SOUTH ORANGE COUNTY COMMUNITY COLLEGE DISTRICT

ATEP - ADVANCED TECHNOLOGY & EDUCATION PARK

15445 Lansdowne Road
Tustin, California 92782

HOPE DRIVE PARKING LOT MAINTENANCE AND REPAIR

PROJECT MANUAL

August, 2009
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NOTICE CALLING FOR BIDS

District: SOUTH ORANGE COUNTY COMMUNITY COLLEGE DISTRICT

Project: BID NO. 6: ATEP - HOPE DRIVE PARKING LOT MAINTENANCE AND REPAIR

Bid Deadline: 2:00 P.M., November 10, 2009

Mailing Address & Place of Bid
Receipt: South Orange County Community College District
Health Sciences Building, 3rd Floor, Room 357
Purchasing & Facilities Planning Department
28000 Marguerite Parkway
Mission Viejo, CA 92692

NOTICE IS HEREBY GIVEN that the South Orange County Community College 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 time, sealed bids for the award of a contract for the above Project.

Complete description, specifications and general conditions may be viewed at the Office of the Director of Facilities Planning and Purchasing Department at the above address, telephone (949) 582-4678 or previewed on-line at socccd.edu Interested bidders may purchase complete bid documents from Repro X-press, 18207 McDermott St, Suite I, Irvine, CA 92614, Phone: (949) 336-7755, Fax: (949) 336-7757. Payment will not be refunded, and the Project Documents are not required to be returned.

There will be a mandatory job walk and conference at 10:00 am, October 27, 2009 starting in front of the ATEP Campus Administration Office, 15445 Lansdowne, Tustin, CA, 92782. Any bidder failing to attend the entire pre bid conference shall be deemed a non-responsive bidder and will have his bid returned unopened.

In accordance with the provisions of California Business and Professions Code Section 7028.15 and Public Contract Code Section 3300, the DISTRICT requires that the bidder possess the following classification of contractor’s license at the time the bid is submitted: Class B. Any bidder not so licensed at the time of the contract award will be rejected as non-responsive.

Time is of the essence. Failure to complete the work within the time set forth in the bid documents will result in the imposition of liquidated damages for each day of delay in the amount set forth in the Information for Bidders.
Each bid shall be accompanied by a bid security in the form of cash, a certified or cashier's check or bid bond in an amount not less than ten percent (10%) of the total bid price, payable to the DISTRICT. In the event the successful bidder fails to enter into the contract and execute the required documents, the bid security shall be forfeited. The successful bidder shall furnish a satisfactory Performance Bond and a Payment Bond in amounts not less than one hundred percent (100%) of the total bid price.

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 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 maintained at the DISTRICT office and 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 ninety (90) calendar days after the date set for the opening of bids.

The general prevailing rate of per diem wages is based upon a working day of eight (8) hours. The rate for holiday and overtime work shall be at least time and one-half.

Pursuant to Section 22300 of the Public Contract Code, 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 retention earned directly into escrow. Please direct any questions to:

Brandy K. D’Lena
Director,
Facilities Planning & Purchasing
949-582-4678
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:

South Orange County Community College District
Health Science Building, 3rd Floor
28000 Marguerite Parkway
Mission Viejo, CA, 92692

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 ten (10) 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 ten (10) 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

Schools Legal Service of O.C.
May 2002

Bid Forms
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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 ninety (90) 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 and the payment bond required in accordance with Civil Code Section 3247, are included in the Project Documents. The payment bond shall be in the amount not less than one hundred percent (100%) of the amount of the contract in accordance with Civil Code Section 3248. The successful bidder will also be required to furnish a separate faithful performance bond in the amount of one hundred percent (100%) of the contract and in the form included in the Project Documents, which shall remain in full force and effect through the guarantee period as specified in the General Conditions. All bond premiums shall be at bidder’s cost.

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 no later than four (4) days before bid deadline. 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 fifteen (15) 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.** If alternate bids are called for, the DISTRICT will award the contract to the lowest responsive and responsible bidder in a manner that accepts the lowest bid price on the base contract without consideration of the process on the additive or deductive items.

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. 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 Project Documents. Labor Code Section 1861.

17. **Contractor's License.** If, at the time and date of the contract execution, 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-VII," 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 Affidavit.** In accordance with the provisions of Section 7106 of the Public Contract Code, each bid must be accompanied by a noncollusion affidavit properly notarized.
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. **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. The number of executed copies of the Agreement, the Faithful Performance Bond, and the Payment Bond required is THREE (3).
Name of Bidder: 

To: South Orange County Community College 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 Security, Designation of Subcontractors Form, Information Required of Bidder, all prequalification forms pursuant to Public Contract Code Section 20111.5, if any, Noncollusion Affidavit, Workers’ Compensation Certificate, Faithful Performance Bond, Payment Bond, Agreement, Escrow Agreement, Drug-Free Workplace Certification, Criminal Records Check Certification, Change Order Forms, Shop Drawing Transmittal Form, all insurance requirements, Guarantee forms, Contractor’s Certificate Regarding Non-Asbestos Containing Materials, Disabled Veteran Business Enterprises Certification, if applicable, General Conditions and Supplemental Conditions, if any, Special Conditions, if any, drawings, specifications, 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:

   Project: ATEP - HOPE DRIVE PARKING LOT MAINTENANCE AND REPAIR
   Project No.: Bid No. 6

All in strict conformity with the Project Documents, including Addenda Nos. ____, ____, ____ and ____ on file at the office of the Director of Facilities Planning and Purchasing of said DISTRICT for the following sums:

<table>
<thead>
<tr>
<th>Handwritten</th>
<th>Numeric</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASE BID</td>
<td>$___/100</td>
</tr>
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<td></td>
<td>$___</td>
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</tbody>
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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 Faithful Performance Bond and a separate Payment Bond as specified, and 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, and the Disabled Veteran Business Enterprises Certification, if applicable, within 10 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, on or before the fifth day after receiving 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 B, 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, except work of a maintenance period, shall be completed within 60 consecutive calendar days from the date specified on 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 affidavit 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:

--------------------------------------------------------------------------------------

Corporation

Name:

(a Corporation¹)

--------------------------------------------------------------------------------------

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.
Business Address:

Telephone:

Signed by: 
Print Name: 
Signed by: 
Print Name: 

[Seal]

Joint Venturer

Name:

Signed by: 
Print Name: 
Date: 
Business Address

Telephone:

Other Parties to Joint Venture:

If an individual:

(continued on next page)
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 ___ South Orange County Community College District, hereinafter called the DISTRICT, in the sum of _________ PERCENT (___ %) OF THE TOTAL AMOUNT OF THE BID of the Principal submitted to the said DISTRICT 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 ______, 200___ for __________________________________________

______________________________________

______________________________________

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 10 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 ___, 200___, 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
Surety

By: ____________________________
   Signature

_______________
   Print Name

_______________
   Title

_______________
   Address

_______________
   Telephone No.

_______________
   Facsimile No.
*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.
<table>
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<tr>
<th>Type of Trade, Labor or Service</th>
<th>Name &amp; License # of Subcontractor, License Expiration Date (Indicate if a Disabled Veteran Business Enterprise)</th>
<th>Complete Address (Name of City is not sufficient) and Telephone No.</th>
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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: ____________________

FAX: ____________________
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. _______________________________________

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
Number of years as a contractor in this type of construction work: __________________________

Person who inspected work site:

Name and Title:______________________________________________________________

Date of Inspection:________________________________________________________

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

(a) as a general contractor? ________________________________________________

(b) as a subcontractor? ___________________________________________________

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

(a) as a general contractor? ________________________________________________

(b) as a subcontractor? ___________________________________________________

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.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

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.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

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.

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Schools Legal Service of O.C.
May 2002

Bid Forms
Page 26
(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.
(Public Contract Code Section 7106)

State of California


County of __________________________

_______________________________

_______________________________

_______________________________, being first duly sworn, deposes and says that he or she is __________________________, the party making the foregoing bid, that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the 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, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

________________________________________

Signature of Bidder

NOTARY FOR NONCOLLUSION AFFIDAVIT

Subscribed and sworn to (or affirmed) before me this ______ day of ________ 20___.

________________________________________

Signature of Notary

[SEAL OF NOTARY]

________________________________________

Typed Name of Notary
W  O R K E R ’ S  C O M P E N S A T I O N  C E R T I F I C A T E

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.)

Schools Legal Service of O.C.  May 2002
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KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the SOUTH ORANGE COUNTY COMMUNITY COLLEGE DISTRICT of Orange County, California (hereinafter referred to as “DISTRICT”), awarded __________________________

(hereinafter referred to as the “Contractor/Principal”) the contract for the work described as


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)
KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the SOUTH ORANGE COUNTY COMMUNITY COLLEGE 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

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 hereto 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)
THIS AGREEMENT, dated the ______ day of _____________, 20___, in the County of Orange, State of California, is by and between South Orange County Community College 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 ______________________________ 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 Security, Designation of Subcontractors, Information Required of Bidder, all prequalification forms submitted pursuant to Public Contract Code Section 20111.5, if any, Non-collusion Affidavit, Workers' Compensation Certificate, Faithful Performance Bond, Payment Bond, Escrow Agreement, if applicable, Drug-Free Workplace Certification, Change Orders, Shop Drawing Transmittals, Insurance Certificates and Endorsements, Guarantees, 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 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. DISTRICT shall pay to the CONTRACTOR, as full consideration for the faithful performance of this Agreement, subject to any additions or deductions as provided in the Project Documents, the sum of ______________________________ ______ Dollars ($__________________).
4. The work shall be commenced on or before the ______ (_____) day after receiving the DISTRICT’S Notice to Proceed and shall be completed within ______________ (____) consecutive calendar days from the date specified in the Notice to Proceed.

5. **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 ___________________________ Dollars($__________________) 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.

6. **Termination for Cause or Non-appropriation.** 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 non-appropriation 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.

7. **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.

8. 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.

Public Liability Insurance for injuries including accidental death, to any one person in an amount not less than $1,000,000

and

Subject to the same limit for each person on account of one accident, in an amount not less than $1,000,000

Property Damage Insurance in an amount not less than $1,000,000
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

9. 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.

10. 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____________________, and that____________________, whose title is____________________, is authorized to act for and bind the corporation.

11. 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.

12. 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.

DISTRICT

By: __________________________
   Signature

Print Name

Title

Contractor’s License No.

Tax ID/Social Security No.

(CORPORATE SEAL OF CONTRACTOR, if corporation)

CONTRACTOR

By: __________________________
   Signature

Print Name

Title

Note: All insurance provisions should be reviewed by DISTRICT’s Risk Management.
+ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into, as of __________________, 20____, by and between South Orange County Community College District, whose address is 28000 Marguerite Parkway, Mission Viejo, CA 92692 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 ___________________________ 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:

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On behalf of Escrow Agent:

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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

__________________________
Title

__________________________
Name

__________________________
Signature

CONTRACTOR

__________________________
Title

__________________________
Name

__________________________
Signature

Escrow Agent

__________________________
Title

__________________________
Name

__________________________
Signature
Guarantee for _______________. We hereby guarantee that the _______________, which we have installed in ________________, 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 one (1) year 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: ________________________________
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.

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

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

Complete either (a) or (b)  
Check One:

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<th>(a) We have verified that the material or equipment contained in this submittal meets all the requirements specified or shown (no exceptions)</th>
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<tr>
<td>(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)</td>
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</table>
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
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.

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

CONTRACTOR

By: _____________________________  By: _____________________________
   Signature                      Signature

_______________________________
Print Name

_______________________________
Title

_______________________________
Date

DISTRICT

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

CONTRACTOR

By: ________________________________

______________________________
Print Name

______________________________
Title

______________________________
Date

DISTRICT

By: ________________________________

______________________________
Print Name

______________________________
Title

______________________________
Date

ARCHITECT

By: ________________________________

Signature

______________________________
Print Name

______________________________
Title

______________________________
Date
CONTRACTOR’S CERTIFICATE REGARDING NON-ASBESTOS CONTAINING MATERIALS

Per Article 69 of the General Conditions.

Certification for __________________. 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 South Orange County Community College District under Project/Bid No. ______.

(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, crocidolite, 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
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ARTICLE 3. 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 Affidavit, Workers’ Compensation Certificate, Faithful Performance Bond, Payment Bond, Agreement, Escrow Agreement, Drug-Free Workplace Certification, Change Order forms, Shop Drawing Transmittals form, Insurance Certificates and Endorsements, Guarantee form, Contractor’s Certificate Regarding Non-Asbestos Containing Materials, 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.

(c) Contractor shall possess and maintain all state Contractor’s license and local business licenses as required for the full duration of the project construction period.

**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, contact information for access during works hours and after hours in
the event of an emergency, 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 subcontract 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 specific to the Project inspector.

**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.

DISTRICT, 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

(a) 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 suspension, 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

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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, with sufficient advance time, six (6) copies, checked and approved by CONTRACTOR, of all shop drawings, schedules, and materials list required for the work. All shop drawings, samples, product data, and other submittal data must be received within fifteen (15) calendar days or receiving the Notice to Proceed. 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 with guidance as to required corrections. 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 five (5) 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 materials lists shall be complete and shall conform to contract drawings and specifications. The CONTRACTOR shall prepare, pay for and print the necessary quantities of shop drawings and submittals as required. Submittal copies shall be neatly bound with sturdy labeled covers. For each item listed include manufacturer’s name and address, trade name, local supplier’s name and address, catalog number, catalog cuts and brochures, complete technical and performance data for machinery and equipment. Mark cuts, brochures, and data to indicate items proposed and the intended use.

(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 twenty-five (25) calendar days after receipt of the 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 if required for laying out of 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 DISTRICT.

**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 for work under this Agreement. Such report shall not be part of the Agreement. Any information obtained from such report or any information given on the project documents 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 must conduct 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 of latent conditions at the worksite materially different from those shown on project documents.

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.

(c) Unless otherwise noted by the contract document, the DISTRICT will pay for testing and inspection costs except for the following conditions listed: Contractor shall pay for resulting costs from:

(1) Testing/inspection beyond a normal 8 hour day, weekends or holidays: or uncoordinated requests for inspection; or insufficient notice of work to be performed.

(2) Additional/premium testing and inspection costs due to our of sequence fabrication and erection

(3) Testing/inspection costs due to faulty work and the subsequent rework

(4) Testing/inspection costs which are a result of this CONTRACTOR’S method of installation or use of alternate/non-specific materials that cause additional testing/inspection over normal accepted installation methods and materials testing.

(5) Testing/inspection costs which are incurred due to work that is not ready for complete inspection.

ARTICLE 27. TRENCHES

(a) CONTRACTOR shall provide, maintain and remove 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. **Any submittal provided after the aforementioned deadline will not be considered.** 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.

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 twenty five (25) 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)

(h) Six (6) copies of pertinent information, technical data and a letter identifying the changes shall be issued by the CONTRACTOR when requesting use of alternate materials

**ARTICLE 31: SAMPLES**

(a) CONTRACTOR shall furnish for approval, within fifteen (15) calendar days following Notice to Proceed, 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 fifteen (15) calendar 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 acceptance. 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 with no activity exceeding a 14 day duration.

(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 reject 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.

