 1. Separable insulated connector system cable terminators shall be non-load break, molded thermoplastic and molded rubber 200 amp for wire sizes smaller than 4/0 AWG, 600 amp for wire sizes 4/0 AWG and larger, unless noted otherwise on Drawings.
 - a. De-energized dead-break bolted connects, unless noted otherwise on Drawings.
- 2. Assemblies shall be rated for continuous submersion in 10 feet of water.
- 3. Provide terminators to accommodate the connecting feeder cable type and size.
- 4. Insulated, shielded, dead front, safety plug, one for each cable phase, complying with ANSI C119 and 386 latest revisions. Shall be designed, manufactured, and tested to comply with IEEE-386 and IEEE-592 latest revisions. Suitable for "insulated-hook-stick" insertion and removal.
- 5. Elbows and apparatus bushing wells shall be mechanically and electrically compatible. Shall be inter-changeable operation between multiple Manufacturers.
- 6. Provide "parking" stands for each termination and phase, in each location.
- 7. As manufactured by G & W Electric; or Elastimold/Thomas & Betts.

B. Electrical Ratings

	<u>System Voltage Electrical Ratings</u>	<u>System Voltage 2400V or 4160V</u>	<u>above 4160 volt to 13000 volt</u>
1.	Line to ground rating	8.3kV	15.2kV-RMS
2.	Impulse withstands voltage BIL.	95kV-RMS	125kV
3.	Withstand voltage, 60Hz AC	34kV-RMS	40kV-RMS
4.	Withstand voltage D.C. 15 minute	53kV D.C.	78kV D.C.
5.	Corona Extinction	11kV D.C.	19kV D.C.
6.	200 amp elbow - momentary withstand for 10Hz	10,000-amp-Sym.	10,000-amp-SYM

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

7.	600 amp elbow – momentary withstand for 10Hz	18,000 Sym.	18,000 Sym.
8.	Continuous load current	200-amp-RMS (600-amp-RMS)	200-amp-RMS (600-amp-RMS)

C. Elbow Connector Test Point

1. Each elbow shall be provided with front accessible capacitive coupled test point.
2. The test point shall include a protective, removable, voltage insulated, snap-in cap to provide test point access.

D. Fault Indicator

1. Provide a fully automatic, capacitance coupled electrical, visual fault indicator installed in each test point.
2. Self-powered through capacitive coupling when installed in the elbow test point.
3. The fault current indicator pick-up current and operating speed shall be selected based on upstream relay/fuse types and settings, for correct fault indicates. Additionally, it shall prevent false fault-indication caused by normal motor, transformer and conductor charging in rush (turn-on) currents.

E. Multi-Point-Junctions

1. Shall distribute primary voltage multiple circuit taps for separable elbow-connectors. Modular, premolded, insulated, with internal 600 ampere single phase copper distribution bus.
2. Provide quantity of multiport connector ports on each junction for multiple insulated separable elbow connector attachments, plus spares. Electrical characteristics and insulation characteristics shall match the elbow connectors.
3. Fully shielded and fully insulated and fully submersible in water when energized.
4. 304 – stainless steel surface mounting brackets with ground lug. Provide two integral (left-right) “parking” stands for elbow connectors.
5. Provide bushing inserts for electrical and mechanical compatibility with respective elbow connectors.
6. Provide not less than three multi-point-junction assemblies at each location; Phase-A, Phase-B, and Phase-C. Provide not less than two additional spare connection ports on each multi-point-junction assembly for future use.
7. Interface spacing between ports shall be uniform and compatible with respective elbow connectors.

2.04 CONDUIT (ADDITIONAL REQUIREMENTS)

- A. Aluminum Conduit, Flexible Metal or Non-metal Conduit and Electrical Metallic Tubing shall not be used.
- B. Rigid Galvanized Steel Conduit shall be used for all exposed and concealed conduit above grade and for bends and risers below grade.

- C. Nonmetallic Conduits Schedule 40 PVC or type "EB" shall be used for all ducts below grade, and shall be completely concrete encased in a 3-inch concrete envelope the entire length, including below building slabs.
- D. Bury Underground Conduit a minimum of 36 inches to top of concrete encasement below final finish grade, including under building slabs.
- E. Provide End Bells on All Conduit Terminations.
- F. Condulets shall not be used.
- G. Provide Molded, Snap Together, Conduit Support Spacers a minimum of 5-feet on center in all underground multiple conduit installations.
The spacing between conduits located below grade shall be as follows:
 - 1. Two inches between conduits for circuits operating above 600 volts.
 - 2. Six inches between conduits for circuits operating above 600 volts and conduits for circuit operating below 600 volts.
 - 3. Twelve inches from conduits for any Utility Company circuits and pipes.

2.05 FIREPROOFING

- A. The Cable Fireproofing shall consist of a hand applied flexible tape, conformable fabric coated with flame retardant and separate securing tape wrap. As manufactured by 3M or Plymouth.
- B. The Tape shall be a flexible polymeric coating and/or chlorinated elastomer not less than 0.03 inch thick, weighing not less than 2.5 pounds per square yard.
- C. The Tape shall be non-corrosive to the cable jacket.
- D. The Tape shall be self-extinguishing shall not support combustion, and shall withstand high current fault Arc temperatures of 13000 degrees Kelvin for 70Hz.
- E. The Tape shall not deteriorate when subjected to oil, water, salt water, sewage and fungus.

PART 3 - EXECUTION

3.01 CONDUCTORS IN RACEWAYS

- A. Conduit Preparation
 - 1. Metallic conduit shall be reamed and cleaned to remove metal cuttings, fillings and cutting oil.
 - 2. Rod all underground raceways, including existing raceways to be used under this Contract, with approved test and flexible mandrels to remove all obstructions. Use test mandrels at least 12-inches long, 1/4-inch less than diameter of duct at center, tapering to 1/2-inch less than duct size at ends. Do all cleaning and testing in the presence of Owner's Representative.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

3. If test mandrels cannot be pulled through Raceways Contractor shall perform the following to clear the raceways.
 - a. Force rigid or semi-rigid rods through the raceways to clear the obstructions from one or both ends of the raceway.
 - b. Force a power driven rotating router device with small diameter cutting blades, in incremental stages to a cutting blade diameter approximately $\frac{1}{8}$ -inch smaller than the raceway inside diameter. After clearing the raceway of obstructions pull a test mandrel or brush through the raceway to clear the remaining debris from the raceway.

B. Cable Lubrication:

1. Cable pulling lubricants shall be specifically approved by the Cable Manufacturer. The following lubricants shall be used where approved by the Cable Manufacturer.
 - a. Slip X -300, American Colliod Co.
 - b. Bishop #45, Bishop Electric.
 - c. MacLube CA51, MacProducts.
 - d. Minerallac H2B,- Minerallac Electric.
 - e. Winter grade #7437-PC, General Machine Products.
 - f. Gel-lube 7/5, Cable associates.
 - g. Polywater, A, C, G - American Polywater.
2. Lubricants shall be continuously applied as cable enters raceway.

C. Pulling Tensions "EPR" Insulation PVC Jacket, Copper Conductors.

1. The maximum pulling-in tensions and stresses on the cable must not exceed the under-mentioned values when pulling the cable.
 - a. The maximum pulling stress in pounds (tension), shall not exceed 0.008 times the CM (Circular Mil) area of the conductor when pulled with a pulling eye attached directly to each copper conductors, (i.e. $(500,000 \text{ MCM}) \times (.008) = 4000$ pounds).
 - b. The maximum pulling stress shall not exceed 1000 pounds for non-leaded cables when pulled with a Kellums or Greenlee type basket grip on each conductor but in any case shall not exceed item (a) above.
 - c. The cable sidewall pressure shall be defined as the pulling tension on the cable out of a bend, expressed in pounds divided by the radius of bend expressed in feet. The maximum cable side wall pressure (pulling tension) in pounds shall not exceed 400 times the raceway bend radius in feet. But in any case shall not exceed 'a' and 'b' above (i.e. $(4 \text{ feet conduit radius}) \times (400) = 1600$ pounds maximum pulling tension at the 4 feet conduit bend).
 - d. Pulling tension calculations shall be submitted to ENGINEER prior to pulling any cable, for each cable run in excess of 100 feet and/or 180 degrees in bends. Similar runs need not be recalculated (i.e. same quantity and type of bends and/or length).
2. A dynamometer to measure pulling tension shall be used on all cable runs in excess 200 feet or with more than 180 degrees in bends. The actual pulling tension value shall be calculated and recorded for each pull.
3. Pulling eyes on each conductor shall be used for cable runs in excess of 100 feet or more than 180 degrees in bends, between pull points.

- D. The Minimum Radii to which the installed cables can be bent for safe electrical operation and without danger of physical damage to the cable insulation, metallic shielding tapes, and/or outer jacketing materials shall not be less than 12 times the diameter over the finished cable jacket. Bends shall not be made in splices or terminations.
- E. Installation
1. Do not pull conductors until factory test reports have been submitted and reviewed.
 2. The attachment of the pulling device to the conductor pulling eyes or basket grips shall be made through a swivel connector.
 3. The attachment of pulling devices directly to the cables shall be with individual basket grips over each cable jacket or individual pulling eyes attached directly to each cable conductor. Securely tape cable ends to prevent moisture or pulling compound from penetrating cable.
 4. The Contractor shall ensure that the high voltage cables are fed straight into the raceway taking care to avoid short bends, sharp edges and cable "cross-overs".
 5. All lashings used for temporary bunching of the individual cables shall be removed before the cables enter the raceway. Lead-out the cables at all man-holes, pullboxes and conduits taking care to feed them in again by hand for the next run. Cables shall not be pulled directly around a short right angle bend.
 6. For each cable pull where a cable direction change is required flexible feed-in tubes, pullout devices, multi-segmented sheaves etc. shall be used to insure proper cable pulling tensions and side wall pressures. Any device or surface the cable comes in contact with when under pull-in tension shall have a minimum radius 50% greater than the final specified minimum installed cable-bending radius. The maximum possible size radius sheaves and feed-in tubes, usable in the available working space, shall be provided in all situations, to insure the minimum possible cable sidewall pulling pressure. Do not use devices with multi-segment "roller" type sheaves.
 7. Cable lengths over 50 feet shall be machine pulled not hand pulled. Cables shall be pulled in a continuous, smooth operation without jerking or stop-start motion after initiation of pull. Maximum cable pulling speed shall be less than 50 feet per minute. Minimum cable pulling speed shall be greater than 15 feet per minute.
 8. Cables shall be pulled straight into or out of the raceway without bends at the raceway entrance or exit. Pull in cable from the end having the sharpest bend (i.e., bend shall be closest to reel). Keep pulling tension to minimum by liberal use of lubricant, hand turning of reel, and slack feeding of cable into duct entrance. Employ not less than one man at reel and one at manhole or pullhole during this operation. Cables shall be pulled directly from cable reels.
 9. Cables shall be trained or racked in trenches, vaults, manholes and pull boxes with consideration given for the minimum specified bending radius of the cable and the possibility of cable movements due to load cycling. The cables shall be racked and supported in such a manner that adequate space is allowed for splicing and the cables shall always be fanned out from the duct or conduit so as not to cross other ducts conduits or cables. To prevent damage from falling objects or personnel entering the manhole the cables shall not pass directly under the manhole opening.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

10. Cable shall be supported in manholes; pull boxes and vaults a minimum of 18-inches on center with cable racks. Provide hot dip galvanized T-slot racks and support arms. Secure cables to racks with porcelain supports for each cable on the racks. Loosely lash cables to racks. Splices shall be directly supported, on racks. Do not install cables more than one feeder on the same rack hook.
11. Cables shall be routed the long way around manhole, pullhole, etc. unless noted otherwise.
12. Existing conductors shall be protected at all times when Contract Work occurs in the same area, including but not limited to pullboxes, vaults manholes, cable trenches etc. Provide temporary electrical insulating blankets and barriers over existing conductors to reduce the possibility of accidental mechanical damage to existing conductors.

F. Movement, Storage, and Handling of Cable

1. Reels of cable shall not be dropped from any height, from trucks or other transporting equipment.
2. Lift and move cable reels using following methods:
 - a. Crane or boom type equipment-insert shaft (heavy rod or pipe) through reel hubs and lift with slings on shaft, with spreader or yoke to reduce or avoid sling pressure against reel head.
 - b. Forklift type of equipment may be used to move smaller, narrower width reels. Fork times should be placed so that lift pressure is on reel heads, not on cable, and shall reach all the way across reels so lift is against both reel heads.
 - c. Reels may be moved short distances by rolling. Reels shall be rolled in the direction indicated by arrows painted on reel heads. Surfaces over which the reels are to be rolled shall be solid clear or debris, and also clear of protruding stones, humps, etc. which might damage the cable if the reel straddles them.
3. Storage of Reels of Cable
 - a. Cable ends shall be sealed prior to shipment to prevent moisture entry into cable. Cable ends shall remain sealed at all times including during installation. Where ends seals are removed, reseal cable ends by stripping cable finishes back 2-inches down to insulation. Then apply four layers of an insulating tape criss-cross over the cable end and carry back at least 4-inches onto cable outer finish. Add a containing cover of two layers of vinyl electrical tape completely over the end seal.
 - b. Cable reels shall be shipped with factory applied lagging (protective cover) left in place until removal is absolutely necessary. Additional covering such as tarpaulin, plastic sheeting, etc. shall be used if cable is to be stored outdoors.
 - c. Store reels of cable on a firm surface, paved, or on planking to prevent settling into soft ground.
 - d. Use fencing or other barriers to protect cables and reels against damage by vehicles or other equipment moving about in the storage area.

G. Cable Testing

1. Contractor shall have an independent Testing Laboratory perform a high voltage DC acceptance test on each phase or leg of cables in accordance with ICEA

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

Standards S-19-81, latest revision. Certified Test Reports shall be submitted to Engineer in the form of time versus current graph showing initial leakage current after test voltage is applied and for each 15 second interval up to 1-minute and for each one minute interval thereafter. Each graph shall be identified to correspond with the Cable Section and feeder name. Information on temperature, humidity and type of test equipment used during test shall also be submitted.

2. Cables shall be tested as follows:
 - a. Each segment and phase shall be tested after installation and prior to splicing or terminating to other equipment or cables.
 - b. Each conductor feeder and phase shall be tested after splicing to other new cables is completed, and prior to connection to equipment or other existing cables.
 - c. Do not perform D.C. high voltage cable acceptance test into existing conductors, new or existing equipment, connected to the cables being tested.
3. Certified Factory Test Reports performed in accordance with ICEA S-19-81, Tables 2-12 and 6-17. Corona and AC/DC Tests shall be submitted with Shop Drawings for the specific cable to be installed.
4. Field test procedure:
 - a. Set up test equipment. Do not connect test lead to cables, but temporarily hang the lead free with a plastic bag over the clip. Raise the voltage to the same final level as the cables test voltage. The leakage current seen on the DC meter is leakage in the test lead, and shall be subtracted from the readings taken later during the cable test. Shut the set off and discharge the lead.
 - b. Apply the test voltage to each phase separately, making sure that all other phases, all cable shields, any armoring or neutral conductors, and other nearby metallic objects are grounded to prevent voltage pick-up.
 - c. Raise the test voltage from zero gradually in 10% steps to 80% of the final test voltage, then in 5% steps to final test voltage, which shall be left on for 5 minutes. Take current readings at each step after current has been stabilized approximately one-minute intervals. Take current reading each minute period. Record each step voltage/current and time interval. Plot readings on graph paper.
 - d. During the test if a breakdown is indicated by a sudden or continuous increase in current, de-energize, disconnect and isolate the trouble. Remedy problem, completely disassemble and redo any defective cable terminations or splices. Retest cable, if breakdown is again indicated, remove, discard and replace defective cable and retest replacement cable. Defective cable shall be removed from site and shall not be reused.
 - e. Upon completion of a successful test, shut down the test set and allow the voltage to decay to $\frac{1}{4}$ the full value. Record the decay time.
 - f. Solidly ground the conductor and allow the ground to remain in place for a period at least as long as the test time.
 - g. Repeat the same test sequence for each phase cable and cable section.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

- h. Proper precautions shall be taken to eliminate "end corona" during the test procedure. The leakage currents and the voltage decay times should be fairly similar for the individual phases of the same cable circuit. Also, a graphic plot of the current versus voltage values of the step-rise test should show a reasonably straight line (equal increments of current rise for equal increments of voltage increases), the current readings always being taken after the same duration of time (one minute) after reaching each voltage level. To insure proper testing procedures the Contractor shall do the following:
 - 1) The cable ends (or terminations) are clean and dry.
 - 2) The cable or terminal ends are as far away from surrounding structures as practical.
 - 3) The creepage distance from conductor back to cable shield is at least 1" for each 5kV of test voltage (this applies to newly installed cable, which has not yet been terminated).
 - 4) The irregularly shaped clip or connector where the test lead joins to the cable is wrapped with a few layers of plastic sheet to form a smooth tube to reduce corona.
 - 5) The free ends of cable have a glass jar or plastic bag over the end to reduce corona.
- i. The final D.C. test voltages for shielded cable shall be 30kV for 5kV or 8kV cable and 56kV for 15kV cable.

3.02 ARC PROOFING (FIREPROOFING)

- A. All Wires and Cables which will carry current at 600 volts or more in manholes, pullboxes and vaults shall be fireproofed.
- B. Strips of Fire Proofing Tape approximately 1/16 inch thick by 3 inches wide shall be wrapped tightly around cable spirally in wrapping. The tape shall be applied with the coated side toward the cable and shall extend one inch into the ducts. To prevent unraveling, the fire-proofing tape shall be spirally "Half-Lap" wrapped the entire length of the cable.
- C. Fire Proofing shall be applied separately on each individual conductor. Secure fire proofing with two layers of spirally wrapped glass cloth electrical tape.

3.03 CABLE SPLICES AND TERMINATIONS

- A. Cable Splicing and Terminations shall be performed by Personnel with a minimum of 5 years-qualified experience with specific splicing and termination methods used. Submit letter-certifying qualifications.
- B. Each Conductor shall be spliced in each manhole and pullbox whether or not shown on the Drawings. No splices or terminations will be allowed in conduit or ducts.
- C. Cable Shield shall be brought out and grounded at each splice and termination point to the equipment bond grounding system.
- D. Splices (Built-Up Tape Type for PVC Jacket Cables)
 - 1. Cables shall be striped, tapered rasped with creepage distances per Manufacturer recommendations. Apply fill sealing putty on conductor compression sleeve indents and conductor, prior to beginning of splice taping.

2. Conductor compression connectors shall be crimped with tools and specifically designed for the connector.
3. Apply tape over conductor and connector sleeve.
4. Apply splicing cement to rasped insulation and insulation screen.
5. Apply insulating tape.
6. Apply friction tape over insulation tape.
7. Apply conducting fabric tape.
8. Apply open spiral of tinned copper wire braid to carry shield continuity across the splice. Tack solders to 5-mil copper shield tape on each side of splice an additional single ground braid. Ground braid shall be brought out at splice, minimum 18-inches long and connected to ground bonding conductor, bind down braid with friction tape.

E. Terminations (indoor built-up) Tape Type, for PVC Jacket Cables where cable terminator is not specified with equipment.

1. Cables shall be striped tapered, rasped with creepage distances per Manufacturer recommendations.
2. Conductor compression connectors shall be crimped with tools and dies specifically designed for the connector.
3. Tack solder to 5 mil copper shield tape, tinned copper shield tape, Bind down with friction tape. Bring out approximately 18-inches of ground braid and connect to ground bonding conductor.
4. Apply sealing putty at tape shield/insulation joint and connector lug indents.
5. Apply insulating tape.
6. Apply friction and electrical tape.
7. Make lug seal applying insulating tape, friction tape and electrical tape.
8. Apply friction and electrical tape.