(i) In addition to the requirement to update the baseline schedule, CONTRACTOR is responsible to provide a three week look-ahead schedule at each progress meeting. Schedule will include activities that are being completed during the week of the meeting and projected work for two weeks out. Schedule shall include information for all trades on-site. Schedule will identify any work that is proposed outside the regular working hours.

ARTICLE 33: TIME ALLOWANCES

(a) DISTRICT will serve a Notice to Proceed upon Contractor by hand delivery, facsimile, email or delivery to Contractor at legal address.

(b) Start date for Contract Times shall be on the date indicated in the Notice to Proceed. If no date is indicated, then the start date for contract time shall be the 5th calendar day from date that Contractor receives DISTRICT’s written Notice to Proceed, unless the Notice to Proceed is served by mail only, then the Start Date under the Contract shall be the tenth (10th) calendar day following the date of mailing. The Contractor shall commence work on such day, and shall prosecute the Work diligently to completion thereafter. No work shall commence before contract bonds and insurance certificates have been filed with the DISTRICT and the contract has been signed by the DISTRICT.

(c) CHANGE OF CONTRACT TIMES

(1) The contract times may only be changed by change order or written amendment and time is of this essence in this Agreement.

(2) The Contract Times will be adjusted in an amount equal to the time lost as shown on a critical path schedule due to the following:

(i) Changes in the Work ordered by DISTRICT;

(ii) Acts or neglect by DISTRICT’s consultants, acts or neglect of utility districts, acts or neglect of other Contractors performing other Work, provided Contractor has fully and completely performed its responsibilities under the Contract Documents, including but not limited to, its cooperation and coordination responsibilities required by the Contract Documents;
Fires, floods, abnormal weather conditions, earthquakes, civil disturbances, or acts of God, provided damage resulting from same is not the result of Contractor's failure to properly protect the Work as required by the Contract Documents. Notwithstanding the foregoing, the contract times shall not be extended unless Contractor has actually been prevented from completing any part of the Work within the contract time due to delay which is (i) beyond the control of Contractor and (ii) due to reasons for which Contractor is not responsible and (iii) a claim for delay is made as provided for herein. Delays attributable to and within the control of a Subcontractor, or its subcontractors, or supplier shall be deemed to be delays within the control of Contractor.

Contractor shall have no right to an adjustment in the time of completion due to weather conditions which are normal for the locality of the site. The time period for completion of the project has been determined with consideration given to the average climatic range prevailing in the locality of the site.

(3) Where Contractor is prevented from completing any part of the Work within the contract due to delay beyond the control of both DISTRICT and Contractor, an extension of contract times in an amount equal to the time loss due to such delay shall be the Contractor's sole and exclusive remedy for such delay. DISTRICT shall not be liable to Contractor, any Subcontractor, any supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from (i) delays caused by or within the control of Contractor, or (ii) delays beyond the control of both parties including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God or acts or neglect by utility districts.

(4) Delays due to adverse weather conditions will not be allowed for weather conditions which do not directly impact the performance of the critical path. Whenever the Contractor has undertaken an exterior critical path activity which is directly impacted by adverse weather conditions, the Contractor shall immediately notify the DISTRICT of the potential delay to such activity. The DISTRICT shall inspect the site, meet with the Contractor and confirm that the exterior critical path activity is impacted and grant an extension of the Contract Times sufficient to allow the Contractor to perform the impacted activity.

(5) If delays acceptable for evaluation occur concurrently, the maximum extension of the Contract time shall be the number of days from the commencement of the first delay to the cessation of the delay which ends last.

(6) Delay in completion of the Work beyond the expiration of the contract time resulting from causes other than those listed as acceptable for evaluation are considered inexcusable delays and shall not entitle the Contractor to an extension of the contract time or an adjustment of the Contract amount.

If an inexcusable delay occurs concurrently with acceptable delays for evaluation, the maximum extension of the Contract Time shall be the number of days, if any, by which the duration of a delay exceeds the inexcusable delay. The duration of concurrence is non-compensable.

(d) NOTICE OF DELAY
(1) Notice shall constitute application for extension of time only if notice requests extension and sets forth the impact of the delay. The delay on the critical path and Contractor's estimate of additional time required together with full recital of causes of unavoidable delays relied upon.

(2) After receipt of a request for a time extension, with verifiable documents and justifications included, DISTRICT will make decision thereon, and will advise Contractor in writing.

(3) No time extensions shall be considered without related documents and justifications necessary for DISTRICT to make determination.

(4) No time extensions shall be granted for delays for which Contractor fails to give timely notice and Contractor hereby waives any and all damages for delay for which timely notice is not given.

(5) Any request for extension of time shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant is entitled as a result of the occurrence of said event. All claims and adjustments in the contract times shall be determined by DISTRICT. No claim for an adjustment in the contract times will be valid and such claim will be waived if not submitted in accordance with the requirements of this paragraph.

(6) The Contractor's failure to perform in accordance with the construction schedule shall not be excused because the Contractor has submitted time extension requests, unless and until such requests are approved by DISTRICT.

(e) NO DAMAGE FOR CONTRACTOR CAUSED DELAY

Contractor shall not be entitled to any compensation, including but not limited to extended field or home office overhead, field supervision, costs of capital, interest, escalation charges, acceleration costs or other impacts for any delays caused in whole or in part by Contractor's failure to perform its obligations under this Contract, or during periods of delay concurrently caused by Contractor and either DISTRICT or others. Contractor may be compensated for delays caused directly and solely by DISTRICT except that Contractor shall not be entitled to damages for delay to the Work caused by the following reasons:

(1) DISTRICT's right to sequence Work in manner which would avoid disruption to the DISTRICT's tenants and their contractors or other prime contractors and their respective subcontractors, exercised as a result of Contractor's failure to perform its cooperation and coordination responsibilities required by this Contract;

(2) DISTRICT's enforcement of government act or regulation, or the provisions of the Contract Documents; and

(3) Extensive requests for clarifications to construction documents or modifications to contract, provided such clarifications or modifications are processed by DISTRICT or its consultants in a reasonable time commensurate with provisions of Contract requirements.
(f) Granting of time extension for any reason shall in no way operate as waiver on part of DISTRICT, of right to collect liquidated damages for other delays or of right to collect other damages or other rights to which DISTRICT is entitled.

ARTICLE 34. 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. DISTRICT may however consider payment on materials that are stored at the jobsite or in a bonded warehouse upon presentation of invoices and any required certifications.

(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 materials, 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 35: 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 36: 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 37: 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 38: 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 39: 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 40. 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 41. 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 42. 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 43. UTILITIES

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(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 44. 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 45. CLEANING UP**

(a) 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. In no event shall any trash or rubble be burned or buried on the project site. Daily clean up will be performed both continuously and simultaneously by CONTRACTOR to the satisfaction of the DISTRICT. If trash removal is not removed as required, the DISTRICT may, at its sole discretion and after proper notification to CONTRACTOR, elect to hire necessary labor to remove same. A notice of backcharge is not required for collecting costs associated with the trash removal.

(b) The Owner requires the Contractor to efficiently use resources to the fullest extent possible in the completion of this project. Resource efficient aspects to be considered in completing this Project include use of techniques that minimize waste generation and recycling of waste generated during the demolition and construction processes. Evaluation of efficient use of resources in the Project will be based on the specific Project goal to divert 25% of the construction waste generated by this project from municipal landfills.

(c) 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. Only non-hazardous cleaning materials shall be used. 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 46. 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 47. 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 48: 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 49: 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](http://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, inadverterence 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 wilful failure to pay the correct prevailing rate of per diem wages. A mistake, inadverterence 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 50: 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 hereinafore 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 51. 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 52. 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 apprentice 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 53: 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 54: 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.

(7) CONTRACTOR must confine all construction activity within the identified project parameters. Any work that must take place outside construction parameters must be approved by the DISTRICT in writing 48 hours in advance of work proceeding.

(8) CONTRACTOR parking must be as approved by the DISTRICT only.

ARTICLE 55: 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 56: 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 57: 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 58: 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 59: 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 percent (90%) of value of work performed and of materials delivered to the job site 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

(b) 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 on the twentieth (20th) day of the month preceding that month within 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. DISTRICT shall review draft pay applications and notify CONTRACTOR of status by the twenty-fifth (25th) of the month preceding that month within which payment is to be made. CONTRACTOR shall not be entitled to have any payment estimates processed or be entitled to have any payment of work performed so long as any lawful or proper direction concerning work, or any portion thereof, given by the DISTRICT shall remain un-complied with by the CONTRACTOR. CONTRACTOR agrees to ten percent (10%) retention on all progress payments. Public Contract Code Section 9203.

(c) 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.

(d) 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.

(e) For original signed, notarized copies of pay application shall be submitted at the DISTRICT by the last day of the month. 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
(f) No payment by DISTRICT hereunder shall be interpreted so as to imply that DISTRICT has inspected, approved or accepted any part of the work.

(g) 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.

(h) 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(c).

(i) The final payment of the ten percent (10%) 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 the DISTRICT. Public Contract Code Section 7107.

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ARTICLE 60. 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. 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.

EXTRA CREDIT

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 the 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 omission 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 61: 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 62: 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 63: 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 64: 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 65: 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 66. 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 67. 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 68: 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 69: 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 70: 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 71. 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 72. GOVERNING LAW**

The laws of the State of California shall govern the Project and the Agreement.
SECTION 01010-SUMMARY OF PROJECT

PART 1-GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Work covered by Contract Documents for this portion of the project.
   2. Contracts.
   3. Administrative and procedural sections applicable to all Contracts.

1.02 RELATED SECTIONS

A. General Conditions, Supplementary Conditions, Special Conditions or such other Conditions/Provisions as may be applicable to this Contract.

1.03 PROJECT-WORK COVERED BY ALL CONTRACT DOCUMENTS

A. Work of the prime Contract shall include the construction of:

1. Project Title: Hope Drive Parking Lot Maintenance and Repair

2. Project Location: South Orange County Community College District
   ATEP – Advanced Education & Technology Park
   15445 Lansdowne Road
   Tustin, California 92782

3. Project Description:
   a. Maintenance, repair, and upgrades to existing parking lot and path of travel to campus, to provide accessible parking, upgraded accessible path of travel, accessible parking spaces, and new parking lot lighting

1.04 WORK INCLUDED IN THE CONTRACT

A. The Work Includes: Architectural, Civil, and Electrical.
B. Cooperate fully with separate Contractors so that work under those Contracts may be carried out smoothly, without interfacing with or delaying work under this Contract.
C. The District may award separate Contracts for additional work to be performed at the site.

1.05 CONTRACT

A. Perform Work of this Contract as bid, under a stipulated sum with the District.

1.06 DOCUMENTS

A. The Contract shall consist of the execution and completion of all work described in the Project Manual and the Drawings, including:
   1. Owner-Contractor Agreement.
   2. Bid Documents.
   3. General Conditions.
   4. Drawings: All those sheets titled and numbered on the Title Sheet.
6. Specifications: All those sections titles and numbered in the table of contents in
   the forepart of the Project Manual.
7. Addenda issued prior to execution of the Contract.
10. Labor and Material Bond.

1.07 CONTRACT DRAWINGS

A. The Drawings provided with and identified in the Project Manual are the Drawings
   referenced in the Project Manual.
B. The location, extent and configuration of the required construction and improvements are
   shown and noted on Drawings. An index of Drawings is included on the title page of the
   Drawings.
C. Drawings are arranged into series according to design discipline. Such organization and
   all references to trades, sub-contractors, specialty contractors or suppliers shall not
   control the Contractor in assigning the Work among sub-contractors or in establishing the
   extent of the work to be performed by any trade.
D. Where the terms "as shown," "as indicated," "as noted," "as detailed," "as scheduled," or
   terms of like meaning are used in the Drawings or Specifications, it shall be understood
   that reference is being made to the Drawings referenced in the Project Manual.
E. Where reference to the word "plans" is made anywhere in Drawings, Specifications and
   related Contract Documents, it shall be understood to mean the Drawings references in
   the Project Manual.

1.08 CONTRACT SPECIFICATIONS

A. The Specifications provided in the Project Manual are the Specifications referenced in the
   Agreement.
B. Specifications are organized by Divisions and Sections in accordance with the
   recommended practices of the Construction Specifications Institute. Such organization
   shall not control the Contractor in assigning the work among subcontractors or in
   establishing the extent of work to be performed by any trade.
C. Specifications are included in the Project Manual, which also may include other
   documents related to the project, including, but not limited to, Information for Bidders,
   Proposal Form or Bid Form, Agreement, Certifications and Attachments, Soils and
   Geotechnical Data, Sample Forms and Schedules.

PART 2-PRODUCTS

Not Used.
PART 3-EXECUTION

3.01 USE OF PREMISES

A. CONTRACTOR shall coordinate the Work of all trades, with DISTRICT and/or Separate Work Contract. CONTRACTOR shall sequence, coordinate, and perform the Work to impose minimum hardship on the operation and use of the existing facilities and/or Project site. CONTRACTOR shall install all necessary protection for existing improvements, Project site, property, and new Work against dust, dirt, weather, damage, vandalism, and maintain and relocate all protection to accommodate progression of the Work.

B. CONTRACTOR shall confine entrance and exiting to the Project site and/or facilities to routes designated by the District.

C. CONTRACTOR shall utilize all available means to prevent generation of unnecessary noise and maintain noise levels to a minimum. When required by the District, CONTRACTOR shall immediately discontinue noise-generating activities and/or provide alternative methods to minimize noise generation. CONTRACTOR shall install and maintain air compressors, tractors, cranes, hoists, vehicles, and other internal combustion engine equipment with mufflers, including unloading cycle of compressors. CONTRACTOR shall discontinue operation of equipment producing objectionable noise as required by the District.

D. CONTRACTOR shall secure work areas with fencing, gates, and locking devices.

E. CONTRACTOR assumes custody and control of DISTRICT property, both fixed and portable, remaining in existing facilities vacated during the Work.

END OF SECTION 01010
SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. Coordination Drawings.
2. Administrative and supervisory personnel.
3. Project meetings.

B. Related Sections include the following:

1. Division 1 Section "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
2. Division 1 Section "Closeout Procedures" for coordinating Contract closeout.

1.3 COORDINATION

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.

B. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.
4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
C. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor’s Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Pre-installation conferences.
7. Startup and adjustment of systems.
8. Project closeout activities.

E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner’s property.

1.4 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.

1.5 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.

B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner, Construction Manager, and Architect, but no later than 10 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Authorized representatives of Owner, Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Discuss items of significance that could affect progress, including the following:
   a. Tentative construction schedule.
   b. Phasing.
   c. Critical work sequencing and long-lead items.
   d. Designation of key personnel and their duties.
   e. Procedures for processing field decisions and Change Orders.
   f. Procedures for requests for interpretations (RFIs).
   g. Procedures for testing and inspecting.
   h. Procedures for processing Applications for Payment.
   i. Distribution of the Contract Documents.
   j. Submittal procedures.
   k. Preparation of Record Documents.
   l. Use of the premises.
   m. Work restrictions.
   n. Owner’s occupancy requirements.
   o. Responsibility for temporary facilities and controls.
   q. Parking availability.
   r. Office, work, and storage areas.
   s. Equipment deliveries and priorities.
   t. First aid.
   u. Security.
   v. Progress cleaning.
   w. Working hours.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect, Construction Manager, and District of scheduled meeting dates.