F. Polymeric Cable Splice Kits and Termination Kits

1. Install in strict compliance with the Manufacturer instructions.

3.04 IDENTIFICATION (ADDITIONAL REQUIREMENTS)

- A. Each Cable and Cable Tap shall be identified with nametags in manhole pullboxes, terminations and vaults.
- B. Identification Tags shall include the following information:
 1. Feeder name as indicated on Drawings (i.e. HV1, F4, MSB3 etc.).
 2. Conductor phase (i.e. phase A, or phase B, or phase C, or neutral).
 3. Installation month and date (i.e. 3/85, 4/78 etc.).

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

4. Conductor size conductor type (copper) and insulation type (i.e. 4/0 CU-EPR, 500 AL VCL, etc.).
5. Insulation voltage (i.e. 5kV, 8KV, 15kV, etc.).
6. Feeder taps to equipment or building shall also be identified with equipment name or building (i.e. library, SW1, XMRA, etc.).

C. Hot-Phasing

The Contractor shall perform and certify phase rotation testing on connections to existing/new circuits and equipment. Testing shall verify equipment and conductors are correctly "Hot-Phase" sequenced, to allow interconnecting and inter switching of any "Hot" circuits of like voltage with correct phase sequencing. The Contractor shall correct any phasing sequence found to be incorrect as a result of work performed by this Contract.

3.05 GROUNDING ADDITIONAL REQUIREMENTS

A. Raceways

1. Provide all raceways and conduits containing circuits operating at line to line or line to ground voltages exceeding 600 volts with an internal dedicated equipment ground/bond wire, copper conductors, 600 volt insulation.
2. Typical for metallic and non-metallic raceways and conduits.

B. Splices and Terminations

1. Provide cable shield ground/bond lead out at each conductor splice and termination location. Extend and connect to respective equipment ground bus; each pull box/man hole respective ground rods and feeder ground conductors; etc.

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SECTION 26 13 05

INTERRUPTER AND SECTIONALIZING SWITCHES

PART 1 - GENERAL

1.01 SCOPE

- A. Work Included: All labor, materials, appliances, tools, equipment necessary for and incidental to performing all operations in connection with furnishing, delivery and installation of the work of this Section, complete, as shown on the Drawings and/or specified herein. Work includes, but is not necessarily limited to the following:
 - 1. Examine all other Specification Sections and Drawings for related work required to be included as work under Division 26.
 - 2. General Provisions and Requirements for electrical work.

1.02 SUBMITTALS (ADDITIONAL REQUIREMENTS)

- A. Submit product data sheets for all transformers, device relays, anti-condensation equipment, enclosures, disconnects, fuses and meters.
- B. Submit detailed Shop Drawings including Dimensioned Plans, Elevations, Details, Schematic Single Line, Point to Point Wiring Diagrams and descriptive literature for all Component Parts. Submit Scaled Plans and Elevation View Drawings.
- C. Submit Full-Scale Time/Current Transparencies on log/log paper for all fuses, circuit breakers, ground fault system devices, and relays.
- D. Short Circuit, Coordination and Arc-Flash
 - 1. Perform and submit engineered settings for each equipment location, fuse and adjustable circuit breaker device, showing the correct time and current settings to provide the coordination within the limits of the specified equipment, per the latest applicable Standards of IEEE and ANSI. Provide electrical system short circuit fault analysis, both 3-phase line-to-line and 1-phase line-to-ground calculations as part of the Coordination Analysis recommendations. Provide Electric Arc-Flash calculations as part of the Coordination Analysis recommendations.
 - 2. The information shall be submitted in both tabular form and on time current log-log graph paper, with an engineering narrative. Written narrative describing data, assumptions, analysis of results and prioritized recommendations, six copies.
 - 3. The goal is to minimize an unexpected but necessary electrical system outage and personnel exposure to the smallest extent possible within the fault occurrence location, using the specified Contract Equipment shall comply with, but not limited to:
 - a. IEEE-242, Recommended Practices for Protection and Coordination of Industrial and Commercial Distribution.
 - b. IEEE-399, Recommended Practice for Industrial and Commercial Power System Analysis.
 - c. IEEE-1584, Guide to Performing Arc-Flash Hazard Study.
 - d. CEC/NEC

**UNIVERSITY HIGH SCHOOL
 UNDERGROUND HIGH VOLTAGE REPLACEMENT
 IRVINE UNIFIED SCHOOL DISTRICT**

- E. Submit Transformer Test Reports
- F. Factory Tests: Switchgear Tests - ANSI C37.72.E Certified copies of design tests, production tests, and conformance tests of the switchgear shall be submitted and reviewed on the project site. In lieu of the above tests, a report of these tests previously performed on identical units of each rating will be acceptable.

1.03 APPLICABLE STANDARDS

The switchgear equipment shall be designed, tested, and assembled in accordance with the latest applicable Standards of National Electrical Code, ANSI, IEEE, and NEMA and UL.

PART 2 - PRODUCTS

2.01 FUSED LOAD AIR INTERRUPTER SWITCH - 200 AMP, 5KV

A. General

- 1. Medium voltage, metal enclosed switchgear consisting of current limiting fuses and load break visible gap air interrupter switch. As manufactured by Square D Mini Break - Class 9875 or equal.
- 2. The completed metal enclosed switchgear shall have the following electrical rating and tested in conformance with ANSI C37.58-197X.
 - a. Maximum circuit design voltage5kV
 - b. Continuous Current200-amp
 - c. Impulse BIL.....60kV
 - d. 60Hz Withstand19kV
 - e. Load break interrupting.....200-amp
 - f. Momentary Current (without fuses).....20,000-amp
(Asym. RMS)
 - g. Momentary Current and Fault closing with current limiting fuses40,000-amp
(Asym. RMS)
 - h. Two Second Rating12,000-amp
(Sym. RMS)
 - i. Mechanical no load operations (minimum).....2,000
 - j. Full load and voltage close/open operations (200-amp, 70-80% power factor).....100

B. Switch Mechanism:

- 1. The switch shall have a stored energy, manually operated, quick-make, quick-break, 3-pole, two position gang operating mechanism.
- 2. The switch handle shall be accessible and operable from the front of the switch without requiring opening the switch or fuse access door. The switch handle shall have provisions for pad locking in the OPEN (de-energized) position.
- 3. Provide mechanical interlocks to prevent opening the switch/fuse access door with the switchblades in the closed (energized) position, and to prevent closing the switch (energizing) blades with the door open.
- 4. The switch and fuse components shall be front accessible for normal maintenance, suitable for mounting the back of switch directly against a wall.

Rear or side accesses for proper installation operation and maintenance shall not be required.

5. Any internal parts that remain energized with the switch contacts open shall be guarded by a fixed internal safety barrier to prevent inadvertent contact by Operating or Maintenance Personnel with the door is open. Interphase insulating barriers shall be provided for the system voltage class, to isolate switch and fuse poles from each other and from grounded metal.
6. Moving switchblades shall incorporate silver tungsten arcing contacts and insulating arch shuts on each switch pole.

C. Fuses

1. The fuses shall be non-disconnecting types.
2. Fuse mounting shall be accessible only through a separate door mechanically interlocked with the load break switch, to insure the switch is in the open position when the fuses are accessible. Switch designs with full height fuse access doors shall have a solid barrier covering the area of the main line side of the switch.
3. No energized parts shall be within normal reach of the opened doorway. Single full-length interphase barriers shall isolate the three phases of the switch from each other and from the enclosures.
4. Fuses shall be affixed in position with provisions for removal and replacement from the switch without the use of special tools.
5. Non-expulsion current limiting fuses with a short circuit interrupting rating of 50,000-amp RMS symmetrical shall be supplied fixed mounted on the load side of each main switch pole. The fuse continuous current rating shall be in accordance with the Manufacturer's recommendation to adequately protect the transformer or load from damaging overloads. Fuses shall provide a visible "Blown-fuse" indication. Fuses shall be removable from the front without special tools.

D. Enclosure

1. The switch frame shall have structural anchor points permanently attached to the assembly, to provide for bolting the switch sections securely to floors and walls. Minimum enclosure construction shall be not less than 11-gauge steel.
2. The Switch Manufacturer at the factory shall provide internal interconnections.
3. Switch components shall be front accessible for normal maintenance. Rear access of primary incoming line conductors shall not be required. Access shall be provided for outgoing line load conductors, top and bottom conduit entrance as indicated on the Drawings.
4. Provide auxiliary switch sections for line and load conductors where indicated on the Drawings, to match Switch Enclosure Requirements. Conduit space shall meet NEC Requirements.
5. Ventilating openings (if required by the Manufacturer) in the enclosure shall be located to insure proper cooling at installed equipment location shown on the Drawings. Provide expanded metal screens on vent opening. Construction shall prevent entry of rodents into the substation interior.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

6. Finish paints indoor equipment. Rust inhibitor primer with Manufacturer's Standard finish color, final paint coat over primer.
7. A prominent nameplate bearing equipment ratings, Manufacturer identification, and reference serial numbers operating instructions shall be mounted on the front of the unit.
8. The equipment enclosure shall not require routing of line and load side conductors in front of the switch/ fuse compartment.
9. The maximum enclosure size shall not exceed 26-inches wide x 24-inches deep x 67-inches high.
10. A full width barriered vertical raceway located at the rear of the housing shall be provided to allow the incoming line conductors to enter the switch and connect to top mounted conductor terminations.
11. A switch door mounted viewing window shall provide observation of the switch contacts.

2.02 PROTECTIVE RELAYS

A. General

1. Protective relays shall be semi-flush, dead-front individual case mounting, drawout construction with test and shorting blocks, extended range (induction disk operation) solid state static.
2. Relays shall incorporate visible, seal-in, externally resettable, target indicators to show trip mode (overcurrent, instantaneous as applicable).
3. Repeat operating accuracy shall be plus or minus 7.5% on time settings, plus or minus 3.5% of current pick-up settings.
4. Pick-up trip-initiating setting ranges shall be as indicated on Drawing or as determined by the coordination study.
5. Relays shall operate from 5 amp secondary current transformers and 120 volt secondary potential transformers within specified accuracy ranges from 0 load to maximum withstand rating of related circuit breakers. Relays shall operate with the circuit breaker control circuits. Relays shall incorporate auxiliary contacts for external device operation and shall be provided with all auxiliary devices required for complete and correct system operation.
6. Relay time current curve operating characteristics shall provide selective coordination with new and existing upstream and downstream primary protective relays and fuses. Relay settings will be furnished by the Contractor to the Engineer.
7. Provide inverse, very inverse or extremely inverse relay tripping characteristics and Manufacturers' standard setting ranges as determined during Shop Drawing submittal phase and by the Coordination Study.
8. Relays shall comply with ANSI/IEEE C37.90 and C37.2.

- B. Time Overcurrent Phase Relay (device type 50/51).
 - 1. One per phase, non-directional, current-sensitive, AC device, operating time shall be inversely related to operating current.
 - 2. Instantaneous unit shall provide relay operation with no intentional time delay for currents exceeding a predetermined level. Instantaneous trip unit shall have external jumpers to defeat the instantaneous trip element.
 - 3. The relay shall have field adjustable time delay dial, overcurrent pick-up tap settings as multiples of current transformer ratio, instantaneous trip with tap block range adjustment.
- C. Time Overcurrent Ground Relay (device Type 50N/51N).
 - 1. Same as phase relay type 50/51, except connected in residual current arrangement to provide protection upon phase to ground, fault.
- D. If solid state type relays are utilized, provide one complete Manufacturer's relay testing system installed in the switchboard.

2.03 INSTRUMENT AND CONTROL TRANSFORMERS

- A. General
 - 1. Instrument and Control Transformers: ANSI C57.13 and NEMA ST20 as applicable.
 - 2. Transformers shall be specifically designed for use on respective protective relay or metering schemes utilized.
- B. Current Transformers
 - 1. Meter/relay grade, shall be multi-ratio tap, initial tap setting as indicated on the Drawings, with 5-amp secondary.
 - 2. Insulation Class, 15,000 volt, (5000 volt) 60Hz, 95kV (60kV) B.I.L., single ring type, and shall have an accuracy classification of 0.3 with the burden of B.01, B.02 and B.03.
- C. Potential Transformers
 - 1. Shall be for insulation class, 15,000 volt, (5000 volt) 60Hz, 95kV (60kV) BIL.
 - 2. Bus voltage to 120-volt ratio and shall have an accuracy classification of 0.3 at rated voltage with the burden of B.01, B.02 and B.03 connected to transformers.
 - 3. Potential transformers and primary fuses shall be one piece horizontal drawout construction, or Trunion mount style.

2.04 MISCELLANEOUS SWITCHGEAR DEVICES

- A. Control and transfer switches shall be of the rotary, oil-tight multi-position, cam-operated, multi-stage type, with dust cover and silver-to-silver contacts rated 6000-volts, 20-amp and adequate for the duty performed in excess of 1-amp. Equip each switch with engraved plastic escutcheon nameplate identifying its function and position.

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

1. AC voltmeter switch 4-position (7-position) for line-to-line (and line to neutral) and off indications.
 2. Ammeter switches 4-position (7-position) for line-to-line (and line to neutral) and off indications.
- B. Anti-condensation heater - each switch Equipment Section shall contain a factory installed sealed 300 watt, nominal, anti-condensation resistance heating element, with automatic on-off adjustable thermostat and humidistat control, factory wired to fused terminals. Voltage 120 volt, 240 volt, 277 volt, or 480 volt, 60Hz, AC as indicated on the Drawings.

2.05 RATING NAMEPLATES

- A. The integrated switchgear assembly shall be provided with a nameplate indicating the Manufacturer's Drawing number and the following: voltage ratings (kV, nominal; kV, maximum design; kV, BIL); main bus continuous rating (amperes); short-circuit ratings (amperes, rms symmetrical and MVA three-phase symmetrical at rated nominal voltage); and the momentary and fault-closing ratings (amperes, rms asymmetrical).
- B. Each individual bay shall bear a nameplate indicating the ratings of the interrupter device (amperes continuous and interrupting); the rating of fuse in amperes; and the catalog number of the fuse units or refill units (if any).

2.06 TAMPER RESISTANT METAL HOUSING OUTDOOR - NON WALK-IN

- A. Fabricated, NEMA 3R, non-walk-in sectional 11 gauge metal enclosed, modular housings, weatherproof, tamper resistant. Housing shall be constructed with internal structural frames, suitable to house independent free standing medium voltage switchgear, as shown on the Drawings.
- B. Provide an open bottom, for bottom entry of underground conduits, with structural frame base for mounting on a concrete slab. Domed roof to shed water. Housing shall be provided with cooling louver air vents, with screen guards behind louvers, quantity and size per Manufacturer's recommendation.
- C. Full height hinged doors, front, sides and rear of each exposed section requiring equipment access for installation, operation or maintenance. Door, stainless steel hinges, pad-lockable three point door latching, with hold open lock rods and recessed penta-head tamper resistant bolt, accessible behind door latch. Doors shall be removable and full height to provide unobstructed access to equipment inside the housing.
- D. The metal enclosure shall be assembled as an integral unit for mounting on a concrete pad. There shall be no exposed screws, bolts, or other fastening devices, which are externally removable. There shall be no unobstructed openings through which foreign objects such as sticks, rods, or wires might contact live parts. There shall be means for padlocking the compartment doors. There shall be means of bolting unit securely to a concrete pad.
- E. The metal enclosure shall be sized to allow unobstructed access to operate and maintain the equipment installed inside the enclosure. Enclosure shall be internally braced to comply with California Seismic.
- F. The hinge and padlocking assemblies shall be made of stainless steel corrosion-resistant material. Stainless steel hinge pins of 3/8-inch minimum diameter shall be provided.

- G. Lifting provisions in accordance with ANSI Standards shall be provided. Jacking and rolling provisions shall be provided.
- H. Ground pads connections with threaded fittings for grounding.
- I. Finish shall be electrostatically applied finish paint over iron oxide rust inhibitor primer. Finish color shall be Manufacturer's Standard color olive green Munsel #7GY3.29/1.5. The bottom side and bottom 6 inches of the equipment shall be coated with 4 MIL minimum thickness rust inhibitor undercoating over finish paint, on all interior surfaces. Finish withstand test without face corrosion or blistering:
 - 1. Salt spray withstands - 2000 hours ASTM B117.
 - 2. Humidity withstands - 750 hour ASTM D2247.
- J. Exposed Hardware and Hinges shall be Stainless Steel type 302 or 304, tamper resistant.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

- A. Electrical installation shall conform to ANSI C2, NFPA 70, and to the Requirements specified herein. All equipment and materials shall be new unless indicated or specified otherwise.
- B. Anchoring of Switchgear shall be per California Seismic.
- C. Torque interconnecting bussing bolts and anchor bolts per Manufacturer's directions.
- D. Install and connect equipment, furnished under this or other Sections as indicated on Project Drawings, the approved Shop Drawing, and as specified herein.

3.02 INSTALLATION PADS FOR PAD-MOUNT EQUIPMENT

- A. General
 - 1. Pad-mount equipment installation shall conform to the Manufacturer's Shop Drawings and mounting instructions and shall include securing the equipment to the concrete slab with a minimum of six anchor bolts, per California Seismic. Complete installation and material shall conform to the Requirements of ANSI C2 and AASHO-H20 traffic rated structures.
 - 2. Equipment concrete slabs shall be set level on grade, with 95% minimum machine compacted fill.
 - 3. Precast concrete slab/pullbox combination shall be as manufactured by Brooks, Jensen, or Christy.
- B. Pad-Mounted Equipment
 - 1. Install on 6-inch thick steel reinforced concrete slab on grade as shown on plans.

3.03 FIELD TESTS AND INSPECTIONS

- A. Tests: After the installation has been completed, and the Engineer has been given 10 days' notice of the proposed test, the Contractor shall conduct an operating test

**UNIVERSITY HIGH SCHOOL
UNDERGROUND HIGH VOLTAGE REPLACEMENT
IRVINE UNIFIED SCHOOL DISTRICT**

demonstrating that all equipment and devices operate in accordance with the Requirements of the Plans and Specifications.

- B. The Relay Setting (where relays are supplied) and testing shall be performed by a skilled Technician actively engaged in testing and using test instruments specifically designed and manufactured for that purpose.
- C. The Contractor shall provide a Skilled Relay Engineer actively engaged in the business of testing and calibrating power relays and circuit breakers. Certification of such experience shall be provided in writing for the review of the Engineer 10-days before the actual testing is proposed. The Contractor shall furnish certified test results and all special equipment required.
- D. Testing Shall Verify:
 - 1. Primary circuit polarity test shall include a DC test from the current transformer to each terminal block and relay terminal.
 - 2. Phase sequence tests of new circuit connections in relation to existing circuits before interconnections are made.
 - 3. Relay switch operation test by application of power and current from the portable relay test set.
 - 4. Test insulation of all control and relay circuits to ground with a suitable megohm-meter. Take suitable precautions where electronic devices, instruments and instrument transformers are involved.
 - 5. Operate each switch manually and check operation of auxiliaries, interlocks, contact wipe and gap clearances as identified in the Manufacturer's instructions. Test each pole of each switch for conductivity with a micrometer. Test insulation of each switch phase-to-ground and phase-to-phase with a megohm-meter. High Potential Test Vacuum or SF6 gas chambers.
 - 6. Check positioning, operation of mechanism and interlocking, both mechanically and electrically.
 - 7. Energize the control circuits, make polarity and voltage checks. Operate through all local control stations. Operate all relay, sensor and interlocking contacts manually to test operation of all circuits related to tripping of equipment.
 - 8. Adjust each protective relay to setting furnished to the Engineer and verify setting using test equipment approved by the Relay Manufacturer, using current sources that do not require correction curves to compensate for wave shape distortion.
 - 9. Test each instrument and meter for proper operation, correct rotation and circuitry. Instruments and meters energized from Instrument Transformer shall be tested at transformer secondary level.
 - 10. Test each current and potential transformer for ratio and polarity. Record values and report deficiencies.
- E. Equipment and Apparatus Tests: Unless specific factory-witnessed tests are specified, tests normally made by the Manufacturer will be acceptable for all equipment and apparatus.

- F. Certified Phase Rotation Testing shall be performed on connections to existing circuits and between equipment buses prior to energizing equipment.
 - G. Retesting: rectify and deficiencies found and completely retest work affected by such deficiencies at the Contractor's expense.
- 3.04 GROUNDING (ADDITIONAL REQUIREMENTS)
- A. Provide Ground Conductor Connections to Ground Lugs Provided on the Equipment.
 - B. Elbow Bushings Shield shall be individually grounded to insure the shields are at ground potential.
- 3.05 SIGNS
- Install "DANGER HIGH VOLTAGE, KEEP OUT, AUTHORIZED PERSONNEL ONLY" on equipment doors, 3-inches high letters.

END OF SECTION 26 13 05
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APPENDIX C

General Conditions

TABLE OF CONTENTS TO THE GENERAL CONDITIONS

<u>ARTICLE</u>	<u>PAGE</u>
1. DEFINITIONS.....	1
2. STATUS OF CONTRACTOR.....	2
3. CHANGE IN NAME AND NATURE OF CONTRACTOR'S LEGAL ENTITY.....	2
4. CONTRACTOR'S SUPERVISION, PROSECUTION AND PROGRESS.....	3
5. SUBCONTRACTORS.....	4
6. PROHIBITED INTERESTS.....	5
7. DISTRICT'S INSPECTOR.....	5
8. ARCHITECT'S STATUS.....	6
9. NOTICE OF TAXABLE POSSESSORY INTEREST.....	6
10. ASSIGNMENT OF ANTITRUST ACTIONS.....	6
11. OTHER CONTRACTS.....	7
12. OCCUPANCY.....	8
13. DISTRICT'S RIGHT TO TERMINATE AGREEMENT.....	8
14. BONDS.....	9
15. SUBSTITUTION OF SECURITIES.....	10
16. FIRE INSURANCE.....	11
17. PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE.....	11
18. WORKERS' COMPENSATION INSURANCE.....	12
19. PROOF OF CARRIAGE OF INSURANCE.....	12
20. DRAWINGS AND SPECIFICATIONS.....	13
21. OWNERSHIP OF DRAWINGS.....	14
22. DETAIL DRAWINGS AND INSTRUCTIONS.....	14
23. SHOP DRAWINGS.....	15
24. LAYOUT AND FIELD ENGINEERING.....	18
25. SOILS INVESTIGATION REPORT.....	18
26. TESTS AND INSPECTIONS.....	19
27. TRENCHES.....	19
28. DOCUMENTS ON WORK.....	21
29. STATE AUDIT.....	21
30. SUBSTITUTIONS.....	21
31. SAMPLES.....	23
32. PROGRESS SCHEDULE.....	23
33. MATERIALS AND WORK.....	24
34. INTEGRATION OF WORK.....	26
35. OBTAINING OF PERMITS, LICENSES AND EASEMENTS.....	26
36. SURVEYS.....	27
37. EXISTING UTILITY LINES; REMOVAL, RESTORATION.....	27

38.	WORK TO COMPLY WITH APPLICABLE LAWS AND REGULATIONS.....	27
39.	ACCESS TO WORK.....	28
40.	PAYMENTS BY CONTRACTOR	28
41.	INSPECTOR'S FIELD OFFICE.....	28
42.	UTILITIES.....	29
43.	SANITARY FACILITIES.....	29
44.	CLEANING UP.....	29
45.	PATENTS, ROYALTIES, AND INDEMNITIES	29
46.	GUARANTEE.....	30
47.	DUTY TO PROVIDE FIT WORKERS.....	31
48.	WAGE RATES, TRAVEL AND SUBSISTENCE.....	31
49.	HOURS OF WORK.....	33
50.	PAYROLL RECORDS.....	33
51.	APPRENTICES	35
52.	LABOR - FIRST AID.....	36
53.	PROTECTION OF PERSONS AND PROPERTY.....	36
54.	NON-DISCRIMINATION	38
55.	SCHEDULE OF VALUES AND PERIODICAL ESTIMATES	38
56.	CONTRACTOR CLAIMS	38
57.	DISPUTES - ARCHITECT'S DECISIONS	39
58.	PAYMENTS.....	39
59.	CHANGES AND EXTRA WORK	41
60.	COMPLETION.....	46
61.	ADJUSTMENTS TO CONTRACT PRICE.....	47
62.	CORRECTION OF WORK.....	47
63.	EXTENSION OF TIME - LIQUIDATED DAMAGES.....	47
64.	PAYMENTS WITHHELD.....	48
65.	TAXES	49
66.	NO ASSIGNMENT	50
67.	NOTICE.....	50
68.	NO WAIVER.....	50
69.	NON-UTILIZATION OF ASBESTOS MATERIAL	51
70.	LEAD	51
71.	CRIMINAL RECORDS CHECK.....	52
72.	DISABLED VETERAN BUSINESS ENTERPRISES	52
73.	TOBACCO FREE POLICY	52
74.	GOVERNING LAW	52

GENERAL CONDITIONS

ARTICLE 1. DEFINITIONS

- (a) Action of the Governing Board is a vote of a majority of the members in a lawful meeting.
- (b) Addenda are the changes in plans, specifications, drawings, and/or Project Documents which have been authorized in writing by the DISTRICT or ARCHITECT, and which alter, explain, or clarify the Project Documents prior to the bid deadline.
- (c) Approval means written authorization by ARCHITECT or DISTRICT.
- (d) Agreement includes collectively all Project Documents.
- (e) Project Documents includes collectively, to wit: Notice Calling for Bids, Information for Bidders, Bid Form, Bid Security, Designation of Subcontractor form, Information Required of Bidder, all prequalification forms submitted pursuant to Public Contract Code Section 20111.5, if any, Noncollusion Declaration, Workers' Compensation Certificate, Faithful Performance Bond, Payment Bond, Agreement, Escrow Agreement, Drug-Free Workplace Certification, Criminal Records Check Certification, Change Order forms, Shop Drawing Transmittals form, Insurance Certificates and Endorsements, Guarantee form, Contractor's Certificate Regarding Non-Asbestos Containing Materials, Disabled Veteran Business Enterprises Certification, if applicable, General Conditions, Supplemental Conditions, if any, Special Conditions, if any, Drawings, Specifications, and all modifications, addenda and amendments thereto. The Project Documents are complementary, and what is called for by any one shall be as binding as if called for by all.
- (f) CONTRACTOR or DISTRICT are those mentioned as such in the Agreement. They are treated throughout the Project Documents as if they are of singular number and neuter gender.
- (g) DISTRICT is the Governing Board or its duly authorized representative.
- (h) Locality in which the work is performed means the county and city in which the work is done.
- (i) Project is the planned undertaking as provided for in the Project Documents by DISTRICT and CONTRACTOR.
- (j) Provide shall include "provide complete in place," that is, "furnish and install."
- (k) Safety Orders are those issued by the Division of Industrial Safety and OSHA safety and health standards for construction.

(l) Standards, Rules, and Regulations referred to are recognized printed standards and shall be considered as one and a part of these specifications within limits specified.

(m) Subcontractor, as used herein, includes those having a direct contractual relationship with CONTRACTOR and one who furnishes material worked to a special design according to plans, drawings, and specifications, but does not include one who merely furnishes material not so worked.

(n) Surety is the person, firm, or corporation that executes as a California admitted surety insurer, the CONTRACTOR's Bid Security, faithful performance bond and payment bond.

(o) Work of the CONTRACTOR or subcontractor includes labor or materials (including, without limitation, equipment and appliances) or both, incorporated in, or to be incorporated in the Project.

(p) Workers includes laborer, worker, or mechanic.

ARTICLE 2. STATUS OF CONTRACTOR

(a) CONTRACTOR is and shall at all times be deemed to be an independent contractor and shall be wholly responsible for the manner in which it performs the services required of it by the terms of the Project Documents. Nothing herein contained shall be construed as creating the relationship of employer and employee, or principal and agent, between the DISTRICT and CONTRACTOR or any of CONTRACTOR's agents or employees. CONTRACTOR assumes exclusively the responsibility for the acts of its employees as they relate to the services to be provided during the course and scope of their employment. CONTRACTOR, its agents and employees shall not be entitled to any rights or privileges of DISTRICT employees and shall not be considered in any manner to be DISTRICT employees. DISTRICT shall be permitted to monitor the activities of the CONTRACTOR to determine compliance with the terms of the Project Documents.

(b) Contractors are required by law to be licensed and regulated by the Contractors' State License Board. Any CONTRACTOR not so licensed is subject to penalties under the law, and the contract will be considered void pursuant to Section 7028.7 of the Business and Professions Code. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, 9821 Business Park Drive, P. O. Box 26000, Sacramento, CA 95826.

ARTICLE 3. CHANGE IN NAME AND NATURE OF CONTRACTOR'S LEGAL ENTITY

Before CONTRACTOR makes any change in the name or legal nature of the CONTRACTOR's entity, CONTRACTOR shall first notify the DISTRICT in writing and cooperate with DISTRICT in making such changes as the DISTRICT may request in the Project Documents.

ARTICLE 4.

CONTRACTOR'S SUPERVISION, PROSECUTION AND PROGRESS

(a) During progress of the work, CONTRACTOR shall keep on the work site a competent superintendent satisfactory to DISTRICT. Before commencing the work herein, CONTRACTOR shall give written notice to DISTRICT and ARCHITECT of the name, qualifications and experience of such superintendent. If Superintendent is found unsatisfactory by DISTRICT, CONTRACTOR shall replace the Superintendent with one acceptable to the DISTRICT. Superintendent shall not be changed except with written consent of DISTRICT, unless a superintendent proves to be unsatisfactory to CONTRACTOR and ceases to be in its employ, in which case, CONTRACTOR shall notify DISTRICT and ARCHITECT in writing and replace said Superintendent with one acceptable to the DISTRICT. Superintendent shall represent CONTRACTOR and all directions given to Superintendent shall be as binding as if given to CONTRACTOR.

(b) CONTRACTOR shall supervise and direct the work competently and efficiently, devoting such attention thereto and applying such skills as may be necessary to perform the work in accordance with the Project Documents. CONTRACTOR shall carefully study and compare all plans, drawings, specifications, and other instructions and shall at once report to ARCHITECT any error, inconsistency or omission which CONTRACTOR or its employees may discover. The CONTRACTOR represents itself to DISTRICT as a skilled, knowledgeable, and experienced CONTRACTOR. The CONTRACTOR shall carefully study and compare the Project Documents with each other, and shall at once report to the ARCHITECT any errors, inconsistencies, or omissions discovered. The CONTRACTOR shall be liable to the DISTRICT for damage resulting from errors, inconsistencies, or omissions in the Project Documents that the CONTRACTOR recognized and which CONTRACTOR knowingly failed to report and which a similarly skilled, knowledgeable, and experienced contractor would have discovered.

(c) The CONTRACTOR shall verify all indicated dimensions before ordering materials or equipment, or before performing work. The CONTRACTOR shall take field measurements, verify field conditions, and shall carefully compare such field measurements and conditions and other information known to the CONTRACTOR with the Project Documents before commencing work. Errors, inconsistencies or omissions discovered shall be reported to the DISTRICT at once. Upon commencement of any item of work, the CONTRACTOR shall be responsible for dimensions related to such item of work and shall make any corrections necessary to make work properly fit at no additional cost to DISTRICT. This responsibility for verification of dimensions is a non-delegable duty and may not be delegated to subcontractors or agents.

(d) Omissions from the plans, drawings or specifications, or the misdescription of details of work which are manifestly necessary to carry out the intent of the plans, drawings and specifications, or which are customarily performed, shall not relieve the CONTRACTOR from performing such omitted or misdescribed work, but they shall be performed as if fully and correctly set forth and described in the plans, drawings and specifications.

(e) The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The CONTRACTOR shall be responsible to see that the finished work complies accurately with the Project Documents.

ARTICLE 5. SUBCONTRACTORS

(a) CONTRACTOR agrees to bind every subcontractor by terms of the Project Documents as far as such terms are applicable to subcontractor's work. If CONTRACTOR shall subcontract any part of the work, CONTRACTOR shall be as fully responsible to DISTRICT for acts and omissions of any subcontractor and of persons either directly or indirectly employed by any subcontractor, as it is for acts and omissions of persons directly employed by CONTRACTOR. Nothing contained in Project Documents shall create any contractual relation between any subcontractor and DISTRICT, nor shall the contract documents be construed to be for the benefit of any subcontractor.

(b) DISTRICT's consent to any subcontractor shall not in any way relieve CONTRACTOR of any obligations under the Project Documents and no such consent shall be deemed to waive any provision of any Project Document.

(c) CONTRACTOR must submit with its bid, a Designation of Subcontractors pursuant to the Subletting and Subcontracting Fair Practices Act. If CONTRACTOR specifies more than one subcontractor for the same portion of work or fails to specify a subcontractor, and such portion of the work exceeds one-half of one percent of the total bid, CONTRACTOR agrees that it is fully qualified to perform and shall perform such work itself, unless CONTRACTOR provides for substitution or addition of subcontractors. Substitution or addition of subcontractors shall be permitted only as authorized under the Subletting and Subcontracting Fair Practices Act, Public Contract Code Section 4100, et. seq.

(d) In accordance with Business and Professions Code Section 7059, if CONTRACTOR is designated as a "specialty contractor" (as defined in Section 7058 of the Public Contract Code), all of the work to be performed outside of the CONTRACTOR's license specialty shall be performed by a licensed subcontractor in compliance with the Subletting and Subcontracting Fair Practices Act, Public Contract Code Section 4100, et seq.

(e) A copy of each subcontract, if in writing, or, if not in writing, then a written statement signed by the CONTRACTOR giving the name of the subcontractor and the terms and conditions of such subcontract, shall be filed with the DISTRICT before the subcontractor begins work. Each subcontract shall contain a reference to the Agreement between the DISTRICT and the CONTRACTOR and the terms of that Agreement and all parts of the Project Documents shall be made a part of such subcontract insofar as applicable to the work covered thereby. Each subcontract will provide for termination in accordance with Article 13 of these General Conditions. Each subcontract shall provide for its annulment by the CONTRACTOR at the order of the ARCHITECT if in the ARCHITECT'S opinion the subcontractor fails to comply with the requirements of the

Project Documents insofar as the same may be applicable to this work. Nothing herein contained shall relieve the CONTRACTOR of any liability or obligation hereunder.

ARTICLE 6. PROHIBITED INTERESTS

No official of DISTRICT who is authorized in such capacity and on behalf of DISTRICT to negotiate, make, accept, or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with construction of the Project, shall become directly or indirectly interested financially in this Project or in any part thereof. No officer, employee, architect, attorney, engineer or inspector of or for DISTRICT who is authorized in such capacity and on behalf of DISTRICT to exercise any executive, supervisory or other similar functions in connection with construction of Project shall become directly or indirectly interested financially in this Project or in any part thereof. CONTRACTOR shall receive no compensation and shall repay DISTRICT for any compensation received by CONTRACTOR hereunder, should CONTRACTOR aid, abet or knowingly participate in violation of this Article 6.

ARTICLE 7. DISTRICT'S INSPECTOR

- (a) One or more Inspector(s), including special inspectors, as required, will be employed by DISTRICT and will be assigned to the Project.
- (b) No work shall be performed by the CONTRACTOR solely upon the instructions or comments by the Inspector. The Inspector has no authority to interpret the Project Documents or order extra work and any extra work performed without the written instruction of the DISTRICT shall be at CONTRACTOR's sole cost and expense and there will be no delay damages incurred by DISTRICT for such work.
- (c) No work shall be carried on except with the knowledge and under the inspection of said Inspector(s). He/she shall have free access to any or all parts of work at any time. CONTRACTOR shall furnish Inspector reasonable opportunities for obtaining such information as may be necessary to keep Inspector fully informed respecting progress and manner of work and character of materials. Inspection of work shall not relieve CONTRACTOR from any obligation to fulfill the Project Documents. Inspector or ARCHITECT shall have authority to stop work whenever provisions of Project Documents are not being complied with and such noncompliance is discovered. CONTRACTOR shall instruct its employees accordingly.
- (d) CONTRACTOR understands and agrees that the Inspector for the Project may also serve concurrently as inspector for other DISTRICT projects and may not therefore be available on site during the entire work day. It shall be the responsibility of CONTRACTOR to notify the Inspector not less than twenty-four (24) hours in advance of materials and equipment deliveries and required inspections.

ARTICLE 8. ARCHITECT'S STATUS

- (a) The ARCHITECT shall be the DISTRICT's representative during construction and shall observe the progress and quality of the work on behalf of the DISTRICT. ARCHITECT shall have the authority to act on behalf of DISTRICT only to the extent expressly provided in the Project Documents. ARCHITECT shall have authority to stop work whenever such stoppage may be necessary in ARCHITECT'S reasonable opinion to ensure the proper execution of the Project Documents.
- (b) The ARCHITECT shall be, in the first instance, the judge of the performance of the work. ARCHITECT shall exercise authority under the Project Documents to enforce CONTRACTOR's faithful performance.
- (c) The ARCHITECT shall have all authority and responsibility established by law. The ARCHITECT has the authority to enforce compliance with the Project Documents and the CONTRACTOR shall promptly comply with instructions from the ARCHITECT or an authorized representative of the ARCHITECT.
- (d) On all questions related to the quantities, the acceptability of material, equipment or workmanship, the execution, progress or sequence of work, the interpretation of plans, specifications or drawings, and the acceptable performance of the CONTRACTOR pursuant to the decision of the ARCHITECT shall govern and shall be precedent to any payment unless otherwise ordered by the Governing Board. The progress and completion of the work shall not be impaired or delayed by virtue of any question or dispute arising out of or related to the foregoing matters and the instructions of the ARCHITECT relating thereto.
- (e) General supervision and direction of the work by the ARCHITECT shall in no way imply that the ARCHITECT or his or her representatives are in any way responsible for the safety of the CONTRACTOR or its employees or that the ARCHITECT or his or her representatives will maintain supervision over the CONTRACTOR's construction methods or personnel other than to ensure that the quality of the finished work is in accordance with the Project Documents.

ARTICLE 9. NOTICE OF TAXABLE POSSESSORY INTEREST

The terms of the Agreement may result in the creation of a possessory interest. If such a possessory interest is vested in a private party to the Agreement, the private party may be subjected to the payment of property taxes levied on such interest.

ARTICLE 10. ASSIGNMENT OF ANTITRUST ACTIONS

Public Contract Code Section 7103.5 provides:

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the

contractor or subcontractor offers and agrees to assign to the awarding body (DISTRICT) 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. Section 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 the contractor, without further acknowledgment by the parties.

CONTRACTOR, for itself and all subcontractors, agrees to assign to DISTRICT all rights, title, and interest in and to all such causes of action CONTRACTOR and all subcontractors may have under the Agreement. This assignment shall become effective at the time DISTRICT tenders final payment to the CONTRACTOR, and CONTRACTOR shall require assignments from all subcontractors to comply herewith.

ARTICLE 11. OTHER CONTRACTS

(a) DISTRICT reserves the right to let other contracts in connection with this work. CONTRACTOR shall afford other contractors reasonable opportunity for introduction and storage of their materials and execution of their work and shall properly connect and coordinate its work with such other contractors.

(b) If any part of CONTRACTOR's work depends for proper execution or results upon work of any other contractor, the CONTRACTOR shall inspect and promptly report to ARCHITECT in writing any defects in such work that render it unsuitable for such proper execution and results. CONTRACTOR will be held accountable for damages to DISTRICT for that work which it failed to inspect or should have inspected. CONTRACTOR's failure to inspect and report shall constitute its acceptance of other contractor's work as fit and proper for reception of its work, except as to defects which may develop in other contractors' work after execution of CONTRACTOR's work.

(c) To ensure proper execution of its subsequent work, CONTRACTOR shall measure and inspect work already in place and shall at once report to the ARCHITECT in writing any discrepancy between executed work and Project Documents.