2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
   b. Options.
   c. Purchases.
   d. Deliveries.
   e. Submittals.
   f. Review of mockups.
   g. Possible conflicts.
   h. Compatibility problems.
   i. Time schedules.
   j. Weather limitations.
   k. Manufacturer’s written recommendations.
   l. Warranty requirements.
   m. Compatibility of materials.
   n. Acceptability of substrates.
o. Temporary facilities and controls.
p. Space and access limitations.
q. Regulations of authorities having jurisdiction.
r. Testing and inspecting requirements.
s. Installation procedures.
t. Coordination with other work.
u. Required performance results.
v. Protection of adjacent work.
w. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Progress Meetings: Conduct progress meetings at weekly intervals. Coordinate dates of meetings with preparation of payment requests.

1. Attendees: In addition to representatives of Owner, Construction Manager, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

a. Contractor's Construction Schedule: Review Short-Interval Progress Schedule since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1) Review schedule for next period.

b. Review present and future needs of each entity present, including the following:

1) Interface requirements.
2) Sequence of operations.
3) Status of submittals.
4) Deliveries.
5) Off-site fabrication.
6) Access.
7) Site utilization.
8) Temporary facilities and controls.
9) Work hours.
10) Hazards and risks.
11) Progress cleaning.
12) Quality and work standards.
13) Status of correction of deficient items.
14) Field observations.
15) Requests for interpretations (RFIs).
16) Status of proposal requests.
17) Pending changes.
18) Status of Change Orders.
19) Pending claims and disputes.
20) Documentation of information for payment requests.

3. Minutes: Architect or Construction Manager will record and distribute to Contractor the meeting minutes.

4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
   a. Schedule Updating: Revise Contractor’s Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue Short-Interval Schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01310
SECTION 01330 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Sections include the following:

1. Division 1 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
2. Division 1 Section "Quality Requirements" for submitting test and inspection reports.
3. Division 1 Section "Closeout Procedures" for submitting warranties.
4. Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
5. Divisions 2 through 16 Sections for specific requirements for submittals in those Sections.

1.3 DEFINITIONS

A. Action Submittals: Written and graphic information that requires Architect's and Construction Manager's responsive action.

B. Informational Submittals: Written information that does not require Architect's and Construction Manager's responsive action. Submittals may be rejected for not complying with requirements.

1.4 SUBMITTAL PROCEDURES

A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

a. Architect and/or Construction Manager reserve the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
B. Submittals Schedule: Provide list of submittals and time requirements for scheduled performance of related construction activities.

C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect’s receipt of submittal from Construction Manager. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow fifteen (15) calendar days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow ten (10) calendar days for review of each resubmittal.

D. Identification: Place a permanent label or title block on each submittal for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.
2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor’s review and approval markings and action taken by Architect and Construction Manager.
3. Include the following information on label for processing and recording action taken:
   a. Project name.
   b. Date.
   c. Name and address of Architect and Construction Manager.
   d. Name and address of Contractor.
   e. Name and address of subcontractor.
   f. Name and address of supplier.
   g. Name of manufacturer.
   h. Submittal number or other unique identifier, including revision identifier.

   1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 06100.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 06100.01.A).

   i. Number and title of appropriate Specification Section.
   j. Drawing number and detail references, as appropriate.
   k. Location(s) where product is to be installed, as appropriate.
   l. Other necessary identification.

E. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.

F. Additional Copies: Unless additional copies are required for final submittal, and unless Architect or Construction Manager observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.

1. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect and Construction Manager.
2. Additional copies submitted for maintenance manuals will not be marked with action taken.
G. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Construction Manager will return submittals, without review, received from sources other than Contractor.

1. Transmittal Form: Provide locations on form for the following information:
   a. Project name.
   b. Date.
   c. Destination (To:).
   d. Source (From:).
   e. Names of subcontractor, manufacturer, and supplier.
   f. Category and type of submittal.
   g. Submittal purpose and description.
   h. Specification Section number and title.
   i. Drawing number and detail references, as appropriate.
   j. Remarks.
   k. Signature of transmitter.

2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect and Construction Manager on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.

H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.

I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

J. Use for Construction: Use only final submittals with mark indicating from Architect’s and Construction Manager’s action stamp taken by Architect and Construction Manager.

1.5 CONTRACTOR’S USE OF ARCHITECT’S CAD FILES

A. General: At Contractor’s written request, copies of Architect’s CAD files will be provided to Contractor for Contractor’s use in connection with Project, subject to the following conditions:

1. General: Electronic copies of CAD Drawings of the Contract Drawings can be purchased from the Architect for Contractor’s use in preparing submittals.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

A. General: Prepare and submit Action Submittals required by individual Specification Sections.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:
   a. Manufacturer's written recommendations.
   b. Manufacturer's product specifications.
   c. Manufacturer's installation instructions.
   d. Standard color charts.
   e. Manufacturer's catalog cuts.
   f. Wiring diagrams showing factory-installed wiring.
   g. Printed performance curves.
   h. Operational range diagrams.
   i. Mill reports.
   j. Standard product operation and maintenance manuals.
   k. Compliance with specified referenced standards.
   l. Testing by recognized testing agency.
   m. Application of testing agency labels and seals.
   n. Notation of coordination requirements.

4. Submit Product Data before or concurrent with Samples.

5. Number of Copies: Submit six (6) copies of Product Data, unless otherwise indicated. Architect, through Construction Manager, will return three (3) copies. Mark up and retain one returned copy as a Project Record Document.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

1. All submittals of shop drawings, catalog cuts, data sheets, schedules and material lists shall be complete and shall conform to contract drawings and specifications. The Contractor shall prepare, pay for and print the necessary quantities of shop drawings and submittals as required. Submittal copies shall be neatly bound with sturdy labeled covers. For each item listed include manufacturer's name and address, trade name, local supplier's name and address, catalog number, catalog cuts and brochures, complete technical and performance data for machinery and equipment. Mark cuts, brochures, and data to indicate items proposed and the intended use.

2. 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.

3. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
a. Dimensions.
b. Identification of products.
c. Fabrication and installation drawings.
d. Roughing-in and setting diagrams.
e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
f. Shopwork manufacturing instructions.
g. Templates and patterns.
h. Schedules.
i. Design calculations.
j. Compliance with specified standards.
k. Notation of coordination requirements.
l. Notation of dimensions established by field measurement.
m. Relationship to adjoining construction clearly indicated.
n. Seal and signature of professional engineer if specified.
o. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.

4. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.

5. Number of Copies: Submit six (6) opaque (bond) copies of each submittal. Architect, through Construction Manager, will return three (3) copies.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.

2. Identification: Attach label on unexposed side of Samples that includes the following:

   a. Generic description of Sample.
   b. Product name and name of manufacturer.
   c. Sample source.
   d. Number and title of appropriate Specification Section.

3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

   a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
   b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

4. Samples for Initial Selection: Submit manufacturer’s color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

   a. Number of Samples: Submit two full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer’s product line. Architect, through Construction Manager, will return submittal with options selected.
5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

   a. Number of Samples: Submit six (6) sets of Samples.

      1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.

      2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three (3) sets of paired units that show approximate limits of variations.

2.2 INFORMATIONAL SUBMITTALS

A. General: Prepare and submit Informational Submittals required by other Specification Sections.

   1. Number of Copies: Submit three (3) copies of each submittal, unless otherwise indicated. Architect and Construction Manager will not return copies.

   2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

   3. Test and Inspection Reports: Comply with requirements specified in Division 1 Section "Quality Requirements."

B. Coordination Drawings: Comply with requirements specified in Division 1 Section "Project Management and Coordination."

C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

D. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.

E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
G. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

H. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

I. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

J. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

K. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
   1. Name of evaluation organization.
   2. Date of evaluation.
   3. Time period when report is in effect.
   4. Product and manufacturers' names.
   5. Description of product.
   6. Test procedures and results.
   7. Limitations of use.

L. Schedule of Tests and Inspections: Comply with requirements specified in Division 1 Section "Quality Requirements."

M. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

N. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

O. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

P. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment.

Q. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
R. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:

1. Preparation of substrates.
2. Required substrate tolerances.
3. Sequence of installation or erection.
4. Required installation tolerances.
5. Required adjustments.
6. Recommendations for cleaning and protection.

S. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:

1. Name, address, and telephone number of factory-authorized service representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Statement that products at Project site comply with requirements.
4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
6. Statement whether conditions, products, and installation will affect warranty.
7. Other required items indicated in individual Specification Sections.

T. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

U. Material Safety Data Sheets (MSDSs): Submit information directly to Construction Manager; do not submit to Architect, except as required in "Action Submittals" Article.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect and Construction Manager.

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S AND/OR CONSTRUCTION MANAGER'S / ACTION

A. General: Architect and Construction Manager will not review submittals that do not bear Contractor's approval stamp and will return them without action.
1. Action Submittals: Architect and Construction Manager will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect and Construction Manager will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken.

B. Informational Submittals: Architect and Construction Manager will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect and Construction Manager will forward each submittal to appropriate party.

C. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

D. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01330
SECTION 01420 - TESTING AND INSPECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Testing and inspection services to meet requirements of the California Building Code (CBC), Title 24, Parts 1 and 2, as indicated on the Drawings.

B. One or more DSA certified inspectors employed by the OWNER in accordance with the requirements of California Building Standards Administrative Code will be assigned to the Work with their duties as specifically defined in Section 4-333(b).

C. Tests of materials are required by a DSA certified testing agency as set forth in Section 4-335 of the California Building Standards Administrative Code.

1.02 RELATED SECTIONS

A. Section 01330: Submittals
B. Section 01700: Execution Requirements
C. Section 01731: Cutting and Patching
D. Section 01720: Contract Closeout

PART 2 – PRODUCTS (Not applicable)

PART 3 – EXECUTION

3.01 TESTS

A. OWNER will select an independent testing agency to conduct tests, sampling, and testing of materials. Selection of material to be tested shall be by the agency and not by CONTRACTOR.

B. Any material shipped from the source of supply prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from IOR such testing and inspection is not required shall not be incorporated into the Work.

C. OWNER will select and directly reimburse testing agency the costs for all DSA and/or DSA required tests and inspections, but may be reimbursed by CONTRACTOR for such costs as noted in related sections of the Contract Documents.

D. The independent testing agency is not authorized to release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work. The agency shall not perform any duties of CONTRACTOR.

E. CONTRACTOR shall provide an insulated curing box for concrete cylinders and will relocate said box and cylinders as rapidly as required in order to provide for progress of the Work.

3.02 TEST REPORTS
A. Test reports shall include all tests performed, regardless of whether such tests indicate
the material is satisfactory or unsatisfactory. Samples taken but not tested shall also be
reported. Records of special sampling operations as required shall also be reported.
Reports shall indicate the material or materials were sampled and tested in accordance
with requirements of CBC, Title 24, Parts 1 and 2, as indicated on the Drawings. Test
reports shall indicate specified design strength. They shall also definitely state whether
or not material or materials tested comply with the specified requirements.

3.03 VERIFICATION OF TEST REPORTS

A. Each testing agency shall submit to the Division of the State Architect, Architect, and
Construction Manager, a verified report in duplicate covering tests which are required to
be performed by that agency during progress of the Work. Such report shall be furnished
each time construction on the Work is suspended, covering tests up to that time, and
prior to Final Completion of the Work, covering all tests.

3.04 INSPECTION BY OWNER

A. OWNER and its representatives shall at all times have access, for purpose of inspection,
to all parts of the Work and to shops wherein the Work is in preparation, and
CONTRACTOR shall at all times maintain proper facilities and provide safe access for
such inspection.

B. OWNER shall have the right to reject materials and/or workmanship deemed defective
Work, and to require correction. Defective workmanship shall be corrected in a
satisfactory manner and defective materials shall be removed from the premises and
legally disposed of, all without charge to OWNER. If CONTRACTOR does not correct
such defective Work within a reasonable time, fixed by written notice and in accordance
with the terms and conditions of the Contract Documents, OWNER may correct such
defective Work and proceed in accordance with related Articles of the Contract
Documents.

C. CONTRACTOR is responsible for compliance to all applicable local, state, and federal
regulations regarding codes, regulations, ordinances, restrictions, and requirements.

3.05 INSPECTOR OF RECORD

A. Inspector of Record is employed by OWNER in accordance with requirements of Title 24
of the California Code of Regulations with their duties specifically defined therein.

B. Inspection of Work shall not relieve CONTRACTOR from any obligation to fulfill all of the
terms and conditions of the Contract Documents.

C. CONTRACTOR shall be responsible for scheduling times of inspection, tests, sample
taking, and similar activities of the Work.

3.06 TESTS AND INSPECTIONS

A. 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.
B. 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.

C. Observations by DISTRICT’s Inspector shall be promptly made, and where practicable, at source of supply.

D. 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.

E. Costs of tests, inspections and any materials found to be not in compliance with the Agreement shall be paid for by CONTRACTOR.

END OF SECTION
SECTION 01430 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.

2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.

3. Requirements for Contractor to provide quality-assurance and control services required by Architect, Owner, Construction Manager, or authorities having jurisdiction are not limited by provisions of this Section.

C. Related Sections include the following:

1. Division 1 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.

2. Divisions 2 through 16 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect or Construction Manager.

C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing,
or operation; they are not Samples. Accepted mockups establish the standard by which the Work will be judged.

D. Laboratory Mockups: Full-size, physical assemblies that are constructed at testing facility to verify performance characteristics.

E. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.

F. Product Testing: Tests and inspections that are performed by a District approved testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.

G. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

H. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

I. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

J. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

K. Experienced: When used with an entity, “experienced” means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 SUBMITTALS

A. Qualification Data: For testing agencies specified in “Quality Assurance” Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
B. Schedule of Tests and Inspections: Prepare in tabular form and include the following:

1. Specification Section number and title.
2. Description of test and inspection.
3. Identification of applicable standards.
4. Identification of test and inspection methods.
5. Number of tests and inspections required.
6. Time schedule or time span for tests and inspections.
7. Entity responsible for performing tests and inspections.
8. Requirements for obtaining samples.
9. Unique characteristics of each quality-control service.

C. Reports: Prepare and submit certified written reports that include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirement for specialists shall not supersede building codes and regulations governing the Work.

G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.

1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
2. NVLAP: A testing agency accredited according to NIST’s National Voluntary Laboratory Accreditation Program.

H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer’s products that are similar in material, design, and extent to those indicated for this Project.

I. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:

1. Contractor responsibilities include the following:
   a. Provide test specimens representative of proposed products and construction.
   b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
   c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
   d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
   e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
   f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on Project.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, through Construction Manager, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
J. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect or Construction Manager.
2. Notify Architect and Construction Manager seven days in advance of dates and times when mockups will be constructed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Architect's and Construction Manager's approval of mockups before starting work, fabrication, or construction.
5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed, unless otherwise indicated.

K. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Sections in Divisions 2 through 16.

1.7 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.

B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
   a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
2. Notify testing agencies at least 72 hours in advance of time when Work that requires testing or inspecting will be performed.
3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."

D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.


1. Notify Architect, Construction Manager, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform any duties of Contractor.