(d) CONTRACTOR shall ascertain to its own satisfaction the scope of the Project and nature of any other contracts that have been or may be awarded by DISTRICT in prosecution of the Project to the end that CONTRACTOR may perform this Agreement in the light of such other contracts, if any.

(e) Nothing herein contained shall be interpreted as granting to CONTRACTOR exclusive occupancy at site of Project. CONTRACTOR shall not cause any unnecessary hindrance or delay to any other contractor working on Project. If simultaneous execution of any contract for Project is likely to cause interference with performance of some other

contract or contracts, DISTRICT shall decide which contractor shall cease work temporarily and which contractor shall continue or whether work can be coordinated so that contractors may proceed simultaneously.

(f) DISTRICT shall not be responsible for any damages suffered or extra costs incurred by CONTRACTOR resulting directly or indirectly from award or performance or attempted performance of any other contract or contracts on Project, or caused by any decision or omission of DISTRICT respecting the order of precedence in performance of contracts.

ARTICLE 12. OCCUPANCY

DISTRICT reserves the right to occupy buildings and/or portions of the site at any time before completion, and such occupancy shall not constitute final acceptance of any part of work covered by this Agreement, nor shall such occupancy extend the date specified for completion of the work. Beneficial occupancy of building(s) does not commence any warranty period nor shall it entitle CONTRACTOR to any additional compensation due to such occupancy.

ARTICLE 13. DISTRICT'S RIGHT TO TERMINATE AGREEMENT

(a) Termination for Cause. If the CONTRACTOR refuses or fails to complete the work or any separable part thereof with such diligence as will insure its completion within the time specified or any extension thereof, or fails to complete said work within such time, or if the CONTRACTOR should file a petition for relief as a debtor, or should relief be ordered against CONTRACTOR as a debtor under Title 11 of the United States Code, or if CONTRACTOR should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or if it should refuse or should fail to supply enough properly skilled workers or proper equipment, tools, and materials in the necessary quantity and quality to complete the work in the time specified, or if CONTRACTOR should fail to make prompt payment to subcontractors for materials or labor, or disregard laws or ordinances or instructions of DISTRICT, or if CONTRACTOR or its subcontractors should otherwise be guilty of a violation of any provision of this Agreement, then CONTRACTOR shall be deemed to be in default of the Agreement and DISTRICT may, without prejudice to any other right or remedy, serve written notice upon CONTRACTOR and its surety of DISTRICT's intention to terminate this Agreement, such notice to contain the reasons for such intention to terminate, and unless within ten (10) calendar days after the service of such notice such condition shall cease or such violation shall cease, or arrangements satisfactory to DISTRICT for the correction thereof be made and corrective action commenced in a diligent and workmanlike manner and pursued to satisfactory completion, this Agreement shall upon the expiration of said ten (10) calendar days, cease and terminate. In such case, CONTRACTOR shall be excluded from the worksite and not be entitled to receive any further payment until work is finished to DISTRICT's satisfaction.

(b) In the event of any such termination, surety shall have the right to take over and perform this Agreement, provided, however, that if surety within five (5) calendar days after service upon it of said notice of termination does not give DISTRICT written notice of its intention to take over and perform this Agreement or does not commence performance thereof within ten (10) calendar days after date of serving such notice of termination by DISTRICT on surety, DISTRICT may take over the work and prosecute same to completion by any means determined by DISTRICT including hiring another contractor for the account and at the expense of CONTRACTOR, and CONTRACTOR and its surety shall be liable to DISTRICT for any excess cost or other damages occasioned by the DISTRICT thereby. Time is of the essence in this Agreement. If the DISTRICT takes over the work as hereinabove provided, the DISTRICT may, without liability for so doing, take possession of and utilize in completing the work such materials, supplies, equipment and other property belonging to the CONTRACTOR as may be on the site of the work and necessary therefore.

(c) The expense of finishing the work, including compensation for additional architectural, managerial, and administrative services, shall be a charge against CONTRACTOR and CONTRACTOR agrees that the charge may be deducted from any money due or becoming due to CONTRACTOR from DISTRICT or CONTRACTOR shall pay the charge to the DISTRICT. Expense incurred by DISTRICT as herein provided, and damage incurred through CONTRACTOR's default, shall be certified to DISTRICT by ARCHITECT. The surety shall become liable for payment should CONTRACTOR fail to pay in full any cost incurred by the DISTRICT.

(d) Nonappropriation of Funds/Insufficient Funds. In the event that sufficient funds are not appropriated to complete the Project or the DISTRICT determines that sufficient funds are not available to complete the Project, DISTRICT may terminate or suspend the completion of the Project at any time by giving written notice to the CONTRACTOR. In the event that the DISTRICT exercises this option, the DISTRICT shall pay for any and all work and materials completed or delivered onto the site, and the value of any and all work then in progress and orders actually placed which cannot be canceled up to the date of notice of termination. The value of work and materials paid for shall include a factor of fifteen percent (15%) for the CONTRACTOR's overhead and profit and there shall be no other costs or expenses paid to CONTRACTOR. All work, materials and orders paid for pursuant to this provision shall become the property of the DISTRICT. DISTRICT may, without cause, order CONTRACTOR in writing to suspend, delay or interrupt the Project in whole or in part for such period of time as DISTRICT may determine. Adjustment shall be made for increases in the cost of performance of the Agreement caused by suspense, delay or interruption.

(e) The foregoing provisions are in addition to and not a limitation of any other rights or remedies available to the DISTRICT.

ARTICLE 14. BONDS

Unless otherwise specified in Special Conditions, CONTRACTOR shall furnish a surety bond in an amount equal to one hundred percent (100%) of contract price as security for faithful performance of this Agreement and shall furnish a separate bond in an amount of one hundred percent (100%) of the contract price as security for payment to persons performing labor and furnishing materials in connection with this Project. Bonds shall be in the form set forth in these Project Documents.

ARTICLE 15. SUBSTITUTION OF SECURITIES

(a) Pursuant to the requirements of Public Contract Code Section 22300, upon CONTRACTOR's request, DISTRICT will make payment to CONTRACTOR of any earned retention funds withheld from payments under this Agreement if CONTRACTOR deposits with the DISTRICT or in escrow with a California or federally chartered bank acceptable to DISTRICT, securities eligible for the investment pursuant to Government Code Section 16430 or bank or savings and loan certificates of deposit, upon the following conditions:

(1) CONTRACTOR shall be the beneficial owner of any securities substituted for retention funds withheld and shall receive any interest thereon.

(2) All expenses relating to the substitution of securities under said Section 22300 and under this Article 15, including, but not limited to DISTRICT's overhead and administrative expenses, and expenses of escrow agent shall be the responsibility of the CONTRACTOR.

(3) If CONTRACTOR shall choose to enter into an escrow agreement, such agreement shall be in the form as set forth in Public Contract Code section 22300(f) attached hereto as part of the Project Documents and which shall allow for the conversion to cash to provide funds to meet defaults by the CONTRACTOR including, but not limited to, termination of the CONTRACTOR's control over the work, stop notices filed pursuant to law, assessment of liquidated damages or amount to be kept or retained under the provisions of the Project Documents.

(4) Securities, if any, shall be returned to CONTRACTOR only upon satisfactory completion of the Agreement.

(b) To minimize the expense caused by such substitution of securities, CONTRACTOR shall, prior to or at the time CONTRACTOR requests to substitute security, deposit sufficient security to cover the entire amount to be then withheld and to be withheld under the General Conditions of this Agreement. Should the value of such substituted security at any time fall below the amount for which it was substituted, or any other amount which the DISTRICT determines to withhold, CONTRACTOR shall immediately, and at CONTRACTOR's expense, deposit additional security qualifying under said Section 22300 until the total security deposited is no less than equivalent to the amount subject to withholding under the Agreement.

(c) In the alternative, under Section 22300, CONTRACTOR, at its own expense, may request DISTRICT to make payment of earned retention funds directly to the escrow agent. Also at the expense of CONTRACTOR, CONTRACTOR may direct investment of the payments into securities, and CONTRACTOR shall receive the interest earned on the investment upon the same conditions as shown in paragraph (a) for securities deposited by CONTRACTOR. Upon satisfactory completion of the Agreement, CONTRACTOR shall receive from the escrow agent all securities, interest and payments received by the escrow agent from DISTRICT, pursuant to the terms of Section 22300.

(d) If any provision of this Article 15 shall be found to be illegal or unenforceable, then, notwithstanding, this Article 15 shall remain in full force and effect, and such provision shall be deemed stricken.

ARTICLE 16. FIRE INSURANCE

CONTRACTOR will procure at CONTRACTOR's own expense, and before commencement of any work under this Agreement, fire insurance on the Project. Amount of fire insurance shall be sufficient to protect against loss or damage in full until work is accepted by DISTRICT. CONTRACTOR shall submit proof of insurance and shall provide endorsements on forms provided by the DISTRICT or on forms approved by the DISTRICT.

ARTICLE 17. PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE

(a) CONTRACTOR shall take out and maintain during the life of this Agreement such public liability and property damage insurance as shall protect CONTRACTOR and DISTRICT from all claims for personal injury, including accidental death, to any person (including, as to DISTRICT, injury or death to CONTRACTOR's or subcontractor's employees), as well as from all claims for property damage arising from operations under this Agreement, in amounts as set forth in the Agreement.

(b) CONTRACTOR shall require its subcontractors, if any, to take out and maintain similar public liability and property damage insurance in like amounts or insure the activities of its subcontractors in CONTRACTOR's own policy.

(c) CONTRACTOR, during the progress of the work and until final acceptance of the work by DISTRICT upon completion of the entire Agreement, shall maintain Builder's Risk/ "All Risk," course-of-construction insurance in an amount not less than as set forth in the Agreement. Coverage is to provide extended coverage and insurance against vandalism, malicious mischief, perils of fire, sprinkler leakage, civil authority, sonic boom, earthquake, collapse, flood, wind, lightning, smoke, riot, debris removal (including demolition), and reasonable compensation for ARCHITECT's services and expenses required as a result of such insured loss upon the entire work which is the subject of the Project Documents, including completed work and work in progress to the full insurable amount thereof. The risk of damage to the work due to the perils covered by the Builder's Risk/"All Risk" Insurance, as well as any other hazards which might result in damage to

the work, is that of CONTRACTOR and the surety, and no claims for such loss or damage shall be recognized by DISTRICT nor will such loss or damage excuse the complete and satisfactory performance of the Agreement by CONTRACTOR.

(d) CONTRACTOR shall submit proof of insurance and shall provide endorsements on the forms provided by the DISTRICT or on forms approved by the DISTRICT. Such insurance shall be issued by admitted surety insurers under the same conditions as required for bonds on the Project.

ARTICLE 18. WORKERS' COMPENSATION INSURANCE

(a) In accordance with the provisions of Section 3700 of the Labor Code, the CONTRACTOR and every subcontractor shall be required to secure the payment of compensation to its employees.

(b) The CONTRACTOR shall provide, during the life of the Agreement, workers' compensation insurance for all of its employees engaged in work under this Agreement, on or at the site of the Project, and, in case any of its work is sublet, the CONTRACTOR shall require the subcontractor similarly to provide workers' compensation insurance for all the latter's employees. Any class of employee or employees not covered by a subcontractor's insurance shall be covered by the CONTRACTOR's insurance. In case any class of employees engaged in work under this Agreement, on or at the site of the Project, is not protected under the workers' compensation statute, the CONTRACTOR shall provide or shall cause a subcontractor to provide, adequate insurance coverage for the protection of such employees not otherwise protected before subcontractor commences work. The CONTRACTOR shall file with the DISTRICT certificates of its insurance protecting workers and a thirty (30) day notice shall be provided to DISTRICT before the cancellation or reduction of any policy of CONTRACTOR or subcontractor. CONTRACTOR shall submit proof of insurance and shall provide endorsements on the forms provided by the DISTRICT or on forms approved by the DISTRICT. Such endorsements shall be submitted concurrently with the Project Documents.

ARTICLE 19. PROOF OF CARRIAGE OF INSURANCE

(a) CONTRACTOR shall not commence work nor shall it allow any subcontractor to commence work under this Agreement until all required insurance certificates and endorsements from admitted surety insurers have been obtained and delivered in duplicate to and approved by DISTRICT. Such insurance shall be issued by admitted surety insurers under the same conditions as required for bonds on the Project. CONTRACTOR shall provide proof of insurance on DISTRICT approved forms without revisions.

(b) Certificates and insurance policies shall include the following:

(1) A clause stating:

"This policy shall not be canceled or reduced in required limits of liability or amount of insurance until notice has been mailed to DISTRICT stating date of cancellation or reduction. Date of cancellation or reduction may not be less than thirty (30) days after date of mailing notice."

(2) Language stating in particular those insured, extent of insurance, location and operation to which insurance applies, expiration date, to whom cancellation and reduction notice will be sent, and length of notice period.

(3) Statement that the DISTRICT is an additional insured under the policy described and that such insurance policy shall be primary to any insurance or self-insurance maintained by the DISTRICT.

(c) In case of CONTRACTOR's failure to provide insurance as required by the Agreement, the DISTRICT may, at DISTRICT's option, take out and maintain at the expense of the CONTRACTOR, such insurance in the name of CONTRACTOR, or subcontractor, as the DISTRICT may deem proper and may deduct the cost of taking out and maintaining such insurance from any sums which are due or to become due to the CONTRACTOR under this Agreement.

ARTICLE 20. DRAWINGS AND SPECIFICATIONS

(a) Drawings and Specifications are intended to delineate and describe the Project and its component parts to such a degree as will enable skilled and competent contractors to intelligently bid upon the work, and to carry said work to a successful conclusion.

(b) Drawings and Specifications are intended to comply with all laws, ordinances, rules and regulations of constituted authorities having jurisdiction, and where referred to in the Project Documents, said laws, ordinances, rules and regulations shall be considered as a part of the Agreement within the limits specified. The CONTRACTOR shall bear all expenses of correcting work done contrary to said laws, ordinances, rules and regulations and if the CONTRACTOR performed same (1) without first consulting the ARCHITECT for further instructions regarding said work, or (2) disregarded the ARCHITECT'S instructions regarding said work.

(c) Questions regarding interpretation of drawings and specifications shall be clarified by the ARCHITECT. Before commencing any portion of the work, CONTRACTOR shall carefully examine all drawings and specifications and other information given to CONTRACTOR. CONTRACTOR shall immediately notify ARCHITECT and DISTRICT in writing of any perceived or alleged error, inconsistency, ambiguity, or lack of detail or explanation in the drawings and specifications. If CONTRACTOR or its subcontractors, material or equipment suppliers, or any of their officers, agents, and employees performs, permits, or causes the performance of any work under the Project Documents, which it knows or should have known to be in error, inconsistent, or ambiguous, or not sufficiently detailed or explained, CONTRACTOR shall bear any and all costs arising therefrom including, without limitation, the cost of correction thereof. In

the event ARCHITECT determines that CONTRACTOR's requests for clarification or interpretation are not justified or do not reflect adequate competent supervision or knowledge by the CONTRACTOR or his/her subcontractors, CONTRACTOR shall be required to pay ARCHITECT's reasonable and customary fees in processing and responding to such requests. Should the CONTRACTOR commence work or any part thereof without seeking clarification, CONTRACTOR waives any claim for extra work or damages as a result of any ambiguity, conflict or lack of information.

(d) Figured dimensions on drawings shall govern, but work not dimensioned shall be as directed. Work not particularly shown or specified shall be the same as similar parts that are shown or specified. Large scale drawings shall take precedence over smaller scale drawings as to shape and details of construction. Specifications shall govern as to materials, workmanship, and installation procedures. Drawings and specifications are intended to be fully cooperative and to agree. If CONTRACTOR observes that drawings and specifications are in conflict, CONTRACTOR shall promptly notify the ARCHITECT in writing, and any necessary changes shall be adjusted as provided in the Article entitled "Changes and Extra Work;" provided, however, that the specification calling for the higher quality material or workmanship shall prevail without additional cost to DISTRICT.

(e) Materials or work described in words which so applied has a well-known technical or trade meaning shall be deemed to refer to such recognized standards.

(f) It is not the intention of the Agreement to go into detailed descriptions of any materials and/or methods commonly known to the trade under "trade name" or "trade term." The mere mention or notation of such "trade name" or "trade term" shall be considered a sufficient notice to CONTRACTOR that it will be required to complete the work so named with all its incidental and accessory items according to the best practices of the trade.

(g) The naming of any material and/or equipment shall mean furnishing and installing of same, including all incidental and accessory items thereto and/or labor necessary to achieve full and complete functioning of the material and/or equipment as per best practices of the trade(s) involved, unless specifically noted otherwise.

(h) ARCHITECT will furnish to CONTRACTOR one (1) complete set of blue-line prints for posting of changes. Additional blue-line prints shall be provided by ARCHITECT upon payment by CONTRACTOR. During the construction period, CONTRACTOR shall maintain the set of blue-line prints in a satisfactory record condition, and shall thoroughly and neatly post, as they occur, all additions, deletions, corrections and/or revisions in the actual construction of the Project. The record drawings must be posted monthly and be current prior to each submission of each certificate of payment.

ARTICLE 21. OWNERSHIP OF DRAWINGS

All plans, drawings, designs, specifications, and other incidental architectural and engineering work or materials and other Project Documents and copies thereof furnished by DISTRICT are DISTRICT'S property. They are not to be used in other work and are to be returned to DISTRICT on request at completion of work, and may be used by DISTRICT as it may require, without any additional costs to DISTRICT.

ARTICLE 22. DETAIL DRAWINGS AND INSTRUCTIONS

(a) In case of ambiguity, conflict, or lack of information, ARCHITECT shall furnish additional instructions by means of drawings or otherwise, necessary for proper execution of work. All such drawings and instructions shall be consistent with Project Documents, true developments thereof, and reasonably inferable therefrom. Such additional instructions shall be furnished with reasonable promptness, provided that CONTRACTOR informs the ARCHITECT of the relationship of the request to the critical path of construction.

(b) Work shall be executed in conformity therewith and CONTRACTOR shall do no work without proper drawings and instructions.

(c) The ARCHITECT will furnish necessary additional details to more fully explain the work, which details shall be considered as part of the Project Documents.

(d) Should any details be more elaborate, in the opinion of the CONTRACTOR, than scale drawings and specifications warrant, CONTRACTOR shall give written notice thereof to the ARCHITECT within five (5) days of the receipt of same. In case no notice is given to the ARCHITECT within five (5) days, it will be assumed the details are reasonable development of the scale drawings. In case notice is given, then it will be considered, and if found justified, the ARCHITECT will either modify the drawings or shall recommend to DISTRICT a change order for the extra work involved.

(e) All parts of the described and shown construction shall be of the best quality of their respective kinds and the CONTRACTOR is hereby advised to use all diligence to become fully involved as to the required construction and finish, and in no case to proceed with the different parts of the work without obtaining first from the ARCHITECT such directions and/or drawings as may be necessary for the proper performance of the work.

(f) If it is found at any time, before or after completion of the work, that the CONTRACTOR has varied from the drawings and/or specifications, in materials, quality, form or finish, or in the amount or value of the materials and labor used, the ARCHITECT shall make a recommendation: (1) that all such improper work should be removed, remade and replaced, and all work disturbed by these changes be made good at the CONTRACTOR's expense; or (2) that the DISTRICT deduct from any amount due CONTRACTOR, the sum of money equivalent to the difference in value between the work performed and that called for by the drawings and specifications. ARCHITECT shall determine such difference in value. The DISTRICT, at its option, may pursue either recommendation made by the ARCHITECT.