F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

H. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within 30 days of date established for commencement of the Work.
1. Distribution: Distribute schedule to Construction Manager, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.8 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency and required special inspector(s) to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect, Construction Manager, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect, through Construction Manager, with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected work.
7. Submit Final Verified Report (DSA-6) at completion of accepted work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

A. Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Date test or inspection results were transmitted to Architect.
4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's and Construction Manager's reference during normal working hours.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.

2. Comply with the Contract Document requirements for Division 1 Section "Cutting and Patching."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01430
SECTION 01524 - CONSTRUCTION WASTE MANAGEMENT

PART 1 – GENERAL

1.01 WORK INCLUDED

A. Waste Management Objective for the Project:

1. This Project shall minimize the generation of construction and demolition waste at the site. Factors that contribute to waste, such as over-packaging, improper storage, ordering error, poor planning, breakage, mishandling, and contamination shall be minimized.

2. Of the inevitable waste that is generated, as many of the waste materials as economically feasible shall be reused or recycled. Waste disposal in landfills shall be minimized.

B. Diversion From Landfill: Waste categories appropriate for diversion from landfill shall include, but not be limited to, the following:

1. Land clearing debris
2. Soil
3. Wood: Clean dimensional wood, palette wood
4. Sheet Wood: Plywood, OSB and particle board
5. Concrete
6. Concrete Masonry Units (CMU)
7. Asphalt Concrete
8. Paper
   a. Bond
   b. Newsprint
   c. Cardboard and paper packaging materials
9. Cement Fiber Products: panels,
10. Metals
    a. Ferrous
    b. Non-ferrous
11. Paint
12. Rigid Foam
13. Glass
14. Plastics
15. Beverage containers
16. Insulation
17. Gypsum Board
18. Porcelain Plumbing Fixtures
19. Fluorescent Light Tubes (per Dept. of Toxic Substances Control regulations)

1.02 RELATED REQUIREMENTS

A. General & Supplementary Conditions

1.03 REFERENCES

A. The California Integrated Waste Management Board (CIWMB); including the California Materials Exchange (CalMAX), Telephone 877-520-9703; www.ciwmb.ca.gov/calmax/.
B. Local Integrated Waste Management Programs and Re-Use Programs in the Project area.

C. The Department of Toxic Substances Control (DTSC)

1.04 WASTE MANAGEMENT

A. Waste management goals:

1. The Owner has established that this Project shall generate the least amount of waste possible and that processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors shall be employed.

2. Of the inevitable waste that is generated, as many of the waste materials as economically feasible shall be reused, salvaged, or recycled. Waste disposal in landfills shall be minimized.

B. Manager: Contractor shall designate on-site party (or parties) responsible for instructing workers and subcontractors, and overseeing and documenting results of Waste Management for the Project.

C. Distribution: Contractor shall distribute copies of the Construction Waste Estimate and Waste Management Report forms to the Job Site Foreman, each Subcontractor, and the State’s Representative.


E. Field Measurements: Contractor is to verify that field measurements are as indicated on construction and/or shop drawings before confirming product orders or proceeding with work, in order to minimize waste due to excessive materials.

F. Materials Handling Procedures: Provide means by which waste materials will be protected from contamination, and means to be employed in reuse or recycling of waste material consistent with requirements for acceptance by receiving facilities.

1. Separation Facilities: Contractor shall lay out and label a specific area to facilitate separation of materials for reuse and recycling. Recycling and waste bin areas shall be kept neat and clean and clearly marked in order to avoid contamination of materials.

2. Hazardous Wastes: Hazardous wastes shall be separated, stored, and disposed of according to local regulations, and in accordance with specifications for such work as may be included in this Project.

3. Instruction: Contractor shall provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at appropriate stages of the Project.

G. PACKING AND SHIPPING:

1. Shipping: Coordinate the schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
2. Packing: Arrange for the return of packing materials, such as wood pallets, where economically feasible.

1.05 WASTE MANAGEMENT PLAN

A. Draft Waste Management Plan: Within 10 calendar days after receipt of Notice of Award of Bid, or prior to any waste removal, whichever occurs sooner, the Contractor shall submit to the Owner and Architect a Draft Waste Management Plan.

B. The Draft Plan shall contain the following:

1. Analysis of the proposed jobsite waste to be generated, including types and quantities.
2. Landfill options: The name of the landfill(s) where trash will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all Project waste in the landfill(s).
3. Alternatives to Landfilling: A list of each material proposed to be salvaged, reused, or recycled during the course of the Project, the proposed local market for each material, and the estimated net cost savings or additional costs resulting from separating and recycling (versus landfilling) each material.
4. "Net" means that the following have been subtracted from the cost of separating and recycling: (a) revenue from the sale of recycled or salvaged materials and (b) landfill tipping fees saved due to diversion of materials from the landfill. The list of these materials is to include, at minimum, the following materials:
   a. Cardboard.
   b. Clean dimensional wood.
   c. Beverage containers.
   d. Land clearing debris.
   e. Concrete.
   f. Bricks.
   g. Concrete Masonry Units (CMU).
   h. Asphalt.
   i. Metals from banding, stud trim, ductwork, piping, rebar,
   j. Roofing, other trim, steel, iron, galvanized sheet steel,
   k. Stainless steel, aluminum, copper, zinc, lead, brass, and bronze.

C. Resources for Development of Waste Management Plan: The following sources may be useful in developing the Draft Waste Management Plan:

1. Triangle J Council of Governments
2. Recycling Haulers and Markets

D. Final Waste Management Plan: Once the Owner has determined which of the recycling options addressed in the draft Waste Management Plan are acceptable, the Contractor shall submit, within 10 calendar days a Final Waste Management Plan.

E. The Final Waste Management Plan shall contain the following:

1. Analysis of the proposed jobsite waste to be generated, including types and quantities.
2. Landfill options: The name of the landfill(s) where trash will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all Project waste in the landfill(s).
3. Alternatives to Landfilling: A list of the waste materials from the Project that will be separated for reuse, salvage, or recycling.

4. Meetings: A description of the regular meetings to be held to address waste management.

5. Materials Handling Procedures: A description of the means by which any waste materials will be protected from contamination, and a description of the means to be employed in recycling the above materials consistent with requirements for acceptance by designated facilities.

6. Transportation: A description of the means of transportation of the recyclable materials (whether materials will be site separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site) and destination of materials.

1.06 WASTE MANAGEMENT PLAN IMPLEMENTATION

A. Manager: The Contractor shall designate an on-site party (or parties) responsible for instructing workers and overseeing and documenting results of the Waste Management Plan for the Project.

B. Distribution: The Contractor shall distribute copies of the Waste Management Plan to the Job Site Foreman, each Subcontractor, the Owner, and the Architect.

C. Instruction: The Contractor shall provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the Project.

D. Separation facilities: The Contractor shall lay out and label a specific area to facilitate separation of materials for potential recycling, salvage, reuse, and return. Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid contamination of materials.

E. Hazardous wastes: Hazardous wastes shall be separated, stored, and disposed of according to local regulations.

F. Application for Progress Payments: The Contractor shall submit with each Application for Progress Payment a Summary of Waste Generated by the Project. Failure to submit this information shall render the Application for Payment incomplete and shall delay Progress Payment. The Summary shall be submitted on a form acceptable to the Owner and shall contain the following information:

1. The amount (in tons or cubic yards) of material land filled from the Project, the identity of the landfill, the total amount of tipping fees paid at the landfill, and the total disposal cost.
2. Include manifests, weight tickets, receipt, and invoices.
3. For each material recycled, reused, or salvaged from the Project, the amount (in tons or cubic yards), the date removed from the jobsite, the receiving party, the transportation cost, the amount of any money paid or received for the recycled or salvaged material, and the net total cost or savings of salvage or recycling each material. Attach manifests, weight tickets, receipts, and invoices.

1.07 WASTE MANAGEMENT REPORT

A. Upon completion of Work, including final cleanup, provide a final Waste Management Report.
1. The total quantity of each waste material generated; and the date(s) removed from the job-site.

2. The percent of the total quantity generated of each material sent to landfill, the identity of the landfill (receiving facility), handling costs, transport costs, tipping fees paid at the landfill, and total landfill costs. Attach copies of manifests, weight tickets, receipts, and invoices.

3. For each material reused or recycled from the Project, include the percent of the total quantity generated, the identity of the receiving facility, the total costs of handling and transportation, and income. Attach manifests, weight tickets, receipts, and/or invoices.

1.08 PREPARATION

A. Storage and Protection: Designate receiving/storage areas for incoming material to be delivered according to installation schedule and to be placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.

B. Store and handle materials in a manner as to prevent loss from weather and other damage. Keep materials, products, and accessories covered and off the ground, and store in a dry, secure area.

C. Prevent contact with material that may cause corrosion, discoloration, or staining.

D. Protect all materials and installations from damage by the activities of other trades.

1.09 INSTALLATION

A. Install product(s) per manufacturer’s recommendations to reduce damage to or waste of materials by required replacement.

1.10 WASTE MANAGEMENT

A. Source separation: Separate, store, protect, and handle at the site identified recyclable and salvageable waste products in order to prevent contamination of materials and to maximize recyclability and salvageability of identified materials.

B. Return: Set aside and protect misdelivered and substandard products and materials and return to supplier for credit.

C. Reuse and Salvage: Set aside, sort, and protect separated products and materials for collection, re-use, and/or salvage.

D. Recycling: Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclables.

END OF SECTION
SECTION 01600 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.

B. Related Sections include the following:

1. Division 1 Section "Closeout Procedures" for submitting warranties for Contract closeout.
2. Divisions 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.
1.4 SUBMITTALS

A. Product List: Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.

1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
2. Form: Tabulate information for each product under the following column headings:
   a. Specification Section number and title.
   b. Generic name used in the Contract Documents.
   c. Proprietary name, model number, and similar designations.
   d. Manufacturer's name and address.
   e. Supplier's name and address.
   f. Installer's name and address.
   g. Projected delivery date or time span of delivery period.
   h. Identification of items that require early submittal approval for scheduled delivery date.

3. Initial Submittal: Within 10 days after date of commencement of the Work, submit 3 copies of initial product list. Include a written explanation for omissions of data and for variations from Contract requirements.
   a. At Contractor's option, initial submittal may be limited to product selections and designations that must be established early in Contract period.

4. Completed List: Within 30 days after date of commencement of the Work, submit 3 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.

5. Architect's Action: Architect will respond in writing to Contractor within 14 days of receipt of completed product list. Architect's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Architect's response, or lack of response, does not constitute a waiver of requirement to comply with the Contract Documents.

B. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Prior to Bid Opening.
   a. 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.

   b. 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.

   c. DISTRICT shall only consider substitution requests from the bidder submitting the bid for the project.
2 After Bid Opening and Prior to Award of Contract
   a. 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. Any submittal provided after the aforementioned deadline will not be considered. 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.
   
b. 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 twenty five (25) 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)

3. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Submit six (6) copies of pertinent information, technical data and a letter identifying the changes shall be issued by the CONTRACTOR when requesting use of alternate materials.

b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.

c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.

d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.

e. Samples, where applicable or requested.

f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.

g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.

h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.

i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall
Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer’s letterhead, stating lack of availability or delays in delivery.

j. Cost information, including a proposal of change, if any, in the Contract Sum.

k. Contractor’s certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.

l. Contractor’s waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

4. Architect’s Action: If necessary, Architect will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Architect will notify Contractor, through Construction Manager, of acceptance or rejection of proposed substitution within 14 days of receipt of request.

a. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.

C. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Architect’s Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor, through Construction Manager, of approval or rejection of proposed comparable product request within 14 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.

a. Form of Approval: As specified in Division 1 Section “Submittal Procedures.”

b. Use product specified if Architect cannot make a decision on use of a comparable product request within time allocated.

D. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 1 Section “Submittal Procedures.” Show compliance with requirements.

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.

2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.
1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer’s written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer’s original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store cementitious products and materials on elevated platforms.
5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer’s written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.
8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner’s construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer’s disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer’s Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer’s warranty or to provide more rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.

1. Manufacturer’s Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
3. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Division 1 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in Part 2 "Comparable Products" Article to obtain approval for use of an unnamed product.

B. Product Selection Procedures:

1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
6. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
7. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the...
specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.

8. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.


a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.

10. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.

a. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

A. Timing: Architect will consider requests for substitution if received within 10 days prior to Bid Opening. Requests received after that time may be considered or rejected at discretion of Architect.

B. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.

2. Requested substitution does not require extensive revisions to the Contract Documents.

3. Requested substitution is consistent with the Contract Documents and will produce indicated results.

4. Substitution request is fully documented and properly submitted.

5. Requested substitution will not adversely affect Contractor's Construction Schedule.

6. Requested substitution has received necessary approvals of authorities having jurisdiction.

7. Requested substitution is compatible with other portions of the Work.

8. Requested substitution has been coordinated with other portions of the Work.

9. Requested substitution provides specified warranty.

10. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
2.3 COMPARABLE PRODUCTS

A. Conditions: Architect will consider Contractor’s request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01600
SECTION 01700 - EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

2. Field engineering and surveying.
4. Coordination of Owner-installed products.
5. Starting and adjusting.
6. Protection of installed construction.
7. Correction of the Work.

B. Related Sections include the following:

1. Division 1 Section "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
2. Division 1 Section "Submittal Procedures" for submitting surveys.
3. Division 1 Section "Cutting and Patching" for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.
4. Division 1 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.3 SUBMITTALS

A. Certified Surveys: Submit two copies signed by land surveyor or professional engineer.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and
verify the existence and location of mechanical and electrical systems and other construction affecting the Work.

1. Before construction, verify the location and points of connection of utility services.

B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
   a. Description of the Work.
   b. List of detrimental conditions, including substrates.
   c. List of unacceptable installation tolerances.
   d. Recommended corrections.

2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Existing Utility Information: Furnish information to Construction Manager that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Construction Manager and Architect promptly.

B. General: Engage a land surveyor or professional engineer to lay out the Work using accepted surveying practices.

1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
3. Inform installers of lines and levels to which they must comply.
4. Check the location, level and plumb, of every major element as the Work progresses.
5. Notify Architect and Construction Manager when deviations from required lines and levels exceed allowable tolerances.
6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.

D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect and Construction Manager.

3.4 FIELD ENGINEERING

A. Identification: Owner will identify existing benchmarks, control points, and property corners.

B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect or Construction Manager. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect and Construction Manager before proceeding.
2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.5 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.

B. Comply with manufacturer’s written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.

2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

D. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

E. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

3.7 STARTING AND ADJUSTING

A. Start lighting/equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust operating components for proper operation without binding. Adjust lighting/equipment for proper operation.

C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1 Section "Quality Requirements."

3.8 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturer's written instructions for temperature and relative humidity.
3.9 CORRECTION OF THE WORK

A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 1 Section "Cutting and Patching."

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

B. Restore permanent facilities used during construction to their specified condition.

C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

END OF SECTION 01700
SECTION 01731 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes procedural requirements for cutting and patching.

1.3 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.

B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 SUBMITTALS

A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting Construction Manager's approval to proceed. Include the following information:

1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.

2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.

3. Products: List products to be used and firms or entities that will perform the Work.

4. Dates: Indicate when cutting and patching will be performed.

5. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.

6. Construction Manager's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.5 QUALITY ASSURANCE

A. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential
interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.6 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.

1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.

2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting.
3.3 PERFORMANCE

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original installer; comply with original installer’s written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.

3. Concrete: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.

4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.

5. Proceed with patching after construction operations requiring cutting are complete.

C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.

2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

   a. Clean piping, conduit, and similar features before applying paint or other finishing materials.

   b. Restore damaged pipe covering to its original condition.

D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 01731
SECTION 01770 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Inspection procedures.
2. Warranties.
3. Final cleaning.

B. Related Sections include the following:

1. Division 1 Section "General Conditions" for requirements for Applications for Payment for Substantial and Final Completion.
2. Division 1 Section "Execution Requirements" for progress cleaning of Project site.
3. Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.3 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.

1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Advise Owner of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer’s name and model number where applicable.
7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner’s personnel of changeover in security provisions.
8. Complete startup testing of systems.
10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
11. Advise Owner of changeover of utilities.
12. Submit changeover information related to Owner’s occupancy, use, operation, and maintenance.
13. Complete final cleaning requirements.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect and Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor’s list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.4 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 1 Section "General Conditions."
2. Submit certified copy of Architect’s Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Instruct Owner’s personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1.6 Warranties

A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer’s written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

   a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
   b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
   c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.

e. Clean exposed exterior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces.

C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner’s property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01770
SECTION 01781 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:

   1. Record Drawings.
   2. Record Specifications.
   3. Record Product Data.

B. Related Sections include the following:

   1. Division 1 Section "Closeout Procedures" for general closeout procedures.
   2. Divisions 2 through 16 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.3 SUBMITTALS

A. Record Drawings: Comply with the following:

   1. Number of Copies: Submit one set of marked-up Record Prints.

      1) Electronic Media: CD-R.

B. Record Specifications: Submit one copy of Project’s Specifications, including addenda and contract modifications.

C. Record Product Data: Submit one copy of each Product Data submittal.

   1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.
PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

A. Record Prints: Maintain one set of black-line white prints of the Contract Drawings and Shop Drawings.

1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
   
a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
   b. Accurately record information in an understandable drawing technique.
   c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.

2. Content: Types of items requiring marking include, but are not limited to, the following:
   
a. Dimensional changes to Drawings.
b. Revisions to details shown on Drawings.
c. Depths of foundations below first floor.
d. Locations and depths of underground utilities.
e. Revisions to routing of piping and conduits.
f. Revisions to electrical circuitry.
g. Actual equipment locations.
h. Duct size and routing.
i. Locations of concealed internal utilities.
j. Changes made by Change Order or Construction Change Directive.
k. Changes made following District’s and/or Architect’s written orders.
l. Details not on the original Contract Drawings.
m. Field records for variable and concealed conditions.
n. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings, whichever is most capable of showing actual physical conditions, completely and accurately.
4. Mark record sets with revisions in red. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Record Transparencies: Immediately before inspection for Certificate of Substantial Completion, review marked-up Record Prints with Architect and Construction Manager. When authorized, prepare a full set of corrected transparencies of the Contract Drawings and Shop Drawings.

1. Incorporate changes and additional information previously marked on Record Prints. Erase, redraw, and add details and notations where applicable.
2. Refer instances of uncertainty to Architect through Construction Manager for resolution.
3. Owner will furnish Contractor one set of transparencies of the Contract Drawings for use in recording information.

4. Print the Contract Drawings and Shop Drawings for use as Record Transparencies. Architect will make the Contract Drawings available to Contractor's print shop.

C. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.

2. Record Transparencies: Organize into unbound sets matching Record Prints. Place transparencies in durable tube-type drawing containers with end caps. Mark end cap of each container with identification. If container does not include a complete set, identify Drawings included.

2.2 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.

3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.

4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.

5. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.

3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur, do not wait until the end of Project.

1. Construction Manager to review on a regular basis.

B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect’s and Construction Manager’s reference during normal working hours.

END OF SECTION 01781
SECTION 02300 - EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Preparing subgrades for walks, pavements, lawns and grasses and exterior plants.
2. Excavating and backfilling for utility trenches.
3. Excavating and backfilling trenches for buried mechanical and electrical utilities and pits for buried utility structures.

1.3 DEFINITIONS

A. Backfill: Soil material or controlled low-strength material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Course placed between the subbase course and hot-mix asphalt paving.

C. Bedding Course: Course placed over the excavated subgrade in a trench before laying pipe.

D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

E. Drainage Course: Course supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.

G. Fill: Soil materials used to raise existing grades.
H. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed 1 cu. yd. for bulk excavation or 3/4 cu. yd. for footing, trench, and pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:

1. Excavation of Footings, Trenches, and Pits: Late-model, track-mounted hydraulic excavator, equipped with a 42-inch- (1065-mm-) wide, maximum, short-tip-radius rock bucket; rated at not less than 138-hp (103-kW) flywheel power with bucket-curving force of not less than 28,090 lbf (125 kN) and stick-crowd force of not less than 18,650 lbf (83 kN); measured according to SAE J-1179.

2. Bulk Excavation: Late-model, track-mounted loader; rated at not less than 210-hp (157-kW) flywheel power and developing a minimum of 48,510-lbf (216-kN) breakout force with a general-purpose bare bucket; measured according to SAE J-732.

I. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material 3/4 cu. yd. or more in volume that exceed a standard penetration resistance of 100 blows/2 inches when tested by an independent geotechnical testing agency, according to ASTM D 1586.

J. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

K. Subbase Course: Course placed between the subgrade and base course for hot-mix asphalt pavement, or course placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

L. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.

M. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 SUBMITTALS

A. Product Data for each product.

B. Samples: 12-by-12-inch Sample of subdrainage geotextile.

C. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:

1. Classification according to ASTM D 2487 of each on-site and borrow soil material proposed for fill and backfill.

2. Laboratory compaction curve according to ASTM D 1557 for each on-site and borrow soil material proposed for fill and backfill.

D. Pre-excavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by earthwork operations. Submit before earthwork begins.
1.5 QUALITY ASSURANCE

A. Geotechnical Testing Agency Qualifications: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and ASTM E 548.

B. Pre-excision Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 PROJECT CONDITIONS

A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Architect and then only after arranging to provide temporary utility services according to requirements indicated.

1. Notify Architect not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Architect’s written permission.
3. Contact utility-locator service for area where Project is located before excavating.

B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.

C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.

1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 sieve.

E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 8 percent passing a No. 200 sieve.
F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 sieve.

G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

H. Drainage Course: Narrowly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve.

I. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch sieve and 0 to 5 percent passing a No. 8 sieve.

J. Sand: ASTM C 33; fine aggregate, natural, or manufactured sand.

K. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

2.2 ACCESSORIES

A. Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, colored as follows:

B. Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep, colored as follows:

2. Yellow: Gas, oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. Protect and maintain erosion and sedimentation controls during earthwork operations.
3.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.

   1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXPLOSIVES

A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.

   1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
   2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:

      a. 24 inches outside of concrete forms other than at footings.
      b. 12 inches outside of concrete forms at footings.
      c. 6 inches outside of minimum required dimensions of concrete cast against grade.
      d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
      e. 6 inches beneath bottom of concrete slabs on grade.
      f. 6 inches beneath pipe in trenches, and the greater of 24 inches wider than pipe or 42 inches wide.

3.5 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.6 EXCAVATION FOR UTILITY TRENCHES

A. Excavate trenches to indicated gradients, lines, depths, and elevations.

   1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit, unless otherwise indicated.

1. Clearance: 12 inches each side of pipe or conduit

C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.

1. For pipes and conduit less than 6 inches in nominal diameter and flat-bottomed, multi-duct conduit units, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
2. For pipes and conduit 6 inches or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe circumference. Fill depressions with tamped sand backfill.
3. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

3.7 SUBGRADE INSPECTION

A. Notify Construction Manager when excavations have reached required subgrade.

B. If Construction Manager and/or Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.

C. Proof-roll subgrade below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons.
3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Architect, and replace with compacted backfill or fill as directed.

D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.

E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect, without additional compensation.

3.8 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi, may be used when approved by Architect.
1. Fill unauthorized excavations under other construction or utility pipe as directed by Architect.

3.9 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.10 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:

1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
2. Surveying locations of underground utilities for Record Documents.
3. Testing and inspecting underground utilities.
4. Removing concrete formwork.
5. Removing trash and debris.
6. Removing temporary shoring and bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.11 UTILITY TRENCH BACKFILL

A. Place backfill on subgrades free of mud, frost, snow, or ice.

B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.

C. Backfill trenches excavated under footings and within 18 inches of bottom of footings with satisfactory soil; fill with concrete to elevation of bottom of footings. Concrete is specified in Division 3 Section "Cast-in-Place Concrete."

D. Provide 4-inch-thick, concrete-base slab support for piping or conduit less than 30 inches below surface of roadways. After installing and testing, completely encase piping or conduit in a minimum of 4 inches of concrete before backfilling or placing roadway subbase.

E. Place and compact initial backfill of satisfactory soil, free of particles larger than 1 inch in any dimension, to a height of 12 inches over the utility pipe or conduit.

1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.

F. Backfill voids with satisfactory soil while installing and removing shoring and bracing.
G. Place and compact final backfill of satisfactory soil to final subgrade elevation.

H. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.12 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:
   1. Under grass and planted areas, use satisfactory soil material.
   2. Under walks and pavements, use satisfactory soil material.
   3. Under steps and ramps, use engineered fill.
   4. Under building slabs, use engineered fill.
   5. Under footings and foundations, use engineered fill.

C. Place soil fill on subgrades free of mud.

3.13 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
   1. Do not place backfill or fill soil material on surfaces that are muddy.
   2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.14 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:
   1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
   2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 92 percent.
   3. Under lawn or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 90 percent.
   4. For utility trenches, compact each layer of initial and final backfill soil material at 90 percent.
3.15  GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

   1. Provide a smooth transition between adjacent existing grades and new grades.
   2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:

   1. Lawn or Unpaved Areas: Plus or minus 1 inch.
   2. Walks: Plus or minus 1 inch.
   3. Pavements: Plus or minus 1/2 inch.

C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot (3-m) straightedge.

   1. to final subgrade.

3.16  FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing.

B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.

C. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:

   1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least 1 test for every 2000 sq. ft. or less of paved area or building slab, but in no case fewer than 3 tests.
   2. Foundation Wall Backfill: At each compacted backfill layer, at least 1 test for each 100 feet or less of wall length, but no fewer than 2 tests.
   3. Trench Backfill: At each compacted initial and final backfill layer, at least 1 test for each 150 feet or less of trench length, but no fewer than 2 tests.

D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

3.17  PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.

1. Scarify or remove and replace soil material to depth as directed by Architect; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.

1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.18 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

B. Disposal: Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Architect.

1. Remove waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION 02300
SECTION 02741 - HOT-MIX ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes hot-mix asphalt concrete paving.

1.2 REFERENCES

A. State of California, Department of Transportation, (CALTRANS)

B. American Society for Testing and Materials (ASTM) -

C. American Association of State Highway Officials (AASHTO) -

D. Asphalt Institute Manual (AIM):
   1. Construction Specifications for Asphalt Concrete and Other Plant Mix Types

E. FS - Federal Specifications

1.3 SUBMITTALS

A. Product Data: For each product specified. Include technical data and tested physical and performance properties.

B. Job-Mix Designs: Certification that mix design meets requirements of this specification.

C. Material Test Reports: Indicate and interpret test results for compliance of materials with requirements indicated.

D. Material Certificates: Certificates signed by manufacturers certifying that each material complies with requirements.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements: In addition to complying with the applicable codes and regulations of governmental agencies having jurisdiction, comply with the applicable requirements of the Standard Specifications.

B. Pre-Installation Conference: Conduct conference at Project site to comply with requirements of Section 01200 “Project Meetings”.

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C. Asphalt-Paving Publication: Comply with AI’s “The Asphalt Handbook,” except where more stringent requirements are indicated in this specification.

1. Review condition of substrate and preparatory work performed by other trades.

2. Review requirements for protecting paving work, including restriction of traffic during installation period and for remainder of construction period.

3. Review inspection and testing requirements, governing regulations, and proposed installation procedures.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Do not apply asphalt materials if substrate is wet or excessively damp or if the following conditions are not met:

1. Prime and Tack Coats: Minimum surface temperature of 60 deg F (15.5 deg C).

2. Slurry Coat: Comply with weather limitations of ASTM D 3910.

3. Asphalt Base Course: Minimum surface temperature of 40 deg F (4 deg C) and rising at time of placement.

4. Asphalt Surface Course: Minimum surface temperature of 60 deg F (15.5 deg C) at time of placement.

B. Traffic Control: Maintain control of vehicular and pedestrian traffic during paving operations, and as required for other construction activities.

C. Phasing: Where existing buildings will be occupied during construction activities, phase paving work as required to maintain adequate parking and access.

PART 2 - PRODUCTS

2.1 AGGREGATES

A. General: Use materials and gradations that have performed satisfactorily in previous installations.

B. Coarse Aggregate: Sound; angular crushed stone; crushed gravel; or properly cured, crushed blast-furnace slag; complying with ASTM D 692.

C. Fine Aggregate: Sharp-edged natural sand or sand prepared from stone; gravel, properly cured blast-furnace slag, or combinations thereof; complying with ASTM D 1073.

1. For hot-mix asphalt, limit natural sand to a maximum of 20 percent by weight of the total aggregate mass.

D. Mineral Filler: Rock or slag dust, hydraulic cement, or other inert material complying with ASTM D 242.
2.2 ASPHALT MATERIALS

A. Asphalt Cement: ASTM D 3381 for viscosity-graded material; ASTM D 946 for penetration-graded material.


C. Prime Coat: ASTM D 977, emulsified asphalt or ASTM D 2397, cationic emulsified asphalt, slow setting, factory diluted in water, of suitable grade and consistency for application per Caltrans requirements.

D. Tack Coat: ASTM D 977, emulsified asphalt or ASTM D 2397, cationic emulsified asphalt, slow setting, factory diluted in water, of suitable grade and consistency for application.

2.3 AUXILIARY MATERIALS

A. Herbicide: Commercial chemical for weed control, registered by Environmental Protection Agency (EPA). Provide granular, liquid, or wettable powder form.

B. Sand: ASTM D 1073, Grade Nos. 2 or 3.

2.4 MIXES

A. Hot-Mix Asphalt: Provide dense, hot-laid, hot-mix asphalt plant mixes designed in accordance with the Standard Specifications and complying with the following requirements:

1. Provide mixes with a history of satisfactory performance in geographical area where Project is located.

2. Base and Surface Specification Courses: C-Z in accordance with subsection 203-6.3.2 of the Standard Specifications.

B. Emulsified-Asphalt Slurry: ASTM D 3910, consisting of emulsified asphalt, fine aggregates, and mineral fillers and as follows:

1. Composition: Type 2.

2.5 BASE MATERIALS

A. Aggregate for Base: Crushed aggregate base or crushed miscellaneous base complying with Section 200-2 – Untreated Base Materials, of the Standard Specifications.

B. Sub-base material shall be suitable material approved by the Institute’s Representative.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that subgrade is dry and in suitable condition to support paving and imposed loads.
B. Proof-roll subbase using heavy, pneumatic-tired rollers to locate areas that are unstable or that require further compaction.

C. Notify Institute’s Representative in writing of any unsatisfactory conditions. Do not begin paving installation until these conditions have been satisfactorily corrected.