ARTICLE 23. SHOP DRAWINGS

- (a) CONTRACTOR shall check and verify all field measurements and shall submit to ARCHITECT within ____ () calendar days of the date specified on the Notice to Proceed _____ () copies, checked and approved by CONTRACTOR, of all shop or setting list drawings, schedules, and materials list required for the work of various trades. ARCHITECT shall review such drawings, schedules and materials list only for conformance with design concept of Project and compliance with information given in Project Documents, and return as approved or disapproved with guidance as to required corrections within ____ () calendar days. CONTRACTOR shall make any corrections required by ARCHITECT, file three (3) corrected copies with ARCHITECT, and furnish such other copies as may be needed for construction within ____ () calendar days. ARCHITECT'S approval of such drawings, schedules, or materials list shall not relieve CONTRACTOR from responsibility for deviations unless CONTRACTOR has in writing called ARCHITECT'S attention to such deviations at time of submission and secured ARCHITECT'S written approval, nor shall it relieve CONTRACTOR from responsibility for errors in shop drawings or schedules.
- (b) All submittals of shop drawings, catalog cuts, data sheets, schedules and material lists shall be complete and shall conform to contract drawings and specifications.
- (c) The term "shop drawing" as used herein shall be understood to include, but not be limited to, detail design calculations, fabrication and installation drawings, lists, graphs and operating instructions.
- (d) Shop drawings shall be submitted at a time sufficiently early to allow review of same by the Division of State Architect (DSA) if required, and the ARCHITECT, and to accommodate the rate of construction progress required under the Project Documents. CONTRACTOR will be required to pay ARCHITECT's reasonable and customary fees in order to expedite review of shop drawings which are not submitted in a timely fashion.
- (e) All shop drawing submittals shall be accompanied by an accurately completed transmittal form using the format bound herein. Any shop drawing submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for resubmittal. The CONTRACTOR may authorize a material or equipment supplier to deal directly with the ARCHITECT with regard to shop drawings, however, ultimate responsibility for the accuracy and completeness of the information contained in the submittal shall remain with the CONTRACTOR.
- (f) Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of shop drawings on various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole. At its option, the

CONTRACTOR or Supplier may obtain from the ARCHITECT quantities of the shop drawing transmittal form at reproduction cost.

(g) CONTRACTOR's review and approval of shop drawings shall include the following stamp:

"The CONTRACTOR has reviewed and approved not only the field dimensions but the construction criteria and has also made written notation regarding any information in the shop drawings that does not conform to the Project Documents. This shop drawing has been coordinated with all other shop drawings received to date by CONTRACTOR and this duty of coordination has not been delegated to subcontractors, material suppliers, the ARCHITECT, or the engineers on this project.

Signature of CONTRACTOR"

(h) Within _____ (___) calendar days after receipt of shop drawings, the ARCHITECT will return one or more prints of each drawing to CONTRACTOR with his or her comments noted thereon. The CONTRACTOR shall make a complete and acceptable submittal to the ARCHITECT by the second submission of drawings. The DISTRICT shall withhold funds due the CONTRACTOR to cover additional costs of the ARCHITECT'S review beyond the second submission and any other costs incurred by DISTRICT.

(i) If prints of the shop drawing are returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN," formal revision of said drawing will not be required. If prints of the drawing are returned to the CONTRACTOR marked "MAKE CORRECTIONS NOTED," formal resubmittal of said drawings will not be required. If prints of the drawing are returned to the CONTRACTOR marked "REVISE AND RESUBMIT," the CONTRACTOR shall revise said drawing and shall resubmit six (6) copies of the revised drawing to the ARCHITECT. If prints of the drawing are returned to the CONTRACTOR marked "REJECTED RESUBMIT," the CONTRACTOR shall resubmit six (6) new copies of the drawing to the ARCHITECT.

(j) Fabrication of an item shall not be commenced before the ARCHITECT has reviewed the pertinent shop drawings and returned copies to the CONTRACTOR marked with "NO EXCEPTIONS TAKEN," or "MAKE CORRECTIONS NOTED." Revisions indicated on shop drawings shall be considered as changes necessary to meet the requirements of the Project Documents and shall not be taken as the basis of claims for extra work. The review of such drawings by the ARCHITECT will be limited to checking for general agreement with the Project Documents, and shall in no way relieve the CONTRACTOR of responsibility for errors or omissions contained therein, nor shall such review operate to waive or modify any provision contained in the Project Documents.

Fabricating dimensions, quantities of material, applicable code requirements, and other contract requirements shall be the CONTRACTOR's responsibility.

(k) No work represented by required shop drawings shall be purchased or commenced until the applicable submittal has been approved. The work shall conform to the approved shop drawings and all other requirements of the Project Documents. The CONTRACTOR shall not proceed with any related work which may be affected by the work covered under shop drawings until the applicable shop drawings have been approved, particularly where piping, machinery, and equipment and the required arrangements and clearances are involved.

(l) Except where the preparation of a shop drawing is dependent upon the approval of a prior shop drawing, all shop drawings pertaining to the same class or portion of the work shall be submitted simultaneously.

(m) Calculations of a structural nature must be approved by the Division of State Architect.

(n) THE CONTRACTOR SHALL HAVE NO CLAIM FOR DAMAGES OR EXTENSION OF TIME DUE TO ANY DELAY RESULTING FROM THE CONTRACTOR HAVING TO MAKE THE REQUIRED REVISIONS TO SHOP DRAWINGS UNLESS REVIEW BY THE ARCHITECT OF SAID DRAWINGS IS DELAYED BEYOND THE TIME PROVIDED HEREINBEFORE AND THE CONTRACTOR CAN ESTABLISH THAT THE ARCHITECT'S DELAY IN REVIEW ACTUALLY RESULTED IN A DELAY IN THE CONTRACTOR CONSTRUCTION SCHEDULE. CONTRACTOR SHALL NOT BE ENTITLED TO ANY CLAIM FOR DAMAGES RESULTING FROM DSA REVIEW EXTENDING BEYOND FIFTEEN (15) CALENDAR DAYS AFTER SUBMITTAL. HOWEVER, DISTRICT MAY CONSIDER AN EXTENSION OF TIME DUE TO ANY DELAY CAUSED BY DSA REVIEW.

ARTICLE 24. LAYOUT AND FIELD ENGINEERING

All field engineering required for laying out of this work and establishing grades for earthwork operations shall be furnished by CONTRACTOR at its expense. Such work shall be done by a qualified civil engineer approved by the ARCHITECT. Any required "Record" drawings of site development shall be prepared by the approved civil engineer.

ARTICLE 25. SOILS INVESTIGATION REPORT

(a) When a soils investigation report has been obtained from test holes at the site, such report is available for the CONTRACTOR's use in preparing its bid and work under this Agreement. Such report shall not be part of the Agreement. Any information obtained from such report or any information given on drawings as to surface and subsurface soil condition or to elevations of existing grades or elevations of underlying rock is approximate only, is not guaranteed and does not form a part of the Agreement. CONTRACTOR is

required to make a visual examination of site and must make whatever test CONTRACTOR deems appropriate to determine surface and subsurface soil conditions. If, during the course of work under this Agreement, CONTRACTOR encounters subsurface or latent conditions which differ materially from those indicated in the soils investigation report, then CONTRACTOR shall notify the DISTRICT within five (5) working days of discovery of the condition.

WARNING: DISTRICT DOES NOT WARRANT THE SOILS AT THE PROJECT SITE NOR ANY INFORMATION CONTAINED IN ANY SOILS REPORT. SOILS INVESTIGATION REPORT IS PROVIDED FOR CONTRACTOR'S INFORMATION ONLY. CONTRACTOR HAS CONDUCTED AN INDEPENDENT INVESTIGATION OF THE PROJECT SITE AND THE SOILS CONDITIONS OF THE SITE. DISTRICT DOES NOT WARRANT THE SOILS CONDITIONS OF THE SITE AND CONTRACTOR IS FULLY RESPONSIBLE TO ASCERTAIN SITE CONDITIONS FOR THE PURPOSES OF DETERMINING CONSTRUCTION MEANS AND METHODS PRIOR TO COMMENCING CONSTRUCTION.

(b) CONTRACTOR agrees that no claim against DISTRICT will be made by CONTRACTOR for damages and hereby waives any rights to damages in the event that during progress of work CONTRACTOR encounters subsurface or latent conditions at the worksite materially different from those shown on drawings or indicated in specifications.

ARTICLE 26. TESTS AND INSPECTIONS

(a) Tests and inspections will comply with California Code of Regulations and with all other laws, ordinances, rules, regulations, or orders of public authorities having jurisdiction over the Project.

(b) If the Agreement, DISTRICT's instructions, laws, ordinances, or any public authority require any work to be specially tested or approved, CONTRACTOR shall give notice in accordance with such authority of its readiness for observation or inspection at least two (2) working days prior to being tested or covered up. If inspection is by authority other than DISTRICT, CONTRACTOR shall inform the DISTRICT's Inspector of the date fixed for such inspection. Required certificates of inspection shall be secured by CONTRACTOR. Observations by DISTRICT's Inspector shall be promptly made, and where practicable, at source of supply. If any work should be covered up without approval or consent of DISTRICT's Inspector, it must be uncovered for examination and satisfactorily reconstructed at CONTRACTOR's expense in compliance with the Agreement. Costs of tests, inspections and any materials found to be not in compliance with the Agreement shall be paid for by CONTRACTOR. Other costs for test and inspection shall be paid by the DISTRICT.

ARTICLE 27. TRENCHES

(a) CONTRACTOR shall provide adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life and limb in trenches and open excavation which conform to applicable safety standards.

(b) If this Agreement involves the excavation of any trench or trenches five (5) feet or more in depth, and the Project cost is in excess of \$25,000, the CONTRACTOR shall, in advance of excavation, submit to the DISTRICT for acceptance or to whomever DISTRICT designates which may include a registered civil or structural engineer employed by the DISTRICT to whom authority to accept has been delegated, a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the Shoring System Standards established by the Construction Safety Orders of the Division of Industrial Safety, the plan shall be prepared by a registered civil or structural engineer employed by the CONTRACTOR, and all costs therefore shall be included in the price named in the Agreement for completion of the work as set forth in the Project Documents. In no case shall such plan be less effective than that required by the Construction Safety Orders. No excavation of such trench or trenches shall be commenced until said plan has been accepted by CAL-OSHA and a CAL-OSHA permit for such plan delivered to the DISTRICT. Labor Code Section 6500 and 6705; Health and Safety Code Section 17922.5)

(c) If this Agreement involves the digging of trenches or excavations that extend deeper than four feet below the surface, the following shall apply pursuant to Public Contract Code section 7104:

(1) The CONTRACTOR shall promptly, and before the following conditions are disturbed, notify the DISTRICT, in writing, of any:

(i) Material that the CONTRACTOR believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

(ii) Subsurface or latent physical conditions at the site different from those indicated.

(iii) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

(2) The DISTRICT shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the CONTRACTOR's cost of, or the time required for, performance of any part of the work shall issue a change order under the procedures described in the Project Documents.

(3) In the event a dispute arises between the DISTRICT and the CONTRACTOR, whether the conditions materially differ or involve hazardous waste, or cause a decrease or increase in the CONTRACTOR's cost of, or time required for, performance of any part of the work, the CONTRACTOR shall not be excused from any scheduled completion date provided for by the Project Documents, but shall proceed with all the work to be performed under the Project Documents. The CONTRACTOR shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

ARTICLE 28. DOCUMENTS ON WORK

CONTRACTOR shall keep on the job site at all times one legible copy of all Project Documents, including addenda and change orders, and all approved drawings, plans, schedules and specifications. Said Documents shall be kept in good order and available to ARCHITECT, ARCHITECT's representatives, and all authorities having jurisdiction. CONTRACTOR shall be acquainted with and comply with all California Code of Regulations provisions relating to conditions on this Project.

ARTICLE 29. STATE AUDIT

Pursuant to and in accordance with the provisions of Government Code Section 8546.7, or any amendments thereto, all books, records and files of the DISTRICT, the CONTRACTOR, or any subcontractor connected with the performance of this Agreement involving the expenditure of public funds in excess of Ten Thousand Dollars (\$10,000.00), including, but not limited to, the costs of administration of the Agreement, shall be subject to the examination and audit of the State Auditor at the request of the DISTRICT or as part of any audit of the DISTRICT for a period of three (3) years after final payment is made under this Agreement .

ARTICLE 30. SUBSTITUTIONS

(a) Prior to Bid Opening. Should the bidder wish to request prior to bid opening, any substitution for the materials, process, service or equipment specified, the bidder shall submit a written request at least ten (10) working days before the bid opening date and hour. If the substituted item is acceptable, the DISTRICT will approve it in an Addendum issued to all bidders of record. Requests received less than ten (10) working days prior to bid opening will not be considered. DISTRICT shall only consider substitution requests from the bidder submitting the bid for the project.

(b) After Bid Opening and Prior to Award of Contract. If the bidder clearly indicates in its bid that it is proposing to use an "equal" product, the brand name or trade name, if any, of a proposed substitute item shall be inserted in the space provided in the bid or shall

be otherwise clearly identified in the bid. If the bidder fails to indicate an "equal" product, its bid shall be considered as offering the material, process, service or equipment referred to by the brand name or trade name specified. It is expressly understood and agreed to by the bidder that the DISTRICT reserves the right to reject any such proposed substituted item. It is further expressly understood and agreed by bidder that in the event the DISTRICT rejects a proposed "equal" item, the bidder will then supply the material, process, service or equipment designated by brand name or trade name or a substitute therefore which meets with the approval of the DISTRICT.

With respect to all proposed substitutions of "equal" items, the bidder shall submit all pertinent and appropriate data substantiating its request for substitutions within _____ () days prior to the award of the contract. DISTRICT shall only consider substitution requests from the bidder submitting the bid for the Project. The DISTRICT is not responsible for locating or securing any information which is not included in such substantiating data. The burden of proof as to the quality or suitability of proposed substituted items shall be borne by the bidder. The DISTRICT shall be the sole judge as to the quality and suitability of proposed substituted items, and decisions of the DISTRICT shall be final and conclusive. Unless extended by the mutual agreement of the parties, the DISTRICT shall notify the successful bidder of the decision concerning the proposed substitution of "equal" items prior to the award of the contract. Also such decisions by the DISTRICT shall be in writing, and no proposed substituted item shall be deemed approved unless the DISTRICT has so indicated in writing. These time limitations shall be complied with strictly, and in no case will an extension of time for completion be granted because of the bidder's failure to request the substitution of an item at the times and in the manner set forth herein.

(c) Whenever in specifications any materials, process, service or equipment is indicated or specified by brand name, trade name, proprietary name or by name of manufacturer, such specification shall be deemed to be used for the purpose of facilitating description of material, process, service or equipment desired and shall be deemed to be followed by the words "or equal," and CONTRACTOR may, unless otherwise stated, offer any material, process, service, or equipment which shall be substantially equal or better in every respect to that so indicated or specified subject to DISTRICT or ARCHITECT approval.

(d) If material, process, service, or equipment offered by CONTRACTOR is not, in opinion of ARCHITECT, or DISTRICT, substantially equal or better in every respect to that specified, then CONTRACTOR shall furnish the material, process, service, or equipment specified. Burden of proof as to equality of any material, process, service, or equipment shall rest with CONTRACTOR. Provision authorizing submission of "or equal" substantiating data shall not in any way authorize an extension of time for performance of this Agreement nor shall DISTRICT or ARCHITECT authorize the submission of □or equal□ substantiating data within ____ () days of the filing of the Notice of Completion on the Project.

(e) In the event CONTRACTOR furnishes material, process, service or equipment other than what was specified by the DISTRICT and which has been accepted by the DISTRICT and which later is defective, then CONTRACTOR at its sole cost and expense shall furnish the DISTRICT specified material, process, service or equipment or fully replace with new the defective material process, service or equipment at DISTRICT's discretion.

(f) In the event CONTRACTOR furnishes material, process service, or equipment more expensive than that specified, difference in cost of such material, process, service, or equipment so furnished shall be borne by CONTRACTOR. Any engineering, design fees, or approval agencies' fees required to make adjustments in material or work of all trades directly or indirectly affected by the approved substituted items shall be borne entirely by CONTRACTOR. Any difference in cost between an approved substitution which is lower in cost than the originally specified item shall be refunded or credited by CONTRACTOR to DISTRICT.

(g) Price, fitness and quality being equal with regard to supplies, the District may prefer supplies grown, manufactured, or produced in California and next prefer supplies partially manufactured grown, or produced in California provided the bids of said suppliers or the prices quoted by them do not exceed by more than 5% of the lowest bids/prices quoted by out of state suppliers, the major portion of the manufacture of the supplies is not done outside of California and the public good will be served thereby. (Government Code section 4330-4334)

ARTICLE 31. SAMPLES

(a) CONTRACTOR shall furnish for approval, within thirty-five (35) calendar days following award of contract, all samples as required in specifications together with catalogs and supporting data required by ARCHITECT. This provision shall not authorize any extension of time for performance of the work. ARCHITECT shall review such samples, as to conformance with design concept of work and for compliance with information given in Project Documents and approve or disapprove same within ten (10) working days from receipt of same.

(b) Unless specified otherwise, sampling, preparation of samples and tests shall be in accordance with the latest standards of the American Society for Testing and Materials.

(c) Samples shall, upon demand of ARCHITECT or DISTRICT, be submitted for tests or examinations and considered before incorporation of same into the work. CONTRACTOR shall be solely responsible for delays due to samples not being submitted in time to allow for tests. Acceptance or rejection will be expressed in writing. Work shall be equal to approved samples in every respect. Samples which are of value after testing will remain the property of the CONTRACTOR.

ARTICLE 32. PROGRESS SCHEDULE

(a) Within five (5) calendar days after being awarded the contract, CONTRACTOR shall submit a progress schedule for DISTRICT's approval. The schedule shall indicate the beginning and completion dates of all phases of construction and shall use the "critical path method" (commonly called CPM) or equivalent scheduling methodology for the value reporting, planning and scheduling, of all work required under the Project Documents. The schedule will separately identify those milestones or events that must be completed before other portions of the work can be accomplished.

(b) The scheduling is necessary for the DISTRICT's adequate monitoring of the progress of the work and shall be prepared in accordance with the time frame described in Article 4 of the Agreement. The DISTRICT may disapprove such a schedule and require modification to it if, in the opinion of the ARCHITECT or DISTRICT, adherence to the progress schedule will cause the work not to be completed in accordance with the Agreement. CONTRACTOR shall adhere to any such modifications required by the DISTRICT.

(c) CONTRACTOR will exchange scheduling information with subcontractors and suppliers. CONTRACTOR will order work, equipment and materials with sufficient lead time to avoid interruption of the work.

(d) The CONTRACTOR shall submit to DISTRICT a monthly schedule to reflect the actual sequence of the work which shall be totally separate and apart from the original progress schedule.

(e) The CONTRACTOR shall also, if requested by the ARCHITECT or DISTRICT, provide revised schedules within ten (10) calendar days if, at any time, the ARCHITECT or DISTRICT, consider the completion date to be in jeopardy. The revised schedule shall be designed to show how the CONTRACTOR intends to accomplish the work to meet the original completion date. The form and method employed by the CONTRACTOR shall be the same as for the original progress schedule. The CONTRACTOR shall modify any portions of the schedule that become infeasible because of "activities behind schedule" or for any other valid reason. CONTRACTOR will provide documents and justification for any schedule changes. An activity that cannot be completed by its original completion date shall be deemed to be behind schedule.

(f) CONTRACTOR shall submit a revised schedule within ten (10) consecutive calendar days of CONTRACTOR's request for any extension of time. Failure to submit such schedule will result in CONTRACTOR waiving his/her right to obtain any extension of time.

(g) IT IS AGREED THAT THE DISTRICT OWNS THE "FLOAT" ON THIS PROJECT. IF CONTRACTOR SUBMITS A REVISED SCHEDULE SHOWING AN EARLIER COMPLETION DATE FOR THE PROJECT, DISTRICT'S ACCEPTANCE OF THIS REVISED SCHEDULE SHALL NOT ENTITLE CONTRACTOR TO ANY DELAY CLAIM OR DISRUPTION DAMAGES OR ANY OTHER DAMAGES DUE TO ANY SUCH REVISED SCHEDULE. NOTHING PROVIDED HEREIN SHALL BE

CONSTRUED AS A DIRECT, INDIRECT OR IMPLICIT ACCELERATION ORDER TO THE CONTRACTOR.