3.2 COLD MILLING

A. Clean existing paving surface of loose and deleterious material immediately before cold milling. Remove existing asphalt pavement, including hot-mix asphalt and, as necessary, unbound-aggregate base course, by cold milling to grades and cross sections indicated.

1. Repair or replace curbs, manholes, and other construction damaged during cold milling.

3.3 PATCHING AND REPAIRS

A. Patching: Saw cut perimeter of patch and excavate existing pavement section to sound base. Recompact new subgrade. Excavate rectangular or trapezoidal patches, extending 12 inches into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically.

1. Tack coat faces of excavation and allow to cure before paving.

2. Partially fill excavation with dense-graded, hot-mix asphalt base mix and compact while still hot. Cover asphalt base course with compacted, hot-mix surface layer finished flush with adjacent surfaces.

B. Portland Cement Concrete Pavement: Break cracked, disintegrated or rocking slabs and remove from site.

1. Replace removed Portland cement concrete pavement as required by Section 02750 “Cement Concrete Paving”.

C. Leveling Course: Install and compact leveling course consisting of dense-graded, hot-mix asphalt surface course to level sags and fill depressions deeper than 1 inch in existing pavements.

1. Install leveling wedges in compacted lifts not exceeding 3 inches thick.

D. Crack and Joint Filling: Remove existing filler material from cracks or joints to a depth of 1/4 inch. Refill with asphalt joint-filling material to restore watertight condition. Remove excess filler that has accumulated near cracks or joints.

E. Tack Coat: Apply uniformly to existing surfaces of previously constructed asphalt or Portland cement concrete paving and to surfaces abutting or projecting into new, hot-mix asphalt pavement. Apply at a uniform rate of 0.05 to 0.15 gal./sq. yd. of surface.

1. Allow tack coat to cure undisturbed before paving.

2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
3.4 SURFACE PREPARATION

A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.

1. Sweep loose granular particles from surface of unbound-aggregate base course. Do not dislodge or disturb aggregate embedded in compacted surface of base course.

B. Herbicide Treatment: Apply herbicide according to manufacturer's recommended rates and written application instructions. Apply to dry, prepared subgrade or surface of compacted-aggregate base before applying paving materials.

1. Mix herbicide with prime coat when formulated by manufacturer for that purpose.

C. Prime Coat: Apply uniformly over surface of compacted-aggregate base at a rate of 0.15 to 0.50 gal./sq. yd. (0.7 to 2.3 L/sq. m). Apply enough material to penetrate and seal, but not flood, surface. Allow prime coat to cure for 72 hours minimum.

1. If prime coat is not entirely absorbed within 24 hours after application, spread sand over surface to blot excess asphalt. Use just enough sand to prevent pickup under traffic. Remove loose sand by sweeping before pavement is placed and after volatiles have evaporated.

2. Protect primed substrate from damage until ready to receive paving.

3.5 HOT-MIX ASPHALT PLACING

A. Machine place hot-mix asphalt mix on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness, when compacted.

1. Place hot-mix asphalt base course in two lifts per Caltrans requirements and thicknesses per the recommendation within the soils report.

2. Place hot-mix asphalt surface course in single lift.

3. Spread mix at minimum temperature of 250 deg F.

4. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes.

5. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.

B. Place paving in consecutive strips not less than 10 feet wide, except where infill edge strips of a lesser width are required.

1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete asphalt base course for a section before placing asphalt surface course.
C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.6 JOINTS

A. Construct joints to ensure continuous bond between adjoining paving sections. Construct joints free of depressions with same texture and smoothness as other sections of hot-mix asphalt course.

1. Clean contact surfaces and apply tack coat.

2. Offset longitudinal joints in successive courses a minimum of 6 inches.

3. Offset transverse joints in successive courses a minimum of 24 inches.

4. Construct transverse joints by bulkhead method or sawed vertical face method as described in Al’s "The Asphalt Handbook."

5. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement.

6. Compact asphalt at joints to a density within 2 percent of specified course density.

3.7 COMPACTION

A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or vibratory-plate compactors in areas inaccessible to rollers.

1. Complete compaction before mix temperature cools to 185 deg F.

B. Breakdown Rolling: Accomplish breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Repair surfaces by loosening displaced material, filling with hot-mix asphalt, and rerolling to required elevations.

C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling, while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:

1. Average Density: 96 percent of reference laboratory density according to ASTM D 1559, but not less than 94 percent nor greater than 100 percent.

D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.

E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while still hot, with back of rake or smooth iron. Compact thoroughly using tamper or other satisfactory method.
F. Repairs: Remove paved areas that are defective or contaminated with foreign materials. Remove surface course over area affected and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.

G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.

H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.8 INSTALLATION TOLERANCES

6. Thickness: Compact each course to produce the thickness indicated per the recommendation within the soils report, and within the following tolerances:

1. Base Course: Plus or minus 1/2 inch
2. Surface Course: Plus 1/4 inch, no minus.

A. Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:

1. Base Course: 1/4 inch
2. Surface Course: 1/8 inch

Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.

3.9 FIELD QUALITY CONTROL

A. Testing Agency: Institute will engage a qualified independent testing agency to perform field inspections and tests and to prepare test reports.

B. Additional testing, at Contractor's expense, will be performed to determine compliance of corrected Work with specified requirements.

C. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D 3549.

D. Surface Smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerances.

E. In-Place Density: Samples of uncompacted paving mixtures and compacted pavement will be secured by testing agency according to ASTM D 979.

1. Reference laboratory density will be determined by averaging results from 4 samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to ASTM D 1559, and compacted according to job-mix specifications.
2. Reference maximum theoretical density will be determined by averaging results from 4 samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to ASTM D 2041, and compacted according to job-mix specifications.

3. In-place density of compacted pavement will be determined by testing core samples according to ASTM D 1188 or ASTM D 2726.
   a. One core sample will be taken for every 1000 sq. yd. (836 sq. m) or less of installed pavement, but in no case will fewer than 3 cores be taken.
   b. Field density of in-place compacted pavement may also be determined by nuclear method according to ASTM D 2950 and correlated with ASTM D 1188 or ASTM D 2726.

F. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

END OF SECTION 02741
SECTION 02760 - PAVEMENT MARKING

PART 1 - GENERAL

1.01 SUMMARY

A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, Special Conditions and Division 1.

B. Section Includes:
   1. Painted traffic and parking control markings.
   2. Traffic symbols, directional arrows, lettering and safety zones.
   3. Miscellaneous exterior signage on horizontal surfaces, and as indicated on Drawings.

1.02 REFERENCES

A. Standard Specifications for Public Works Construction.
   1. SSPWC - Section 310 Painting.
      a. Wherever term “Agency” occurs in SSPWC, it shall be construed to mean Owner, for purposes of this Section.
      b. Wherever term “Engineer” occurs in SSPWC, it shall be construed to mean Architect, for purposes of this Section.

B. Federal Standards.

C. California Code of Regulations.

D. Americans with Disabilities Act.
   1. ADA - Title III.

E. California Department of Transportation.
   1. CALTRANS – Section 84 Traffic Control Markings.

F. South Coast Air Quality Management District.
   1. SCAQMD – Rule 1113.

1.03 SUBMITTALS

A. Submit under provisions of Section 01330.

B. Submit shop drawing layout of all signage required under this Section, including complete parking lot, indicating stalls, lettering, safety zones, directional arrows, fire lane signage and widths of lines and colors.
1.04 FIELD SAMPLES
   A. Provide field sample in the form of one parking lot stall, illustrating coating color, width of stroke, thickness of application and dimensioning.
   B. Locate where approved.
   C. Accepted sample may remain as part of the Work.
   D. Do not proceed with pavement marking until sample panel has been approved.

1.05 DELIVERY, STORAGE AND HANDLING
   A. Deliver products to site in sealed and labeled containers.
   B. Container labeling to include manufacturers name, type of paint, brand name, brand code, coverage, surface preparation, drying time, cleanup, color designation and instructions for mixing and reducing.
   C. Store paint materials at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, unless otherwise recommended by the manufacturer.

1.06 EXTRA STOCK
   A. Provide a one gallon unopened container of each color to the Owner.
   B. Label each container with color in addition to the manufacturer’s label.

1.07 QUALITY ASSURANCE
   A. Regulatory Requirements, State: Comply with CALTRANS Section 84.
   B. Regulatory Requirements, Local: Comply with SSPWC Section 310.
   C. Comply with SCAQMD Rule 1113 for maximum volatile emissions requirements.
   D. Perform off-site Work in public rights-of-way in accordance with requirements of authorities having jurisdiction. For conditions not indicated otherwise on Drawings, comply with standard details adopted by authorities having jurisdiction, including standard details for SSPWC, as amended and adopted by those authorities.
   E. Perform on-site Work as indicated and referenced on the Drawings and as specified herein.
   F. Manufacturer: Company specializing in manufacturing quality traffic line paint products with minimum ten years experience.
   G. Applicator: Company regularly engaged in pavement marking, with minimum 3 years experience in use of machine-applied painted stripes, signage and graphics and other markings.
1.08 PROJECT CONDITIONS

A. Do not apply marking or signage paint when weather is foggy or rainy, or when ambient or pavement temperatures are below 40 degrees F., or when such conditions are anticipated within eight hours of application.

B. Do not apply marking paint or signage when wind velocity causes uncontrollable overspray or excessively rapid drying.

C. Sequence and Schedule: Apply pavement markings after asphaltic concrete and/or Portland cement concrete paving Work are complete.
   1. Substrate materials shall be thoroughly cured.
   2. Sealers, when specified, shall be applied and cured prior to application of pavement markings.
   3. Landscaping, when applicable, shall be complete.
   4. Apply other signage only when substrate is cured, dry, firm and ready for application.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Approved Manufacturers:
   1. Frazee Paint and Wallcovering, Inc., City of Commerce, CA. Product: No. 502 TRAFFIC LINE PAINT—ACRYLIC
   3. ICI/Sinclair Paint, Los Angeles, CA. Product: No. 160 VINYL TRAFFIC PAINT.

2.02 MATERIALS

A. Paint for Traffic Striping and Marking and Miscellaneous Signage: Rapid dry, oil base or vinyl acrylic base, meeting requirements of local air quality management district for volatile emissions maximums, manufactured specifically for application to asphalt and concrete traffic surfaces.
   1. If required by authorities having jurisdiction for Work in public rights-of-way, include reflective material in paint and/or thermoplastic paint, with reflective additives.
   2. Paint for marking curbs shall not require reflective material.

2.03 COLORS

A. Provide standard factory-mixed, quick drying and non-bleeding colors, complying with SSPWC Section 310 and adopted by the City and/or County in which the project is located, as applicable.

B. Accessible Stalls and Signage: Blue, complying with Fed. Std. 595B No. 15090.

C. Parking stalls, lettering, arrows and traffic signage: White.
D. Other Signage: Colors as indicated on approved shop drawings.

E. Paint curb red at fire lanes.

PART 3 - EXECUTION

3.01 PREPARATION

A. Allow substrates to cure before painting as recommended by manufacturer of paint.

B. Thoroughly power and hand broom clean surfaces free of dirt, sand, gravel, oil and other foreign matter. Wash down surfaces to dustfree condition and allow to thoroughly dry.

C. Lay out markings as shown on Drawings. Use guide lines, templates and forms for precise edges and spacings.

D. At off-site and on-site public rights-of-way, obtain review and approval of layout by authorities having jurisdiction.

3.02 APPLICATION

A. Using proper masking, stencils and application equipment, apply paint at rate recommended by paint manufacturer to produce minimum 12 mils DFT average.

B. Traffic Striping: Uniform line width, 3-inches minimum wide, unless otherwise indicated, with uniform, straight edges without overspray. Provide reflective materials in striping when required by authorities having jurisdiction.

1. Accessible pavement markings shall be marked with painted lines and markings on pavement. Provide 3" minimum wide and blue in color equal to Color No. 15090 per Federal Standard 595B.

C. Traffic Directional Markings and Accessible Logo: Provide minimum of two applications of paint. Provide reflective material in traffic directional markings when required by authorities having jurisdiction.

D. Curbs: Paint full vertical face and first 6-inches of horizontal plane at top of curb or combination curb/paving.

E. Hatching: Provide hatching in parking areas, including accessible parking stalls, as indicated on Drawings or as required by CBC and ADA.

F. Stall Marking:
   1. Use single-line style striping between parking stalls, unless otherwise indicated.
   2. Identify compact parking stalls and reserved stalls with text as indicated on Drawings.
   3. Parking stalls for the disabled shall be marked in accordance with CBC 1129B.3 and 1129B.4.

G. Tactile warning lines shall be in conformance to CBC Section 1133B.8.5.
3.03 PROTECTION AND TOUCH-UP

A. Prevent construction activities over completed signage and markings, to prevent damage to applied work.

B. Touch-up paint as required to provide clean, straight lines and full coverage of surfaces.

C. Clean up all oil, paint splatters and other stains from surfaces in preparation for Substantial Completion review.

3.04 DEFECTIVE WORK

A. Remove any paint which demonstrates evidence of checking, cracking, peeling, discoloration, lack of bonding or poor coverage.

B. Misplaced lines shall be completely removed by paint remover or sandblasting. Painting over misplaced lines will not be permitted. Comply with SSPWC Section 310.

END OF SECTION 02760
SECTION 02764 - PAVEMENT JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Expansion and contraction joints within cement concrete pavement.
   2. Joints between cement concrete and asphalt pavement.

B. Related Sections include the following:
   1. Division 2 Section "Hot-Mix Asphalt Paving" for constructing joints between concrete and asphalt pavement.
   2. Division 2 Section "Sitework Concrete" for constructing joints in concrete pavement.

1.3 SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

B. Product Certificates: For each type of joint sealant and accessory, signed by product manufacturer.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer.

B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, and mixing instructions for multi-component materials.

B. Store and handle materials to comply with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.
1.6 PROJECT CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer.
2. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
3. When joint substrates are wet or covered with frost.
4. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
5. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.

B. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.

2.2 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer based on testing and field experience.

B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer’s full range.

2.3 COLD-APPLIED JOINT SEALANTS

A. Type NS Silicone Sealant for Concrete: Single-component, low-modulus, neutral-curing, non-sag silicone sealant complying with ASTM D 5893 for Type NS.

1. Available Products:
   a. Crafco Inc.; RoadSaver Silicone
   b. Dow Corning Corporation; 888.
   c. Approved Equal

B. Type SL Silicone Sealant for Concrete and Asphalt: Single-component, low-modulus, neutral-curing, self-leveling silicone sealant complying with ASTM D 5893 for Type SL.

1. Available Products:
a. Crafo Inc.; RoadSaver Silicone SL.
b. Dow Corning Corporation; 890-SL.
c. Approved Equal

C. Multi-component Low-Modulus Sealant for Concrete and Asphalt: Proprietary formulation consisting of reactive petropolymer and activator components producing a pourable, self-leveling sealant.

1. Available Products:
   b. Approved Equal

2.4 JOINT-SEALANT BACKER MATERIALS

A. General: Provide joint-sealant backer materials that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by joint-sealant manufacturer based on field experience and laboratory testing.

B. Round Backer Rods for Cold- and Hot-Applied Sealants: ASTM D 5249, Type 1, of diameter and density required to control sealant depth and prevent bottom-side adhesion of sealant.

C. Backer Strips for Cold- and Hot-Applied Sealants: ASTM D 5249; Type 2; of thickness and width required to control sealant depth, prevent bottom-side adhesion of sealant, and fill remainder of joint opening under sealant.

D. Round Backer Rods for Cold-Applied Sealants: ASTM D 5249, Type 3, of diameter and density required to control sealant depth and prevent bottom-side adhesion of sealant.

2.5 PRIMERS

A. Primers: Product recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

   1. Proceed with installation only after unsatisfactory conditions have been corrected.
3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer’s written instructions.

B. Joint Priming: Prime joint substrates where indicated or where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer’s written instructions. Confin primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer’s written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install backer materials of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

   1. Do not leave gaps between ends of backer materials.
   2. Do not stretch, twist, puncture, or tear backer materials.
   3. Remove absorbent backer materials that have become wet before sealant application and replace them with dry materials.

D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

   1. Place sealants so they directly contact and fully wet joint substrates.
   2. Completely fill recesses provided for each joint configuration.
   3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

   1. Remove excess sealants from surfaces adjacent to joint.
   2. Use tooling agents that are approved in writing by joint-sealant manufacturer and that do not discolor sealants or adjacent surfaces.

F. Provide joint configuration to comply with joint-sealant manufacturer’s written instructions, unless otherwise indicated.

G. Provide recessed joint configuration for silicone sealants of recess depth and at locations indicated.
3.4 CLEANING

A. Clean off excess sealants or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately and replace with joint sealant so installations with repaired areas are indistinguishable from the original work.

END OF SECTION 02764
SECTION 02765 - PAVEMENT REPAIR

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Bituminous Surfacing Repair: Areas removed for utility trenches, heaved by tree roots, cracked areas, protruding areas where pavement meets hard surfaces, depressed areas, holes and areas around new structures, and raveled bituminous pavement.

1.02 SUBMITTALS

A. Product Data:

1. Submit manufacturer’s technical data for materials and products.

1.03 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement:


PART 2 - PRODUCTS

2.01 MATERIALS

A. Materials specified in Division 2 Section "Hot-Mix Asphalt Paving".

2.02 HEADERS AND STAKES

A. Headers: Redwood, Construction Heart Grade, size 2 x 6, unless otherwise indicated on Drawings.

B. Stakes: 2 x 4 Redwood, Construction Grade.

C. Nails: Common, galvanized, 12d minimum.

2.03 SLURRY

A. Cement-sand slurry; minimum two sacks of cement per cubic yard of mixture.
PART 3 - EXECUTION

3.01 PAVEMENT REMOVAL

A. Remove bituminous and concrete pavement in accordance with applicable provisions of Section 300 - "Earthwork" of the Standard Specifications for Public Works Construction.

B. Pavement Heaved By Roots: Remove pavement to limits of distortion and expose roots. Trim roots to provide at least 12 inch clearance to pavement.

C. Remove protruding bituminous surfaces flush with the surrounding grade using a suitable tool or equipment so that adjacent finishes will not be blackened.

D. Remove raveled and depressed bituminous pavement to limits indicated or required.

E. Trim holes and trenches in bituminous and concrete pavement to size big enough to allow mechanical hand tampers to compact the fill and to a neat even line by saw-cutting.

F. Remove broken concrete by saw-cutting. If cut would fall within 30 inches of a score line, joint line or edge, remove to the score, joint or edge.

3.02 EXCAVATING, BACKFILLING AND COMPACTING

A. Conform to applicable requirements in Section 02300 - Earthwork.

B. Where subgrade or base is determined to be unstable, excavate such materials to firm earth and replace with a suitable approved material. Spread and compact fill materials in accordance with requirements of applicable specifications sections.

3.03 HEADERS

A. Install headers along edge of bituminous surfacing where it abuts lawn, dirt or planting area, unless indicated otherwise.

B. Place headers so that bottom has continuous bearing on solid earth. Where excavation for headers is undercut, tamp earth under the header thoroughly. Compact backfill on both sides of header to the density of the adjacent undisturbed earth.

C. Hold headers in place with Redwood or Douglas fir stakes of length necessary to extend into solid earth a minimum of 12 inch. All stakes shall be of sound material, neatly pointed, driven vertically, and securely nailed to headers. Space stakes, not to exceed 4 feet on centers with top of stakes set 1 inch below top of header. Use minimum of 2-12d galvanized common nails through each stake.

D. Remove existing headers where new surfacing is placed to join existing surfacing.

E. Install temporary headers at transverse joints of paving where continuous paving
operations are not maintained.

F. Provide additional stakes and anchorage as required to hold headers in place.

3.04 RESURFACING

A. Holes and Trenches: Remove loose dirt and backfill with cement-sand slurry allowing for asphalt surfacing one-inch thicker than existing. Unless otherwise indicated on Drawings, resurface flush with existing adjoining pavement using the same type of materials used in original work.

B. Where bituminous surfacing abuts concrete, masonry, walks or paving, tamp joint smooth, if necessary, as described above to obtain a uniformly even joint, free of differences in elevation. Tamp and smooth while materials before asphalt is allowed to cool.

3.05 PATCHING

A. The material in the area to be repaired should be removed to the depth necessary to reach firm support and the subgrade compacted to 90% relative density. The excavation should also extend at least 1 foot into the good pavement surrounding the area to be patched. Holes should be square-edged and the cuts rectangular in shape.

B. The vertical faces of the hole are then given a tack coat as specified in Division 2 Section "Hot-Mix Asphalt Paving".

C. If the bottom of the hole or patch area is a granular base that is part of the pavement structure, it should be primed before the asphalt patching mix is placed. If the depth of the hole or patch extends to or into the subgrade and a full-depth asphalt patch is contemplated, a prime coat is not necessary.

D. The hole should be backfilled with a hot-asphalt mix as specified in Division 2 Section "Hot-Mix Asphalt Paving", spread carefully to prevent segregation.

E. Compact the asphalt flush with the surrounding pavement surface. The patch should not be overfilled in anticipation of traffic compaction. A straightedge or stringline should be used to check the evenness of the surface.

3.06 REPAIRING AND RESEALING EXISTING SURFACES

A. Preparation of Surfaces:
   1. Prior to filling cracks, clean existing bituminous surfacing of loose and foreign materials and coat with a film of asphalt emulsion.

B. Repair of Existing Surfacing:
   1. Fill cracks 1/2 inch wide and less with RS-1 emulsion and silica sand or other similar material. Cracks more than 1/2 inch wide shall be filled with Type C2 or
D1 Asphalt Concrete as specified in Division 2 Section "Hot-Mix Asphalt Paving". Cracks shall be filled to level of adjacent surfacing.

2. Where low areas, holes or depressions occur in existing surfacing, repair with emulsified asphalt. After placing, strike off the emulsified asphalt with a straight-edge, flush with adjoining surfacing. Finish with a steel trowel, and after dehydration, compact by rolling or tamping.

C. Flood Testing: After the District Inspector has reviewed and approved repairs, flood test entire area in presence of the District Inspector. Entire area tested shall be free of standing water or puddles.

D. Seal Coat: After surface has been repaired and tested, apply seal coat over entire area. Seal coat shall be as specified in Division 2 Section "Hot-Mix Asphalt Paving".

3.07 CLEANING

A. Remove all stains on the Project site and adjacent properties caused by or attributed to the Work of this section.

B. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

3.08 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION 02765
SECTION 02770 - SITE CONCRETE WORK

PART 1 - GENERAL

1.1 THE REQUIREMENT

A. The CONTRACTOR shall furnish all materials for concrete in accordance with the provisions of this Section and shall form, mix, place, cure, repair, finish, and do all other work as required to produce finished concrete, in accordance with the requirements of the Contract Documents.

B. Provide curb cuts meeting the accessibility requirements of the California Code of Regulations (CCR) Title 24 Part 2, 1127B.5, and ramps complying with CCR, T24, CCR, Part 2, 1003.3.4 and 1133B.5.

C. The following types of concrete shall be covered in this Section:

1. Portland cement concrete pavement, cement walks, curbs, gutters, swales, trash pick-up areas, ramps, mowing strips, fence post footings, sliding gate concrete tracks, catch basins, pipe bedding and encasements, transition structures, flagpoles and light standard bases and footings, splash blocks and equipment pads.

1.2 SUMMARY

A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, Special Conditions and Division 1.

1.3 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. Comply with the reference specifications of the GENERAL REQUIREMENTS.


C. Comply with the current provisions of the following Codes and Standards.

1. Federal Specifications:

2. Commercial Standards:
a. ACI 214 Recommended Practice for Evaluation of Strength Test Results of Concrete.
b. ACI 301 Specifications for Structural Concrete for Buildings.
c. ACI 315 Details and Detailing of Concrete Reinforcement.
d. ACI 318 Building Code Requirements for Reinforced Concrete.
e. ACI 347 Recommended Practice for Concrete Formwork.
f. ACI 350 Recommended Practice for Sanitary Structure.
g. ASTM C 31 Practices for Making and Curing Concrete Test Specimens in the Field.
h. ASTM C 33 Specification for Concrete Aggregates.
i. ASTM C 39 Test Method for Compressive Strength of Cylindrical Concrete Specimens.
j. ASTM C 40 Test Method for Organic Impurities in Fine Aggregates for Concrete.
k. ASTM C 42 Methods of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
l. ASTM C 78 Specification for Flexural Strength.
m. ASTM C 88 Test Method for Soundness of Aggregates by use of Sodium Sulfate or Magnesium Sulfate.
n. ASTM C 94 Specification for Ready-Mixed Concrete.
o. ASTM C 114 Method for Chemical Analysis of Hydraulic Cement.
r. ASTM C 143 Test Method for Slump of Portland Cement Concrete.
s. ASTM C 150 Specification for Portland Cement.
t. ASTM C 156 Test Method for Water Retention by Concrete Curing Materials.
v. ASTM C 172 Specification for Sampling Fresh Concrete.
w. ASTM C 192 Method of Making and Curing Concrete Test Specimens in the Laboratory.
x. ASTM C 260 Specification for Air-Entraining Admixtures for Concrete.
z. ASTM C 311 Method for Sampling and Testing Fly Ash or Natural Pozzolans for Use as a Mineral Admixture in Portland Cement Concrete.
aa. ASTM C 494 Specification for Chemical Admixtures for Concrete.
bb. ASTM C 618 Specification for Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete.
cc. ASTM D 1751 Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).
cc. ASTM D 1751 Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).

1.4 CONTRACTOR SUBMITTALS
A. Submittals shall be made in accordance with Section 01330.
B. The following submittals and specific information shall be provided.
1. **Mix Designs:** Prior to beginning the WORK, the CONTRACTOR shall submit to the ENGINEER, for review, and approval, preliminary concrete mix designs for each class and type of concrete specified herein. The mix designs shall be designed by an independent testing laboratory acceptable to the ENGINEER. All costs related to such mix design shall be borne by the CONTRACTOR.

   a. Each concrete mix submittal shall contain the following information:

   1) Slump on which the design is based.
   2) Total gallons of water per cubic yard.
   3) Brand, type, composition and quantity of cement.
   4) Brand type, composition and quantity of fly ash.
   5) Specific Gravity and gradation of each aggregate.
   6) Ratio of fine to total aggregate per cubic yard.
   7) Weight (surface dry) of each aggregate per cubic yard.
   8) Brand, type, and ASTM designation, active chemical ingredients and quantity of each admixture.
   9) Copy of the Building and Safety Research Report Approval for each concrete admixture.
   10) Air content.
   11) Compressive strength based on 7 day and 28 day compression tests, including standard deviation calculations, corroborative data (if applicable), and required average comprehensive strength per ACI 318, Section 5.
   12) Time of initial set.
   13) Certification stamp and signature by a Civil or Structural engineer registered in state of California.

2. **Certified Delivery Tickets:** Where ready-mix concrete is used, the CONTRACTOR shall provide certified weighmaster delivery tickets at the time of delivery of each load of concrete. Each certificate shall show the public weighmaster’s signature, and the total quantities, by weight of cement, sand, each class of aggregate admixtures, and the amounts of water in the aggregate and added at the batching plant as well as the amount of water allowed to be added at the site for the specific design mix. Each certificate shall, in addition, state the mix number, total yield in cubic yards, and the time of day, to the nearest minute, corresponding to when the batch was dispatched, when it left the plant, when it arrived at the job, the time that unloading began, and the time that unloading was finished.

3. When a water reducing admixture is to be used, the CONTRACTOR shall furnish mix designs for concrete both with and without the admixture.

4. The CONTRACTOR shall furnish a Certificate of Compliance signed by the supplier identifying the type of fly ash and stating that the fly ash complies with ASTM C 618 and these Specifications, together with all supporting test data prior to the use of the fly ash the sample represents. The supporting data shall also contain test results confirming that the fly ash in combination with the cement and water to be used meets all strength requirements and is compatible with air-entraining agents and other admixtures.

5. The CONTRACTOR shall submit to the ENGINEER for review the design mix for fly ash concrete together with the design mix for portland cement (non-fly ash) concrete as specified in this Section.
1.5 QUALITY ASSURANCE

A. Testing for Portland Cement Concrete shall be sampled and tested in accordance with the ASTM and California Tests listed in the Standard Specifications for Public Works Construction, 2003 Edition, Section 201-1.1.5.

B. Samples for strength tests of each class of concrete placed each day shall be taken not less than once a day, or not less than once for each 50 cubic yards of concrete, or not less than once for each 2,000 square feet of surface area for slabs. Additional samples for seven-day compressive strength tests shall be taken for each class of concrete at the beginning of the concrete work or whenever the mix or aggregate is changed.

C. The cost of all laboratory tests on cement, aggregates, and concrete, will be borne by the CONTRACTOR.

D. Concrete for testing shall be supplied by the CONTRACTOR at no cost to the DISTRICT, and the CONTRACTOR shall provide assistance and facilities to the INSPECTOR in obtaining samples, and disposal and cleanup of excess material.

E. Curbs and gutters shall be staked by a Land Surveyor licensed to practice in the State of California.

F. Construction Tolerances: The CONTRACTOR shall set and maintain concrete forms and perform finishing operations so as to ensure that the completed work is within the tolerances specified herein. Surface defects and irregularities are defined as finishes and are to be distinguished from tolerances. Tolerance is the specified permissible variation from lines, grades, or dimensions shown. Where tolerances are not stated in the specifications, permissible deviations will be in accordance with ACI 347.

G. The following construction tolerances are hereby established and apply to finished walls and slab unless otherwise shown:

<table>
<thead>
<tr>
<th>Item</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation of the constructed linear outline from the established position in plan.</td>
<td>In 10 feet: 1/8-inch; In 20 feet or more: 1/4-inch</td>
</tr>
<tr>
<td>Variation from the level or from the grades shown.</td>
<td>In 10 feet: 1/8-inch; In 20 feet or more: 1/4-inch</td>
</tr>
<tr>
<td>Variation from the plumb</td>
<td>In 10 feet: 1/8-inch; In 20 feet or more: 1/4-inch</td>
</tr>
<tr>
<td>Variation in the thickness of slabs and walls.</td>
<td>Minus 1/8-inch; Plus 1/4-inch</td>
</tr>
<tr>
<td>Variation in the locations and sizes of slabs and wall openings</td>
<td>Plus or minus 1/8-inch</td>
</tr>
</tbody>
</table>
PART 2 - PRODUCTS

2.1 CONSTRUCTION MATERIALS

A. Materials shall be delivered, stored, and handled so as to prevent damage by water or breakage. Only one brand of cement shall be used. Cement reclaimed from cleaning bags or leaking containers shall not be used. All cement shall be used in the sequence of receipt of shipments.