(h) CONTRACTOR agrees that failure to timely submit the progress schedule, the monthly schedule or any revised progress schedule requested by the ARCHITECT or the DISTRICT may result in delay in payment to CONTRACTOR.

ARTICLE 33. MATERIALS AND WORK

(a) Except as otherwise specifically stated in this Agreement, CONTRACTOR shall provide and pay for all materials, supplies, tools, equipment, labor transportation, superintendence, temporary constructions of every nature, and all other services and facilities of every nature whatsoever necessary to execute and complete the Project within specified time.

(b) Unless otherwise specified, all materials shall be new and the best of their respective kinds and grades as noted or specified, and workmanship shall be of good quality.

(c) Materials shall be furnished in ample quantities and at such times as to insure uninterrupted progress of work and shall be stored properly and protected as required. DISTRICT has no obligation to pay for any prefabricated material stored offsite until delivered and installed to the jobsite and inspected and approved by the inspector of record.

(d) CONTRACTOR shall, after issuance of the Notice to Proceed by DISTRICT, place orders for materials and/or equipment as specified so that delivery of same may be made without delays to the work. CONTRACTOR shall, upon demand from the ARCHITECT, furnish to the ARCHITECT documentary evidence showing that orders have been placed.

(e) DISTRICT reserves the right, for any neglect in not complying with the above instructions, to place orders for such materials and/or equipment as it may deem advisable in order that the work may be completed at the date specified in the Agreement, and all expenses incidental to the procuring of said materials and/or equipment shall be paid for by the CONTRACTOR.

(f) No materials, supplies, or equipment for work under this Agreement shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by seller or supplier. CONTRACTOR warrants good title to all material, supplies, and equipment installed or incorporated in work and agrees upon completion of all work to deliver premises, together with all improvements and appurtenances constructed or placed thereon by it, to DISTRICT free from any claims, liens, or charges. CONTRACTOR further agrees that neither it nor any person, firm, or corporation furnishing any materials or labor for any work covered by this Agreement shall have any right to lien upon premises or any

improvement or appurtenance thereon, except that CONTRACTOR may install metering devices or other equipment of utility companies or of political subdivisions, title to which is commonly retained by utility company or political subdivision. In the event of installation of any such metering device or equipment, CONTRACTOR shall advise DISTRICT as to owner thereof.

(g) Nothing contained in this Article 33, however, shall defeat or impair the rights of persons furnishing material or labor under any bond given by CONTRACTOR for their protection or any rights under any law permitting such persons to look to funds due CONTRACTOR in hand of DISTRICT, and this provision shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials or labor when no formal contract is entered into for such materials or labor.

(h) The title to new materials and/or equipment and attendant liability for its protection and safety, shall remain in the CONTRACTOR until incorporated in the work and accepted by the DISTRICT; no part of said materials and/or equipment shall be removed from its place of onsite/offsite storage except for immediate installation in the work; and CONTRACTOR shall keep an accurate inventory of all said materials and/or equipment in a manner satisfactory to the DISTRICT or its authorized representative.

ARTICLE 34. INTEGRATION OF WORK

(a) CONTRACTOR shall do all cutting, fitting, patching, and preparation of work as required to make its several parts come together properly, and fit it to receive or be received by work of other contractors or existing conditions showing upon, or reasonably implied by, the drawings and specifications, and shall follow all directions given by the Architect.

(b) All costs caused by defective or ill-timed work shall be borne by CONTRACTOR.

(c) CONTRACTOR shall not endanger any work by cutting, excavating, or otherwise altering work and shall not cut or alter work of any other contractor without the written consent of the ARCHITECT. CONTRACTOR shall be solely responsible for protecting existing work on adjacent properties and shall obtain all required permits for shoring and excavations near property lines.

(d) When modifying existing work or installing new work adjacent to existing work, CONTRACTOR shall match, as closely as conditions of site and materials will allow, the finishes, textures, and colors of the original work, refinishing existing work as required, at no additional cost to DISTRICT.

(e) CONTRACTOR is aware that this Project may be split into several phases. If the Project is split into phases then CONTRACTOR has made allowances for any delays or damages which may arise from coordination with contractors for other phases. If any delays should arise from a contractor working on a different phase, CONTRACTOR's sole remedy for damages, including delay damages, shall be against the contractor who caused

such damage and not the DISTRICT. CONTRACTOR shall provide access to contractors for other phases as necessary to prevent delays and damages to contractors working on other phases of construction.

ARTICLE 35. OBTAINING OF PERMITS, LICENSES AND EASEMENTS

(a) Permits, licenses, and certificates necessary for prosecution of work, shall be secured and paid for by CONTRACTOR, unless otherwise specified. All such permits, licenses, and certificates shall be delivered to the ARCHITECT before demand is made for the certificate of final payment. CONTRACTOR shall, and shall require subcontractors to, maintain contractors' licenses in effect as required by law.

(b) Easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by DISTRICT, unless otherwise specified.

(c) Permits and charges for installation, and inspection thereof, of utility services by serving utilities shall be secured and paid for by DISTRICT.

ARTICLE 36. SURVEYS

Surveys to determine location of property lines and corners will be supplied by DISTRICT. Surveys to determine locations of construction, grading, and site work, shall be provided by CONTRACTOR.

ARTICLE 37. EXISTING UTILITY LINES; REMOVAL, RESTORATION

(a) Pursuant to Government Code Section 4215, the DISTRICT assumes the responsibility for removal, relocation, and protection of utilities located on the construction site at the time of commencement of construction under this Agreement with respect to any such utility facilities which are not identified in the plans and specifications. The CONTRACTOR shall not be assessed for liquidated damages for delay in completion of the Project caused by failure of the DISTRICT to provide for removal or relocation of such utility facilities. If the CONTRACTOR, while performing work under this Agreement, discovers utility facilities not identified by the DISTRICT in the plans or specifications, CONTRACTOR shall immediately notify the DISTRICT and the utility in writing. CONTRACTOR shall be compensated according to the provisions governing changes in the work.

(b) This Article 37 shall not be construed to preclude assessment against the CONTRACTOR for any other delays in completion of the work. Nothing in this Article shall be deemed to require the DISTRICT to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the construction site can be inferred from the presence of other visible facilities, such as buildings, meter junction boxes, on or adjacent to the site of the construction.

(c) As part of the work to be performed, CONTRACTOR shall provide the notices and proceed in accordance with Government Code Sections 4216.2, 4216.3 and 4216.4, and pay all fees charged pursuant to Government Code Section 4216, et seq.

ARTICLE 38. WORK TO COMPLY WITH APPLICABLE LAWS AND REGULATIONS

(a) CONTRACTOR shall give all notices and comply with all laws, ordinances, rules, and regulations applicable to the work as indicated and specified.

(b) If CONTRACTOR observes that drawings or specifications are at variance therewith, CONTRACTOR shall promptly notify ARCHITECT in writing and any changes deemed necessary by the ARCHITECT shall be adjusted as provided for changes in work. If CONTRACTOR performs any work which it knew, or through exercise of reasonable care should have known, to be contrary to such laws, ordinances, rules or regulations, and without such notice to ARCHITECT, CONTRACTOR shall bear all costs arising therefrom. Where plans, drawings or specifications state that materials, processes, or procedures must be approved by the Division of State Architect, State Fire Marshall, or other body or agency, CONTRACTOR shall be responsible for satisfying requirements of such bodies or agencies.

ARTICLE 39. ACCESS TO WORK

DISTRICT and its representatives shall at all times have access to work wherever it is in preparation or progress. CONTRACTOR shall provide safe and proper facilities for such access so that DISTRICT's representatives may perform their functions.

ARTICLE 40. PAYMENTS BY CONTRACTOR

CONTRACTOR shall pay:

(1) For all transportation and utility services not later than the 20th day of the calendar month following that in which such services are rendered;

(2) For all materials, tools, and other expendable equipment to the extent of ninety percent (90%) of cost thereof, not later than the 20th day of the calendar month following that in which such materials, tools, and equipment are delivered at site of Project and balance of cost thereof not later than the 30th day following completion of that part of work in or on which such materials, tools, and equipment are incorporated or used; and

(3) To each of its subcontractors, not later than the 5th day following each payment to CONTRACTOR the respective amounts allowed CONTRACTOR on account of work performed by respective subcontractor to the extent of such subcontractor's interest therein.

(4) Within seven (7) days from the time that all or any portion of the retentions are received by CONTRACTOR from DISTRICT, to each of its subcontractors from whom retention has been withheld, each subcontractor's share of the retention received. However, if a retention payment received by CONTRACTOR is specifically designated for a particular subcontractor, payment of the retention shall be made to the designated subcontractor, if the payment is consistent with the terms of the subcontract. CONTRACTOR may withhold from a subcontractor its portion of the retentions if a bona fide dispute exists between the subcontractor and the CONTRACTOR. The amount withheld from the retention shall not exceed one hundred fifty percent (150%) of the estimated value of the disputed amount.

ARTICLE 41. INSPECTOR'S FIELD OFFICE

CONTRACTOR shall provide for the exclusive use of Inspector a temporary field office to be located as directed by Inspector and to be maintained until removal is authorized by DISTRICT. Office shall be of substantial waterproof construction with adequate natural light and ventilation by means of stock design windows. Door shall have a key-type lock or padlock hasp. A table satisfactory for study of plans and two chairs shall be provided by CONTRACTOR. CONTRACTOR shall provide and pay for adequate electric lights, telephone service (not a pay phone), and adequate heat for the field office until authorized removal.

ARTICLE 42. UTILITIES

(a) All utilities, including but not limited to electricity, water, gas, and telephone used on work shall be furnished and paid for by CONTRACTOR. CONTRACTOR shall furnish and install necessary temporary distribution systems, including meters, if necessary, from distribution points to points on site where utility is necessary to carry on the work. When it is necessary to interrupt any existing utility service to make connections, a minimum of forty-eight (48) hours advance notice shall be given to the DISTRICT and ARCHITECT. Interruptions in utility services shall be of the shortest possible duration for the work at hand and shall be approved by the DISTRICT and the ARCHITECT. In the event any utility service is interrupted without the required forty-eight (48) hours notice, then CONTRACTOR shall be liable for all damage suffered by DISTRICT due to the interruption. Upon completion of work, CONTRACTOR shall remove all temporary distribution systems.

(b) CONTRACTOR may, with written permission of DISTRICT, use DISTRICT's existing utilities by making prearranged payments to DISTRICT for utilities used by CONTRACTOR for the Project.

ARTICLE 43. SANITARY FACILITIES

The CONTRACTOR shall provide sanitary temporary toilet facilities in no fewer numbers than required by law and such additional facilities as may be directed by the Inspector for the use of all workers. The toilet facilities shall be maintained in a sanitary condition at all

times and shall be left at the site until removal is directed by the Inspector. Use of toilet facilities in the work under construction shall not be permitted.

ARTICLE 44. CLEANING UP

CONTRACTOR at all times shall keep work site free from debris such as waste, rubbish, and excess materials and equipment caused by this work. CONTRACTOR shall not leave debris under, in, or about the work site, but shall promptly remove same. Upon completion of work, CONTRACTOR shall clean interior and exterior of building, including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections, and any areas where debris has collected. CONTRACTOR shall clean and polish all glass, plumbing fixtures, and finish hardware and similar finish surfaces and equipment and remove temporary fencing, barricades, planking, sanitary facilities and similar temporary facilities from site. If CONTRACTOR fails to clean up, the DISTRICT shall do so and the cost thereof shall be charged to the CONTRACTOR and deducted from any progress payment due.

ARTICLE 45. PATENTS, ROYALTIES, AND INDEMNITIES

The CONTRACTOR shall hold and save the DISTRICT and its governing board, officers, agents, and employees harmless from liability of any nature or kind, including cost and expense, for or on account of any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of this Agreement, including its use by the DISTRICT, unless otherwise specifically provided in the Project Documents, and unless such liability arises from the sole negligence, or active negligence, or willful misconduct of the DISTRICT.

ARTICLE 46. GUARANTEE

(a) CONTRACTOR warrants that the work (which includes any equipment furnished by CONTRACTOR as part of the materials) shall: (a) be free from defects in workmanship and material; (b) be free from defects in any design performed by CONTRACTOR; (c) be new, and conform and perform to the requirements stated in the specifications and where detail requirements are not so stated, shall conform to applicable industry standards; and (d) be suitable for the use stated in the specifications.

(b) The warranty period for discovery of defective work shall commence on the date stamped on the Notice of Completion verifying County recordation and continue for the period set forth in the specifications or for one year if not so specified. If, during the warranty period, the work is not available for use due to defective work, such time of unavailability shall not be counted as part of the warranty period. The warranty period for corrected defective work shall continue for a duration equivalent to the original warranty period.

(c) District shall give CONTRACTOR prompt written notice after discovery of any defective work. CONTRACTOR shall correct any such defective work, as well as any

damage to any other part of the work resulting from such defective work, and provide repair, replacement, or reimbursement, at its sole expense, in a manner approved by the DISTRICT and with due diligence and dispatch as required to make the work ready for use by DISTRICT, ordinary wear and tear, unusual abuse or neglect excepted. Such corrections shall include, but not be limited to, any necessary adjustments, modifications, changes of design (unless of DISTRICT's design), removal, repair, replacement or reinstallation, and shall include all necessary parts, materials, tools, equipment, transportation charges and labor as may be necessary, and cost of removal and replacement of work shall be performed at a time and in such a manner so as to minimize the disruption to DISTRICT's use of the work.

(d) In the event of failure of CONTRACTOR or Surety to commence and pursue with diligence said repairs or replacements within ten (10) calendar days after being notified in writing, DISTRICT is hereby authorized to proceed to have defects repaired or replaced and made good at expense of CONTRACTOR and Surety who hereby agree to pay costs and charges therefore immediately on demand.

(e) If, in the opinion of the DISTRICT, defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the DISTRICT or to prevent interruption of operations of the DISTRICT, the DISTRICT will attempt to give the written notice required by this Article. If the CONTRACTOR or Surety cannot be contacted or neither complies with the DISTRICT's requirements for correction within a reasonable time as determined by the DISTRICT, the DISTRICT may, notwithstanding the provisions of this Article, proceed to make such correction or provide such attention and the costs of such correction or attention shall be charged against the CONTRACTOR and Surety. Such action by the DISTRICT will not relieve the CONTRACTOR and Surety of the guarantees provided in this Article or elsewhere in the Project Documents.

(f) This Article does not in any way limit the guarantees on any items for which a longer guarantee is specified or on any items for which a manufacturer gives a guarantee for a longer period. CONTRACTOR shall furnish to DISTRICT all appropriate guarantee or warranty certificates upon completion of the Project or upon request by DISTRICT.

(g) All guarantees required under this Article shall be in writing on the Guarantee form included in the Project Documents.

(h) CONTRACTOR shall provide to DISTRICT instruction manuals for all items which require same.

(i) Nothing herein shall limit any other rights or remedies available to DISTRICT.

(j) The DISTRICT may collect its reasonable costs and attorneys' fees in any action to enforce this Article.

ARTICLE 47. DUTY TO PROVIDE FIT WORKERS

(a) CONTRACTOR and subcontractors shall at all times enforce strict discipline and good order among their employees and shall not employ on work any unfit person or anyone not skilled in work assigned to such person. It shall be the responsibility of CONTRACTOR to ensure compliance with this Article.

(b) Any person in the employ of the CONTRACTOR or subcontractors whom DISTRICT or ARCHITECT may deem incompetent, unfit, troublesome or otherwise undesirable shall be excluded from the work site and shall not again be employed on it except with written consent of DISTRICT.

ARTICLE 48. WAGE RATES, TRAVEL AND SUBSISTENCE

(a) Pursuant to the provisions of Article 2 (commencing at Section 1770), Chapter 1, Part 7, Division 2 of the Labor Code, the governing board of DISTRICT has obtained the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this public work is to be performed for each craft, classification or type of worker needed for this Project from the Director of the Department of Industrial Relations ("Director.") These rates are on file with the Clerk of the DISTRICT's governing board and copies will be made available to any interested party on request. CONTRACTOR shall post a copy of such wage rates at the work site. Labor Code Section 1773.2. The rates are available on the Internet at www.dir.ca.gov "Statistics & Research."

(b) Holiday and overtime work, when permitted by law, shall be paid for at a rate of at least one and one-half times the above specified rate of per diem wages, unless otherwise specified. Holidays shall be defined in the Collective Bargaining Agreement applicable to each particular craft, classification or type of worker employed.

(c) CONTRACTOR shall pay and shall cause to be paid each worker engaged in work on the Project not less than the general prevailing rate of per diem wages determined by the Director, regardless of any contractual relationship which may be alleged to exist between the CONTRACTOR or any subcontractor and such workers.

(d) CONTRACTOR shall pay and shall cause to be paid to each worker needed to execute the work on the Project travel and subsistence payments, as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed with the Department of Industrial Relations in accordance with Labor Code Section 1773.8.

(e) If during the period this bid is required to remain open, the Director of Industrial Relations determines that there has been a change in any prevailing rate of per diem wages in the locality in which this public work is to be performed, such change shall not alter the wage rates in the Notice Calling for Bids or the contract subsequently awarded.

(f) Pursuant to Labor Code Section 1775, CONTRACTOR shall as a penalty to the DISTRICT, forfeit fifty dollars (\$50) for each calendar day, or portion thereof, for each worker paid less than the prevailing rate of per diem wages, determined by the Director,

for such craft or classification in which such worker is employed for any public work done under the Agreement by CONTRACTOR or by any subcontractor under it. The amount of the penalty shall be determined by the Labor Commission and shall be based on consideration of the CONTRACTOR's mistake, inadvertence or neglect in failing to pay the correct prevailing rate of per diem wage, or the previous record of the CONTRACTOR in meeting his or her prevailing rate of per diem wage obligations, or the CONTRACTOR's willful failure to pay the correct prevailing rate of per diem wages. A mistake, inadvertence or neglect in failing to pay the correct prevailing rate of per diem wage is not excusable if the CONTRACTOR had knowledge of his or her obligations under this part. The difference between such prevailing rate of per diem wage and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing rate of per diem wage shall be paid to each worker by the CONTRACTOR.

(g) Any worker employed to perform work on the Project, which work is not covered by any craft or classification listed in the general prevailing rate of per diem wages determined by the Director shall be paid not less than the minimum rate of wages specified therein for the craft or classification which most nearly corresponds to work to be performed by them, and such minimum wage rate shall be retroactive to time of initial employment of such person in such craft or classification.

(h) Pursuant to Labor Code Section 1773.1, per diem wages are deemed to include employer payments for health and welfare, pension, vacation, travel time, and subsistence pay as provided for in Labor Code Section 1773.8.

(i) CONTRACTOR shall post at appropriate conspicuous points on the site of the Project, a schedule showing all determined minimum wage rates and all authorized deductions, if any, from unpaid wages actually earned.

ARTICLE 49. HOURS OF WORK

(a) As provided in Article 3, (commencing at Section 1810), Chapter 1, Part 7, Division 2 of the Labor Code, eight (8) hours of labor shall constitute a legal day's work. The time of service of any worker employed at any time by the CONTRACTOR or by any subcontractor on any subcontract under this Agreement upon the work or upon any part of the work contemplated by this Agreement shall be limited and restricted by the Agreement to eight (8) hours per day, and forty (40) hours during any one week, except as hereinafter provided. Notwithstanding the provisions hereinabove set forth, work performed by employees of CONTRACTOR in excess of eight (8) hours per day and forty (40) hours during any one week, shall be permitted upon this public work upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half times the basic rate of pay.

(b) The CONTRACTOR shall keep and shall cause each subcontractor to keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed by CONTRACTOR in connection with the work or any part of the work contemplated by this Agreement. The record shall be kept open at

all reasonable hours to the inspection of the DISTRICT and to the Division of Labor Standards Enforcement, Department of Industrial Relations.

(c) Pursuant to Labor Code Section 1813, the CONTRACTOR shall pay to the DISTRICT a penalty of Twenty-Five Dollars (\$25) for each worker employed in the execution of this Contract by the CONTRACTOR or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of Article 3 (commencing at Section 1810), Chapter 1, Part 7, Division 2 of the Labor Code.

(d) Any work necessary to be performed after regular working hours, or on Sundays or other holidays shall be performed without additional expense to DISTRICT.

ARTICLE 50. PAYROLL RECORDS

(a) Pursuant to the provisions of Labor Code Section 1776, the CONTRACTOR shall keep and shall cause each subcontractor performing any portion of the work under this Agreement to keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by CONTRACTOR in connection with the work.

(b) The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours at the principal office of the CONTRACTOR on the following basis:

(1) A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.

(2) A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection or furnished upon request to a representative of the DISTRICT, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations.

(3) A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection upon request by the public or copies thereof made; provided, however, that a request by the public shall be made through either the District, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to paragraph (2), the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the CONTRACTOR, subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the CONTRACTOR.

(4) The form of certification shall be as follows:

I, _____ (Name-print), the undersigned, am _____ (position in business) with the authority to act for and on behalf of _____ (Name of business and/or CONTRACTOR), certify under penalty of perjury that the records or copies thereof submitted and consisting of _____ (description, number of pages) are the originals or true, full and correct copies of the originals which depict the payroll record(s) of the actual disbursements by way of cash, check, or whatever form to the individual or individuals named.

Dated: _____ Signature: _____

(c) Contractor shall file a certified copy of the payroll records enumerated in subdivision (a) with the entity that requested the records within ten (10) days after receipt of a written request. In the event that the CONTRACTOR fails to comply within the 10-day period, the CONTRACTOR shall, as a penalty to the DISTRICT, forfeit Twenty-Five Dollars (\$25) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due.

(d) Any copy of payroll records made available for inspection as copies and furnished upon request to the public by the DISTRICT, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of the CONTRACTOR shall not be marked or obliterated.

(e) The CONTRACTOR shall inform the DISTRICT of the location of the payroll records enumerated under subdivision (a), including the street address, city and county, and shall, within five (5) working days, provide a written notice of a change of location and address.

(f) It shall be the responsibility of the CONTRACTOR to ensure compliance with the provisions of this Article 50 and the provisions of Labor Code Section 1776.

ARTICLE 51. APPRENTICES

(a) The CONTRACTOR acknowledges and agrees that, if this Agreement involves a dollar amount greater than or a number of working days greater than that specified in Labor Code Section 1777.5, this Agreement is governed by the provisions of Labor Code Section 1777.5. It shall be the responsibility of the CONTRACTOR to ensure compliance with this Article 51 and with Labor Code Section 1777.5 for all apprenticing occupations.

(b) Apprentices of any crafts or trades may be employed and, when required by Labor Code Section 1777.5, shall be employed provided they are properly registered in full compliance with the provisions of the Labor Code.

(c) Every such apprentice shall be paid the standard wage paid to apprentices under the regulations of the craft or trade at which he or she is employed, and shall be employed only at the work of the craft or trade to which he or she is registered.

(d) Only apprentices, as defined in Section 3077, who are in training under apprenticeship standards and written apprentice agreements under Chapter 4 (commencing at Section 3070), Division 3 of the Labor Code, are eligible to be employed on public works. The employment and training of each apprenticeship shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which he or she is training.

(e) Pursuant to Labor Code Section 1777.5, the CONTRACTOR and any subcontractors employing workers in any apprenticeship craft or trade in performing any work under this Agreement shall employ apprentices in at least the ratio set forth in Section 1777.5 and apply to the applicable joint apprenticeship committee for a certificate approving the CONTRACTOR or subcontractor under the applicable apprenticeship standards for the employment and training of apprentices.

(f) Every contractor and subcontractor shall submit contract award information to the applicable joint apprenticeship committee which shall include an estimate of journeyman hours to be performed under the Agreement, the number of apprentices to be employed and the approximate dates the apprentices will be employed.

(g) If the CONTRACTOR or subcontractor willfully fails to comply with Labor Code Section 1777.5, then, upon a determination of noncompliance by the Chief of the Division of Apprenticeship Standards, the CONTRACTOR or subcontractor shall be subject to the penalties imposed under Labor Code Section 1777.7. Interpretation and enforcement of these provisions shall be in accordance with the rules and procedures of the California Apprenticeship Council.

(h) The CONTRACTOR and all subcontractors shall comply with Labor Code Section 1777.6, which section forbids certain discriminatory practices in the employment of apprentices.

(i) CONTRACTOR shall become fully acquainted with the law regarding apprentices prior to commencement of the work. Special attention is directed to Sections 1777.5, 1777.6, and 1777.7 of the Labor Code, and Title 8, California Code of Regulations, Section 200, et seq. Questions may be directed to the State Division of Apprenticeship Standards, 455 Golden Gate Avenue, 8th Floor, San Francisco, California 94102, (415) 703-4920.

ARTICLE 52. LABOR - FIRST AID

The CONTRACTOR shall maintain emergency first aid treatment for CONTRACTOR's workers on the Project which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C.A., Sec. 651, et seq.).

ARTICLE 53. PROTECTION OF PERSONS AND PROPERTY

(a) The CONTRACTOR shall be responsible for all damages to persons or property that occur as a result of its fault or negligence in connection with the prosecution of this Agreement and shall take all necessary measures and be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance by the DISTRICT. CONTRACTOR shall provide such heat, covering, and enclosures as are necessary to protect all work, materials, equipment, appliances, and tools against damage by weather conditions. All work shall be solely at the CONTRACTOR's risk with the exception of damage to the work caused by "acts of God" as defined in Public Contract Code Section 7105.

(b) CONTRACTOR shall take, and require subcontractors to take, all necessary precautions for safety of workers and shall comply with all applicable federal, state, local and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to the work site and to provide a safe and healthful place of employment. CONTRACTOR shall furnish, erect and properly maintain at all times, as directed by DISTRICT or ARCHITECT or required by conditions and progress of work, all necessary safety devices, safeguards, construction canopies, signs audible devices for protection of the blind, safety rails, belts and nets, barriers, lights, and watchmen for protection of workers and the public and shall post danger signs warning against hazards created by such features in the course of construction. CONTRACTOR shall designate a responsible employee, whose duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety requirements, and to protect the life, safety and health of workers. Name and position of person so designated shall be reported in writing to DISTRICT by CONTRACTOR. CONTRACTOR shall correct any violations of safety laws, standards, orders, rules, or regulations. Upon the issuance of a citation or notice of violation by the Division of Occupational Safety and Health, such violation shall be corrected immediately by the CONTRACTOR at CONTRACTOR's expense.

(c) In an emergency affecting safety of person or of work or of adjoining property, CONTRACTOR, without special instruction or authorization from ARCHITECT or DISTRICT, is hereby permitted to act, at its discretion, to prevent such threatened loss or injury; and CONTRACTOR shall so act if so authorized or instructed by Architect or DISTRICT. Any compensation claimed by CONTRACTOR on account of emergency work shall be determined by written agreement with the DISTRICT.

(d) CONTRACTOR shall take adequate precautions to protect existing roads, sidewalks, curbs, pavements, utilities, adjoining property and structures (including, without limitation, protection from settlement or loss of lateral support), and to avoid damage thereto, and repair any damage thereto caused by construction operations.

(e) CONTRACTOR shall (unless waived by the DISTRICT in writing):

- (1) When performing new construction on existing sites, become informed and take into specific account the maturity of the students on the site; perform work which may interfere with school routine before or after school hours; enclose working area with a substantial barricade; not allow any unauthorized individuals on the site; require all workers on the Project to be conspicuously identified either by a firm logo on their clothing or prominent identification badge and arrange work to cause a minimum amount of inconvenience and danger to students and faculty in their regular school activities.
- (2) Provide substantial barricades around any shrubs or trees indicated to be preserved.
- (3) Deliver materials to building area over route designated by ARCHITECT.
- (4) When directed by DISTRICT, take preventive measures to eliminate objectionable dust.
- (5) Enforce all instructions of DISTRICT and ARCHITECT regarding signs, advertising, fires, and smoking and require that all workers comply with all regulations while on construction site.
- (6) Take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed by accident, they shall be replaced by an approved civil engineer at no cost to the DISTRICT.

ARTICLE 54. NON-DISCRIMINATION

In the performance of the terms of this Agreement, CONTRACTOR agrees that it will not engage in nor permit such subcontractor as it may employ to engage in unlawful discrimination in employment of persons because of the race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, age or sex of such persons.

ARTICLE 55. SCHEDULE OF VALUES AND PERIODICAL ESTIMATES

- (a) CONTRACTOR shall furnish on form(s) approved by DISTRICT:
 - (1) Within ten (10) calendar days of award of contract a detailed schedule of values giving complete breakdown of contract price for each component of the Project or site which shall include all subcontractor/supplier agreements showing dollar amounts of these agreements to justify the schedule of values; and

(2) A periodical itemized estimate of work done for purpose of making partial payments thereon. Change order work shall be clearly identified on a separate schedule of values.

(3) Within ten (10) calendar days of request of DISTRICT, a schedule of estimated monthly payments which shall be due CONTRACTOR under the Agreement.

(b) Values employed in making up any of these schedules are subject to the ARCHITECT's written approval and will be used only for determining basis of partial payments and will not be considered as fixing a basis for additions to or deductions from contract price.

ARTICLE 56. CONTRACTOR CLAIMS

If the CONTRACTOR shall claim compensation for any damage sustained by reason of the acts of the DISTRICT or its agents, CONTRACTOR shall, within five (5) calendar days after sustaining of such damage, make to the ARCHITECT a written statement of the damage sustained. On or before the 15th day of the month succeeding that in which such damage shall have been sustained the CONTRACTOR shall file with the DISTRICT an itemized statement of the details and amount of such damage, and unless such statement shall be made as thus required, CONTRACTOR's claims for compensation shall be forfeited and invalidated and it shall not be entitled to consideration for payment on account of any such damage.

ARTICLE 57. DISPUTES - ARCHITECT'S DECISIONS

(a) The ARCHITECT shall, within a reasonable time, make decisions on all matters relating to the CONTRACTOR's execution and progress of the work. The decisions of the ARCHITECT shall not be binding, but shall be advisory only on the CONTRACTOR for the purpose of CONTRACTOR's obligation to proceed with the work.

(b) Except for tort claims, all claims by the CONTRACTOR for a time extension, payment of money or damages arising from work done by, or on behalf of, the CONTRACTOR pursuant to the Agreement and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or as to the amount of payment which is disputed by the DISTRICT of Three Hundred Seventy Five Thousand Dollars (\$375,000) or less shall be subject to the settlement procedures set forth in Public Contract Code Section 20104, et seq. which provisions are incorporated herein by reference.

(c) In the event of a dispute between the parties as to performance of the work, the interpretation of this Agreement or payment or nonpayment for work performed or not

performed, the parties shall attempt to resolve the dispute. Pending resolution of the dispute, CONTRACTOR agrees to continue the work diligently to completion. If the dispute is not resolved, CONTRACTOR agrees it will neither rescind the Agreement nor stop the progress of the work, but CONTRACTOR's sole remedy shall be to submit such controversy to determination by a court of the State of California, in Orange County, having competent jurisdiction of the dispute, after the Project has been completed, and not before.

ARTICLE 58. PAYMENTS

(a) Unless otherwise specified in writing, each month within thirty (30) days after receipt by the DISTRICT of the monthly progress schedule and an undisputed, properly submitted payment request from CONTRACTOR which has been certified for payment by the Architect, there shall be paid to CONTRACTOR a sum equal to ninety-five percent (95%) of value of work performed and of materials delivered to the jobsite and inspected and approved by the inspector of record and subject to or under the control of the DISTRICT and unused up to the last day of the previous month, less aggregate previous payments. Public Contract Code Section 20104.50 Monthly payments shall be made only on the basis of monthly estimates which shall be prepared by CONTRACTOR on a form approved by DISTRICT and filed before the fifth day of the month during which payment is to be made. Work completed as estimated shall be an estimate only and no inaccuracy or error in said estimate shall operate to release CONTRACTOR or Surety from any damages arising from such work or from enforcing each and every provision of this Agreement, and DISTRICT shall have the right subsequently to correct any error made in any estimate for payment. CONTRACTOR SHALL NOT BE ENTITLED TO HAVE ANY PAYMENT ESTIMATES PROCESSED OR BE ENTITLED TO HAVE ANY PAYMENT FOR WORK PERFORMED SO LONG AS ANY LAWFUL OR PROPER DIRECTION CONCERNING WORK, OR ANY PORTION THEREOF, GIVEN BY THE DISTRICT OR ARCHITECT SHALL REMAIN UNCOMPLIED WITH BY THE CONTRACTOR. CONTRACTOR AGREES TO THE FIVE PERCENT (5%) RETENTION ON ALL PROGRESS PAYMENTS. Public Contract Code Section 9203.

(b) DISTRICT has discretion to require from the CONTRACTOR any of the following information with the application for payment: (i) certified payroll covering the period of the prior application for payment; (ii) unconditional waivers and releases from all subcontractors/suppliers for which payment was requested under the prior application for payment; and/or (iii) receipts or bills of sale for any items. CONTRACTOR agrees that payment may be contingent upon District receiving any one or more of these documents.

(c) Before payment is made hereunder, a certificate in writing shall be obtained from the ARCHITECT stating that the work for which the payment is demanded has been performed in accordance with the terms of the Project Documents and that the amount stated in the certificate is due under the terms of the Project Documents, which certificate shall be attached to and made a part of the claim made and filed with the DISTRICT, provided that if the ARCHITECT shall, within three (3) days after written demand therefore, fail to deliver such certificate to the DISTRICT, the CONTRACTOR may file

its claim with the DISTRICT without said certificate, but together with such claim shall be filed a statement that demand was made for such certificate and that the same was refused. Thereupon, the DISTRICT will either allow said claim as presented or shall, by an order entered on the minutes of said DISTRICT state the reasons for refusing to allow said claim. It is understood, moreover, that the certificate of the ARCHITECT shall not be conclusive upon the DISTRICT, but advisory only.

(d) Upon receipt of CONTRACTOR's payment request, DISTRICT shall review the payment request as soon as practicable after receipt for the purpose of determining that the payment request is proper. Any payment request determined not to be proper shall be returned to the CONTRACTOR as soon as practicable but not later than seven (7) days after receipt and shall be accompanied by a document setting forth in writing the reasons(s) why the payment request was not proper. Public Contract Code Section 20104.50

(e) NO PAYMENT BY DISTRICT HEREUNDER SHALL BE INTERPRETED SO AS TO IMPLY THAT DISTRICT HAS INSPECTED, APPROVED, OR ACCEPTED ANY PART OF THE WORK.

(f) Unless otherwise provided, on or before making request for final payment of the undisputed amount due under the Agreement, CONTRACTOR shall submit to DISTRICT, in writing a summary of all claims for compensation under or arising out of this Agreement which were timely filed. The acceptance by CONTRACTOR of the payment of the final amount shall constitute a waiver of all claims against DISTRICT under or arising out of this Agreement, except those previously made, in a timely manner and in writing, and identified by CONTRACTOR as unsettled at the time of CONTRACTOR's final request for payment.

(g) CONTRACTOR shall pay each of its subcontractors from whom retention has been withheld each subcontractor's share of the retention received within seven (7) days from the time that all or any portion of the retention are received by the CONTRACTOR subject to any limitations set forth in Public Contract Code Section 7107(e).

(h) The final payment of the five percent (5%) retention of the value of the work done under this Agreement, if unencumbered, shall be made thirty-five (35) days after recording by the DISTRICT of the Notice of Completion at the County Recorder's Office. APPROVAL OF COMPLETION OF THE PROJECT WILL BE MADE ONLY BY ACTION OF THE GOVERNING BOARD OF DISTRICT. Public Contract Code Section 7107.

ARTICLE 59. CHANGES AND EXTRA WORK

(a) DISTRICT may, as provided by law and without affecting the validity of this Agreement, order changes, modifications, deletions and extra work by issuance of written change orders from time to time during the progress of the Project, contract sum being

adjusted accordingly. All such work shall be executed under conditions of the original Agreement except that any extension of time caused thereby shall be adjusted at time of ordering such change. DISTRICT has discretion to order changes on a "time and material" basis with adjustments to time made after CONTRACTOR has justified through documentation the impact on the critical path of the Project.

(b) Notwithstanding any other provision in the Project Documents, the adjustment in the contract sum, if any, and the adjustment in the contract time, if any, set out in a change order shall constitute the entire compensation and/or adjustment in the contract time due CONTRACTOR arising out of the change in the work covered by the change order unless otherwise provided in the change order. The amount of the compensation due CONTRACTOR shall be calculated pursuant to subparagraph (e) of this Article 59. The entire compensation shall not include any additional charges not set forth in subparagraph (e) and shall not include delay damages (due to processing of a change order, refusal to sign a change order) indirect, consequential, and incidental costs including any project management costs, extended home office and field office overhead, administrative costs and profit other than those amounts authorized under subparagraph (e) of this Article 59.

(c) In giving instructions, ARCHITECT shall have authority to make minor changes in work, not involving change in cost, and not inconsistent with purposes of the Project. The DISTRICT's Assistant Superintendent of Business Services may authorize changes in work involving a change in cost that does not exceed Fifteen Thousand Dollars \$15,000. Otherwise, except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order from DISTRICT, authorized by action of the governing board, and no claim for addition to contract sum shall be valid unless so ordered.

(d) If the ARCHITECT determines that work required to be done constitutes extra work outside the scope of the Agreement, the ARCHITECT shall send a request for a detailed proposal to the CONTRACTOR. CONTRACTOR will respond with a detailed proposal within five (5) calendar days of receipt of the Request for Proposal which shall include a complete itemized cost breakdown of all labor and materials showing actual quantities, hours, unit prices, and the wage rates required for the change. If the change order involves a change in construction time, a request for the time change shall accompany the change order cost breakdown. All such requests for time shall be specified by CONTRACTOR as either "work days" or "calendar days." Any request for time received with only the designation of "days" shall be considered calendar days. The term "work days" as used in this paragraph shall mean Monday through Friday, excluding Saturdays, Sundays and federal/State of California observed holidays. If the work is to be performed by a subcontractor, CONTRACTOR must include a bid from the subcontractor containing the same detailed information as required for CONTRACTOR. No extensions of time will be granted for change orders that, in the opinion of the ARCHITECT, do not affect the critical path of the Project.

(e) Value of any such extra work, change, or deduction shall be determined at the discretion of DISTRICT in one or more of the following ways:

(1) By mutual written acceptance of a lump sum proposal from CONTRACTOR properly itemized and supported by sufficient substantiating data to permit evaluation by DISTRICT and ARCHITECT.

(2) By unit prices contained in CONTRACTOR's original bid and incorporated in the Project Documents or fixed by subsequent agreement between DISTRICT and CONTRACTOR.

(3) By cost of material and labor and percentage for overhead and profit ("time and material"). If the value is determined by this method the following requirements shall apply:

(A) Daily Reports by Contractor.

(i) General. At the close of each working day, the CONTRACTOR shall submit a daily report to the ARCHITECT and the Inspector, on forms approved by the DISTRICT, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day, and for other services and expenditures when authorized concerning extra work items. An attempt shall be made to reconcile the report daily, and it shall be signed by the ARCHITECT and the CONTRACTOR. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by Subcontractors or others shall be submitted through the CONTRACTOR.

(ii) Labor. The report shall show names of workers, classifications, and hours worked and hourly rate. Project Superintendent expenses are not allowed.

(iii) Materials. The report shall describe and list quantities of materials used and unit cost.

(iv) Equipment. The report shall show type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable, and hourly/daily cost.

(v) Other Services and Expenditures. Other services and expenditures shall be described in such detail as the DISTRICT may require.

(B) Basis for Establishing Costs

(i) Labor. The costs of labor will be the actual cost for wages prevailing locally for each craft classification or type of workers at the time the extra work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from federal, state or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. The use of labor classification which would increase the extra work cost will not be permitted unless the CONTRACTOR establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

(ii) Materials. The cost of materials reported shall be at invoice or lowest current price at which such materials are locally available and delivered to the work site in the quantities involved, plus sales tax, freight and delivery. The DISTRICT reserves the right to approve materials and sources of supply, or to supply materials to the CONTRACTOR if necessary for the progress of the work. No markup shall be applied to any material provided by the DISTRICT.

(iii) Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of \$100 or less or where an invoice is not provided.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental source, or distributors, at the time the work is performed. The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals. Necessary loading and transportation costs for equipment used on the extra work shall be included. If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the DISTRICT than holding it at the work site, it shall be returned, unless the CONTRACTOR elects to keep it at the work site at no expense to the DISTRICT.

All equipment shall be acceptable to the ARCHITECT, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and manufacturer's approved modifications shall be used to classify equipment and it shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

(iv) Other Items. The DISTRICT may authorize other items which may be required on the extra work. Such items include labor, services, material and equipment which are different in their nature from those required by the work and which are of a type not ordinarily available from the

CONTRACTOR or any of the subcontractors. Invoices covering all such items in detail shall be submitted with the request for payment.

(v) Invoices. Vendors' invoices for material, equipment rental, and other expenditures, shall be submitted with the request for payment. If the request for payment is not substantiated by invoices or other documentation, the DISTRICT may establish the cost of the item involved at the lowest price which was current at the time of the report.

(C) The following form shall be used as applicable by the DISTRICT and CONTRACTOR to communicate proposed additions and deductions to the Agreement.

	<u>EXTRA</u>	<u>CREDIT</u>
i. Material/Equipment (attach itemized quantity and unit cost plus sales tax)	_____	_____
ii. Labor (attach itemized hours and rates)	_____	_____
iii. Subtotal	_____	_____
iv. If subcontractor performed work, add Subcontractor's overhead and profit to portions performed by it, not to exceed 15% of Item iii. above	_____	_____
v. Subtotal	_____	_____
vi. General Contractor's Overhead and Profit, not to exceed 15% of Item v if Contractor performed the work. If subcontractor performed the work, not to exceed 5% of Item v. Of portions performed by Contractor and subcontractors, portions performed by Contractor shall not exceed 15% of Item V, and portions performed by Subcontractor shall not exceed 5% of Item v.	_____	_____
vii. Subtotal	_____	_____
viii. Bond and Liability Insurance		

Premium, if in fact additional bonds or insurance were actually purchased, not to exceed 1% of Item vii.

ix. Total

(4) IT IS EXPRESSLY UNDERSTOOD THAT THE VALUE OF SUCH EXTRA WORK OR CHANGES, AS DETERMINED BY ANY OF THE AFOREMENTIONED METHODS, EXPRESSLY INCLUDES ANY AND ALL OF CONTRACTOR'S COSTS AND EXPENSES, BOTH DIRECT AND INDIRECT, RESULTING FROM ADDITIONAL TIME REQUIRED ON THE PROJECT, OR RESULTING FROM DELAYS TO THE PROJECT. ANY COSTS OR EXPENSES NOT INCLUDED ARE DEEMED WAIVED. FOR PURPOSES OF DETERMINING THE COST, IF ANY, OF ANY EXTRA WORK, CHANGE, ADDITION OR OMISSION HEREUNDER, ALL TRADE DISCOUNTS, REBATES, REFUNDS, AND ALL RETURNS FROM THE SALE OF SURPLUS MATERIALS AND EQUIPMENT SHALL ACCRUE AND BE CREDITED TO CONTRACTOR, AND CONTRACTOR SHALL ENSURE THAT SUCH DISCOUNTS, REBATES, REFUNDS, AND RETURNS MAY BE SECURED, AND THE AMOUNT THEREOF SHALL BE ALLOWED AS A REDUCTION OF CONTRACTOR'S COST IN DETERMINING THE ACTUAL COST OF CONSTRUCTION FOR PURPOSES OF ANY EXTRA WORK, CHANGE, ADDITION OR OMISSIONS IN THE WORK AS PROVIDED HEREIN.

(f) If the CONTRACTOR should claim that any instruction, request, drawing, specification, action, condition, omission, default, or other situation obligates the DISTRICT to pay additional compensation to CONTRACTOR or to grant an extension of time, or constitutes a waiver of any provision in the Agreement, CONTRACTOR shall notify the DISTRICT, in writing, of such claim within five (5) calendar days from the date CONTRACTOR has actual or constructive notice of the factual basis supporting the claim. The notice shall state the factual bases for the claim and cite in detail the Project Documents (including plans and specifications) upon which the claim is based. The CONTRACTOR's failure to notify the DISTRICT within such five (5) day period shall be deemed a waiver and relinquishment of such a claim. If such notice be given within the specified time, the procedure for its consideration shall be as stated above in these General Conditions.

(g) “PROHIBITED USAGE OF CONTRACTOR QUALIFYING LANGUAGE STAMPS ON DISTRICT DRAWINGS OR CONTRACT FORMS.” Contractor shall not countersign or endorse any form, drawing, change order, contract or other documents with any conditions not mutually agreed to in advance by the DISTRICT and the CONTRACTOR. Endorsement of a contract, change order, specification, drawing or form with the following: “This change order is being executed without waiver of the right to seek additional compensation for such services,” shall be of no legal force or effect.

ARTICLE 60. COMPLETION

(a) The DISTRICT shall accept completion of the Project and have the Notice of Completion recorded within ten (10) days of acceptance of completion of the Project when the entire work including punch list items shall have been completed to the satisfaction of the DISTRICT. Civil Code Section 3093. The work may only be accepted as complete by action of the DISTRICT's Governing Board.

(b) However, the DISTRICT, at its sole option, may accept completion of the Project and have the Notice of Completion recorded when the entire work including individual portions of the work shall have been completed to the satisfaction of the DISTRICT, except for minor corrective items, as distinguished from incomplete items.

(c) A final walk through of the Project to determine completion and to record the Notice of Completion shall occur only upon a valid claim by CONTRACTOR that the Project is complete except for minor corrective items. Any erroneous claims of completion by CONTRACTOR resulting in a premature walk through shall be at CONTRACTOR's sole cost and expense and DISTRICT shall make adjustments to the contract price by reducing the amount thereof to pay for any costs incurred by the DISTRICT due to the erroneous claims by the CONTRACTOR that the Project is complete. Minor corrective items shall be identified in the final walk through of the Project.

(d) If the CONTRACTOR fails to complete the minor corrective items prior to the expiration of the thirty-five (35) day period immediately following recording of the Notice of Completion, the DISTRICT shall withhold from the final payment an amount equal to one hundred fifty percent (150%), as determined by the DISTRICT, of the amount of each item until such time as the item is completed. Public Contract Code Section 7107. At the end of such 35-day period, if there are items remaining to be corrected, the DISTRICT may elect to proceed as provided in Article 61(b) entitled "Adjustments to Contract Price."

ARTICLE 61. ADJUSTMENTS TO CONTRACT PRICE

(a) If CONTRACTOR defaults or neglects to carry out the work in accordance with the Project Documents or fails to perform any provision thereof, DISTRICT may, after ten (10) days written notice to the CONTRACTOR and without prejudice to any other remedy it may have, make good such deficiencies.

(b) The DISTRICT shall adjust the total contract price by reducing the amount thereof by the cost of making good such deficiencies. If DISTRICT deems it inexpedient to correct work not done in accordance with the Project Documents, an equitable reduction in the contract price shall be made therefore.

ARTICLE 62. CORRECTION OF WORK

(a) CONTRACTOR shall promptly remove all work identified by DISTRICT as failing to conform to the Project Documents, whether incorporated or not. CONTRACTOR shall promptly replace and re-execute its own work to comply with Project Documents without additional expense to DISTRICT and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

(b) If CONTRACTOR does not remove such work within a reasonable time, fixed by written notice, DISTRICT may remove it and may store the material at CONTRACTOR's expense. If CONTRACTOR does not pay expenses of such removal within ten (10) days' time thereafter, DISTRICT may, upon ten (10) days written notice, sell such materials at auction or at private sale and shall account for net proceeds thereof, after deducting all costs and expenses that should have been borne by CONTRACTOR.

ARTICLE 63. EXTENSION OF TIME - LIQUIDATED DAMAGES

(a) The CONTRACTOR and DISTRICT hereby agree that the exact amount of damages for failure to complete the work within the time specified is extremely difficult or impossible to determine. CONTRACTOR shall be assessed liquidated damages for each and every day the work required under the Project Documents remains unfinished past the time for completion, as set forth in the Agreement, and any extensions of time granted by the DISTRICT to the CONTRACTOR under the terms of the Project Documents. The CONTRACTOR will pay to the DISTRICT or DISTRICT may retain from amounts otherwise payable to the CONTRACTOR, said amount for each day after failure to meet the requirements of the contract completion as scheduled in the Agreement. Government Code Section 53069.85 for purposes of this article, the work shall be considered "complete" in accordance with the provisions of Article 60, "COMPLETION", except that the work may be considered complete without formal acceptance by the DISTRICT Governing Board so long as the Governing Board, at its next regularly scheduled meeting, accepts the work.

(b) CONTRACTOR shall not be charged for liquidated damages, as set forth above, because of any delays in completion of work which are not the fault or negligence of CONTRACTOR, including but not restricted to acts of God. CONTRACTOR shall within ten (10) days of beginning of any such delay, notify DISTRICT in writing of causes of delay. CONTRACTOR shall provide documentation and justification to substantiate the delay and its relation to the Project's critical path. DISTRICT shall ascertain the facts and extent of delay and grant extension of time for completing work when, in its judgment, the findings of fact justify such an extension. The DISTRICT's finding of fact thereon shall be final and conclusive on the parties hereto. Extension of time shall apply only to that portion of work affected by the delay, and shall not apply to other portions of work not so affected.

ARTICLE 64. PAYMENTS WITHHELD

(a) In addition to amount which DISTRICT may retain under Article entitled "COMPLETION" and Article entitled "PAYMENTS," DISTRICT may withhold a sufficient amount or amounts of any payment or payments otherwise due to CONTRACTOR, as in its judgment may be necessary to cover:

(1) Payments which may be past due and payable for just claims against CONTRACTOR or any subcontractors, or against and about the performance of work on the Project, including, without limitation, payments made pursuant to the Article entitled "PAYMENTS BY CONTRACTOR."

(2) The cost of defective work which CONTRACTOR has not remedied.

(3) Liquidated damages assessed against CONTRACTOR.

(4) Penalties for violation of labor laws.

(5) The cost of materials ordered by the DISTRICT pursuant to Article 33 entitled "MATERIALS AND WORK."

(6) The cost of completion of this Agreement if there exists a reasonable doubt that this Agreement can be completed for the balance then unpaid to CONTRACTOR.

(7) Damage to DISTRICT, another contractor, or subcontractor.

(8) Site clean-up as provided in Article 44 entitled "CLEANING UP."

(9) Payments to indemnify, defend, or hold harmless the DISTRICT.

(10) Any payments due to the District including but not limited to payments for failed tests, utilities or imperfections.

(11) Extra services for ARCHITECT.

(12) Extra services for the INSPECTOR including but not limited to reinspection required due to CONTRACTOR's failed tests or installation of unapproved or defective materials and CONTRACTOR's requests for inspection and CONTRACTOR's failure to attend the inspection.

(13) Failure of CONTRACTOR to submit on a timely basis, proper and sufficient documentation required by the Project Documents, including without limitation, monthly progress schedules, shop drawings, submittal schedules, schedule of values, product data and samples, proposed product lists, executed change orders and verified reports.

(14) Any other obligation(s) of the DISTRICT which the DISTRICT is authorized and/or compelled by law to perform.

(b) If the above grounds are in the opinion of the DISTRICT removed by or at the expense of CONTRACTOR, payment shall be made for amounts withheld because of them.

(c) DISTRICT may apply such withheld amount or amounts to payment of such claims or obligations at its discretion. In so doing, DISTRICT shall make such payments on behalf of CONTRACTOR. If any payment is so made by DISTRICT, then such amount shall be considered as a payment made under contract by DISTRICT to CONTRACTOR and DISTRICT shall not be liable to CONTRACTOR for such payments made in good faith. Such payments may be made without prior judicial determination of claim or obligations. DISTRICT will render CONTRACTOR an accounting of such funds disbursed on behalf of CONTRACTOR.

(d) As an alternative to payment of such claims or obligations, DISTRICT, in its sole discretion, may reduce the total contract price as provided in Article 61 entitled "ADJUSTMENTS TO CONTRACT PRICE."

ARTICLE 65. TAXES

(a) CONTRACTOR will pay all applicable federal, state and local taxes on all materials, labor, or services furnished by it, and all taxes arising out of its operations under the Project Documents.

(b) If under federal excise tax law any transaction hereunder constitutes a sale on which a federal excise tax is imposed and the sale is exempt from such excise tax because it is a sale to a state or local government for its exclusive use, the DISTRICT, upon request, will execute documents necessary to show (1) that the DISTRICT is a political subdivision of the State for the purposes of such exemption and (2) that the sale is for the exclusive use of the DISTRICT. No excise tax for such materials shall be included in any bid price.

ARTICLE 66. NO ASSIGNMENT

The CONTRACTOR shall not assign, transfer, convey, sublet or otherwise dispose of this Agreement or of its rights, title or interest in or to the same or any part thereof. If the CONTRACTOR shall assign, transfer, convey, sublet or otherwise dispose of the Agreement or its right, title or interest therein, or any part thereof, such attempted or purported assignment, transfer, conveyance, sublease or other disposition shall be null, void and of no legal effect whatsoever; and the Agreement may, at the option of the DISTRICT, be terminated, revoked and annulled, and the DISTRICT shall thereupon be

relieved and discharged from any and all liability and obligations growing out of the same to the CONTRACTOR, and to its purported assignee or transferee.

ARTICLE 67. NOTICE

Any notice from one party to the other or otherwise under the Agreement shall be in writing and shall be dated and signed by party giving such notice or by a duly authorized representative of such party. Any such notice shall not be effective for any purpose whatsoever unless served in one of the following manners:

- (1) If notice is given to DISTRICT, by personal delivery thereof to DISTRICT, or by depositing same in United States mail, enclosed in a sealed envelope addressed to DISTRICT, and sent by registered or certified mail with postage prepaid;
- (2) If notice is given to CONTRACTOR, by personal delivery thereof to said CONTRACTOR, or to CONTRACTOR's superintendent at site of Project, or by depositing same in United States mail, enclosed in a sealed envelope addressed to said CONTRACTOR at its regular place of business or at such address as may have been established for the conduct of work under this Agreement, and sent by registered or certified mail with postage prepaid;
- (3) If notice is given to surety or other persons, by personal delivery to such surety or other person, or by depositing same in United States mail, enclosed in a sealed envelope, addressed to such surety or person at the address of such surety or person last communicated by surety or other person to party giving notice, and sent by registered or certified mail with postage prepaid.

ARTICLE 68. NO WAIVER

The failure of the DISTRICT in any one or more instances to insist upon strict performance of any of the terms of this Agreement or to exercise any option herein conferred shall not be construed as a waiver or relinquishment to any extent of the right to assert or rely upon any such terms or option on any future occasion.

ARTICLE 69. NON-UTILIZATION OF ASBESTOS MATERIAL

- (a) The CONTRACTOR will be required to execute and submit the Certificate Regarding Non-Asbestos Containing Materials.
- (b) Should asbestos containing materials be installed by the CONTRACTOR in violation of this certification, or if removal of asbestos containing materials is part of the Project, decontaminations and removals will meet the following criteria:

(1) Decontamination and removal of work found to contain asbestos or work installed with asbestos containing equipment shall be done only under the supervision of a qualified consultant, knowledgeable in the field of asbestos abatement and accredited by the Environmental Protection Agency (EPA).

(2) The asbestos removal contractor shall be an EPA accredited contractor qualified in the removal of asbestos and shall be chosen and approved by the asbestos consultant who shall have sole discretion and final determination in this matter.

(3) The asbestos consultant shall be chosen and approved by the DISTRICT who shall have sole discretion and final determination in this matter.

(4) The work will not be accepted until asbestos contamination is reduced to levels deemed acceptable by the asbestos consultant.

(c) Cost of all asbestos removal, including, but not necessarily limited to the cost of the asbestos removal contractor, the cost of the asbestos consultant, analytical and laboratory fees, time delays and additional costs as may be incurred by the DISTRICT shall be borne entirely by the CONTRACTOR.

(d) Hold Harmless: Interface of work for the Project with work containing asbestos shall be executed by the CONTRACTOR at his/her risk and at his/her discretion with full knowledge of the currently accepted standards, hazards, risks and liabilities associated with asbestos work and asbestos containing products. By execution of the Agreement, the CONTRACTOR acknowledges the above and agrees to hold harmless the DISTRICT, its Governing Board, employees, agents, and ARCHITECT and assigns for all asbestos liability which may be associated with this work. The CONTRACTOR further agrees to instruct his/her employees with respect to the above mentioned standards, hazards, risks and liabilities.

ARTICLE 70. LEAD

Pursuant to the Lead-Safe Schools Protection Act (Education Code Sections 32240, et seq.) and other applicable law, the CONTRACTOR shall not use lead-based paint, lead plumbing and solders, or other potential sources of lead contamination in the construction of any new school facility or the modernization or renovation of any existing school facility.

ARTICLE 71. CRIMINAL RECORDS CHECK

Education Code Section 45125.1 provides that if the employees of any entity that has a contract with a school district may have any contact with pupils, those employees shall submit or have submitted their fingerprints in a manner authorized by the Department of Justice together with a fee determined by the Department of Justice to be sufficient to

reimburse the Department for its costs incurred in processing the application. The CONTRACTOR shall not permit an employee to come in contact with DISTRICT pupils until the Department of Justice has ascertained that the employee has not been convicted of a violent or serious felony. The CONTRACTOR shall certify in writing to the Governing Board of the DISTRICT that none of its employees who may come in contact with pupils have been convicted of a violent or serious felony. Criminal Records Check Certification by CONTRACTOR is included in the Project Documents.

ARTICLE 72. DISABLED VETERAN BUSINESS ENTERPRISES

Each bidder must meet goals and requirements relating to three percent (3%) participation by Disabled Veteran Business Enterprises, established by the DISTRICT and the State Allocation Board (SAB), or make a good faith effort with respect thereto, in accordance with the DISTRICT's policies and procedures. CONTRACTOR may obtain information from the Office of Small Business Certification and Resources (OSBCR) at <http://www.dgs.ca.gov/osbcr> or (916) 323-5478. The CONTRACTOR shall be required to submit to the DISTRICT the DVBE Certification which is included in the Project Documents. Prior to, and as a condition precedent for final payment on the Project, the CONTRACTOR shall provide appropriate documentation to the DISTRICT so that the DISTRICT can assess its success at meeting the DVBE participation goal.

ARTICLE 73. TOBACCO FREE POLICY

CONTRACTOR has been advised and is aware that DISTRICT has adopted a Board Policy which prohibits the use of tobacco products, including smokeless tobacco, anywhere on DISTRICT property. CONTRACTOR shall be responsible for the enforcement of DISTRICT's tobacco-free policy among all CONTRACTOR's employees and subcontractors while on DISTRICT property. CONTRACTOR understands and agrees that should any employee or subcontractor of CONTRACTOR violate the DISTRICT's Board Policy after having already been warned once for violating DISTRICT's tobacco-free policy, CONTRACTOR shall remove the individual for the duration of the Project. CONTRACTOR shall not be entitled to any additional compensation and/or time in completing the Project for such removal.

ARTICLE 74. GOVERNING LAW

The laws of the State of California shall govern the Project and the Agreement.

APPENDIX D

Drawings
(Separate Attachment)