B. All materials furnished for the work shall comply with the requirements of Sections 201, 203, and 204 of ACI 301, as applicable.

C. Storage of materials shall conform to the requirements of Section 205 of ACI 301.

D. Form Materials: Plywood, metal, metal-framed plywood, or other acceptable panel-type materials to provide full-depth, continuous, straight, smooth exposed surfaces. Conform to Section 303-5.2 of the Standard Specifications for Public Works Construction, 2003 edition.

1. Use flexible or curved forms for curves of a 100-foot or less radius.

E. Reinforcing Materials: As follows:

1. Steel Reinforcing Bars: ASTM A 615 deformed grade 40 billet steel, plain finish, unless otherwise specified on Construction Document.
2. Welded Steel Wire Fabric: ASTM A 185, flat sheets, not rolls, unfinished.
3. Plain, Cold-Drawn Steel Wire: ASTM A 82.

F. Concrete Materials: As follows:

1. Cement shall be standard brand portland cement conforming to ASTM C 150 for Type II. Portland cement shall contain not more than 0.60 percent alkalis. The term "alkalis" referred to herein is defined as the sum of the percentage of sodium oxide and 0.658 times the percentage of potassium oxide (Na2O + 0.658 K2O). These oxides shall be determined in accordance with ASTM C 114. A single brand of cement shall be used throughout the work, and prior to its use, the brand shall be acceptable to the ENGINEER. The cement shall be suitably protected from exposure to moisture until used. Cement that has become lumpy shall not be used. Sacked cement shall be stored in such a manner so as to permit access for inspection and sampling. Certified mill test reports for each shipment of cement to be used shall be submitted to the INSPECTOR.

2. Concurrent with strength design criteria, concrete shall also be proportioned to provide the requisite durability to satisfy the exposure conditions imposed by either environment and/or service. Durability, in this context, refers to the ability of the concrete to resist deterioration from the environment or service in which it is placed. Concrete proportioned in accordance with ACI 318, chapter 4, Durability Requirements, will meet this criteria.

3. Combined Aggregate: 3/8" maximum coarse aggregate size conforming to Grading C of Standard Specifications for Public Works Construction, Section 201-1.3.2(A). Aggregates shall be obtained from pits acceptable to the INSPECTOR, shall be non-reactive, and shall conform to ASTM C 33.
4. Water: Shall be potable, clean, and free from objectionable quantities of silty organic matter, alkali, salts and other impurities. The water shall be considered potable, for the purposes of this Section only, if it meets the requirements of the local governmental agencies.

G. Admixtures:

1. The ENGINEER may require the use of admixtures or the CONTRACTOR may propose to use admixtures to control the set, effect water reduction, and increase workability. In either case, the addition of an admixture shall be at the CONTRACTOR’s expense. The use and continued use of an admixture shall be approved by the ENGINEER. Admixtures specified herein, other than calcium chloride, shall conform to the requirements of ASTM C 494. The required quantity of cement shall be used in the mix regardless of whether or not an admixture is used. Admixtures shall contain no free chloride ions, be non-toxic after 30 days, and shall be compatible with and made by the same manufacturer as the air entraining admixture.

2. These admixtures shall not be used in greater doses than those recommended by the manufacturer or permitted by the ENGINEER. The permitted dosage of the admixture shall not exceed that which will result in an increase in the driving shrinkage of the concrete in excess of 20 percent when used in precast or prestressed concrete, or 10 percent when used in any other structural concrete. The strength of concrete containing the admixture in the amount of proposed shall, at the age of 48 hours and longer be not less than that of similar concrete without the admixture. The admixture shall not adversely affect the specified air content, unless permitted by the ENGINEER.

3. Set controlling admixture shall be either with or without water-reducing properties. Where the air temperature at the time of placement is expected to be consistently over 80 degrees F, a set retarding admixture such as Sika Chemical Corporation’s Plastiment, Master Builder’s Pozzolith 300R, or equal shall be used. Where the air temperature at the time of placement is expected to be consistently under 40 degrees F, a set accelerating admixture such as Sika Chemical Corporation’s Plastocrete 161FL, Master Builder’s Pozzolith 50C, or equal shall be used.

4. Low range water reducer shall conform to ASTM C 494, Type A. It shall be either a hydroxylated carboxylic acid type or a hydroxylated polymer type. The quantity of admixture used and the method of mixing shall be in accordance with the manufacturer’s instructions and recommendations.

5. High range water reducer shall be sulfonated polymer conforming to ASTM C 494, Type F or G.

a. If the high range water reducing agent is added to the concrete at the batch plant, it shall be second generation type, [Daracem 100, as manufactured by W.R. Grace & Co.;] [Pozzolith 43OR, as manufactured by Masterbuilders;] or equal. High range water reducer shall be added to the concrete after all other ingredients have been mixed and initial slump has been verified.

b. If the high range water reducer is added to the concrete at the job site, it shall be used in conjunction with a low range water reducer and shall be [Pozzolith 400N and Pozzolith MBL82, as manufactured by Masterbuilders]; [WRDA 19 and WRDA 79, as manufactured by W.R. Grace & Co.]; or equal. Concrete shall have a slump of 3-inches ± 1/2-inch prior to adding the high range water reducing admixture at the job site. The high range water reducing admixture shall be accurately measured and pressure injected into the mixer as a single dose by an experienced technician. A standby system shall be provided and tested prior to each day’s operation of the job site system.
6. Air-entraining agent meeting the requirements of ASTM C 260, shall be used. Sufficient air-entraining agent shall be used to provide a total air content of 3 to 4 percent, provided that, when the mean daily temperature in the vicinity of the worksite falls below 40 degrees F for more than one day, the total air content provided shall be 5 to 6 percent. The Owner reserves the right, at any time, to sample and test the air-entraining agent received on the job by the CONTRACTOR. The air-entraining agent shall be added to the batch in a portion of the mixing water. The solution shall be batched by means of a mechanical batcher capable of accurate measurement.

7. Calcium Chloride: Except as otherwise provided herein, calcium chloride will not be permitted to be used in concrete.

8. Fly ash/pozzolan shall conform to ASTM C 618 and the following supplementary requirements:

   a. Class F fly ash
      o Loss on ignition, maximum 4 percent
      o SiO₂ content, maximum 3 percent
      o Moisture content, maximum 1 percent
      o R = (CaO - 5%)/(Fe₂O₃), maximum 0.75 percent

   b. Class F fly ash, as a percent by weight of total cementitious material, shall not exceed 15 percent.

H. Curing Materials:

1. Concrete curing compound shall conform to the requirements of ASTM C 309 Type 1-D (clear or translucent with a fugitive dye), Class B (Resin Type Only), except the loss of water shall not exceed 0.15 kilograms per square meter in 24 hours nor 0.45 kilograms per square meter in 72 hours when tested in accordance with ASTM C 156. The CONTRACTOR shall provide, when requested by the ENGINEER, certified copies of vendor's test report showing compliance with ASTM C 309 and these specifications. The testing and the report shall be supplied without cost to the Agency. All compounds shall be furnished by the CONTRACTOR in sealed original containers labeled in accordance with ASTM C 309 and with the date of manufacture.

2. Polyethylene sheet for use as concrete curing blanket shall be white and conform to ASTM C 171. The loss of moisture when determined in accordance with the requirements of ASTM C 156 shall not exceed 0.055 grams per square centimeter of surface.

3. Polyethylene-coated burlap for use as concrete curing blanket shall conform to ASTM C 171. The loss of moisture, when determined in accordance with the requirements of ASTM C 156, shall not exceed 0.055 grams per square centimeter of surface.

I. Expansion Joint Filler Material


2. Concrete Walk and Slab: "Homex 300", or approved equal, as manufactured by Homasote Company, material conforming to ASTM D 1751-99.

3. Elastomeric Sealant: Premium-grade, high-performance, moisture-cured, single-component, polyurethane-based, non-sag elastomeric sealant, ASTM C-920, Type
S, Class 25; Grade NS, Use NT, SikaFlex-15 LM by Sika Corporation, Elasto-thane 230 by Pacific Polymers International, Inc.

J. Related Materials: As follows:
1. Damp-proofing agent shall be an asphalt emulsion, such as Sonneborn Hydrocide 660, Flintkote C-13-E Foundation Coating, or equal.
2. Epoxy adhesives shall be the following products for the applications specified:
   a. For bonding freshly-mixed, plastic concrete to hardened concrete, Sikadur Hi-Mod Epoxy Adhesive, as manufactured by Sika Chemical Corporation; Concresive 1001-LPL, as manufactured by Adhesive Engineering Company; or equal.
   b. For bonding hardened concrete or masonry to steel, Colma-Dur Gel, Sikadur Hi-Mod Gel, or equal.

K. Flatwork Mix Design: Special exposure mixes should be proportioned in accordance with ACI 318, Chapter 4, Durability Requirements. Admixtures containing calcium chloride are prohibited for use in concrete exposed to sulfates. Concrete for flatwork shall conform to the Standard Specifications for Public Works Construction, 2003 Edition, Section 201-1.1.2, mix class 560-C-3250:
   1. Compressive Strength: minimum of 3250 psi at 28 days compressive strength.
   2. Water-Cement Ratio: 0.45 maximum gal/sack.
   4. Cement per cu yard (sacks): 6.0 (minimum).
   5. Air Content: 4% +/- 1% percent.

L. Curbs & Curb/Gutter Mix Design: At a minimum, concrete shall conform to the Standard Specifications for Public Works Construction, 2003 Edition, Section 201-1.1.2, mix class 520-C-2500:
   1. Compressive Strength: minimum 2500 psi at 28 days compressive strength.
   2. Water-Cement Ratio: 0.45 maximum gal/sack.
   4. Cement per cu yard (sacks): 5.5.

M. Slurry Mix Design:
   1. Compressive Strength: 100 psi at min. 28 days compr. strength.
   2. Water-Cement Ratio: 3.300 gal/sack
   3. Slump Limit: 5 inches at point of placement.
   4. Cement per cu yard (sacks): 1.0
   5. Air Content: 4% +/- 1% percent.

N. Concrete Splash Block: Pre-cast reinforced concrete splash block, 12" x 24", Christy Concrete Products Inc, ordering code M50SPB1, or approved equal. Contractor can view this product at the following web site:
PART 3 - EXECUTION

3.1 PREPARATION OF SURFACES FOR CONCRETING

A. General: Earth surfaces shall be thoroughly wetted by sprinkling, prior to the placing of any concrete, and these surfaces shall be kept moist by frequent sprinkling up to the time of placing concrete thereon. The surface shall be free from standing water, mud, and debris at the time of placing concrete.

B. Subgrade Preparation: Prior to placing concrete the existing native soil must be scarified to a depth of 12 inches, watered or aerated as required, thoroughly mixed to a uniform near optimum moisture condition, and re-compacted to at least 90 percent of the ASTM D-1557 laboratory test standard. All material should be moisture conditioned and compacted by mechanical means in approximate 8-inch thick lifts. The Geotechnical Engineer should monitor the compaction of the subgrade soils and perform testing to verify that proper compaction has been obtained. Subgrade soils should exhibit a firm, unyielding surface in addition to the recommended compaction.

C. The above subgrade preparation recommendations are based on the assumption that soils encountered during field exploration are representative of soils throughout the site. However, there can be unforeseen and unanticipated variations in soils between points of subsurface exploration. For this reason, the actual scarification or overexcavation depths will have to be determined on the basis of in-grading observations and testing performed by representatives of the project geotechnical consultant.

D. Joints in Concrete: Concrete surfaces upon or against which concrete is to be placed, where the placement of the old concrete has been stopped or interrupted so that, as determined by the ENGINEER, the new concrete cannot be incorporated integrally with that previously placed, are defined as construction joints. The surfaces of horizontal joints shall be given a compacted, roughened surface for good bond. Except where the Drawings call for joint surfaces to be coated, the joint surfaces shall be cleaned of all laitance, loose or defective concrete, and foreign material. Such cleaning shall be accomplished by sandblasting followed by thorough washing. All pools of water shall be removed from the surface of construction joints before the new concrete is placed.

E. Embedded Items: No concrete shall be placed until all formwork, installation of parts to be embedded, reinforcement steel, and preparation of surfaces involved in the placing have been completed and ACCEPTED by the INSPECTOR at least 24 hours before placement of concrete. All surfaces of forms and embedded items that have become encrusted with dried grout from concrete previously placed shall be cleaned of all such grout before the surrounding or adjacent concrete is placed.

F. All inserts or other embedded items shall conform to the requirements herein.

G. All reinforcement, anchor bolts, sleeves, inserts, and similar items shall be set and secured in the forms where shown or by shop drawings and shall be acceptable to the INSPECTOR before any concrete is placed. Accuracy of placement is the responsibility of the CONTRACTOR.

H. Where concrete is to be cast against old concrete, (greater than 60 days of age), the surface of the old concrete shall be thoroughly cleaned and roughened by sand-blasting, exposing the aggregate. In concrete shear-walls, suspended slabs and roof slabs, the
interface surface at construction joints shall be roughened to a full amplitude of one quarter inch. The hardened surface shall be cleaned of all latent foreign material and washed clean, prior to the application of an epoxy bonding agent.

I. No concrete shall be placed in any structure until all water entering the space to be filled with concrete has been properly cut off or has been diverted by pipes, or other means, and carried out of the forms, clear of the work. No concrete shall be deposited underwater nor shall the CONTRACTOR allow still water to rise on any concrete until the concrete has attained its initial set. Water shall not be permitted to flow over the surface of any concrete in such manner and at such velocity as will injure the surface finish of the concrete. Pumping or other necessary dewatering operations for removing ground water, if required, will be subject to the review of the ENGINEER.

J. Corrosion Protection: Pipe, conduit, dowels, and other ferrous items required to be embedded in concrete construction shall be so positioned and supported prior to placement of concrete that there will be a minimum of 2-inches clearance between said items and any part of the concrete reinforcement. Securing such items in position by wiring or welding them to the reinforcement will not be permitted.

K. Openings for pipes, inserts for pipe hangers and brackets, and the setting of anchors shall, where practicable, be provided for during the placing of concrete.

L. Anchor bolts shall be accurately set, and shall be maintained in position by templates while being embedded in concrete.

M. Cleaning: The surfaces of all metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar, and other foreign substances immediately before the concrete is placed.

3.2 HANDLING, TRANSPORTING, AND PLACING

A. General: Placing of concrete shall conform to the applicable requirements of ACI 301 and the requirements of this Section.

B. Non-Conforming Work or Materials: Concrete which upon or before placing is found not to conform to the requirements specified herein shall be rejected and immediately removed from the work. Concrete which is not placed in accordance with these Specifications, or which is of inferior quality, shall be removed and replaced by and at the expense of the CONTRACTOR.

C. Concrete shall not be placed until the forms and reinforcement have been inspected, all preparations for the placement have been completed, and the preparations have been checked by the project inspector, all subject to the observation of the engineer or architect.

D. Casting New Concrete Against Old: An approved epoxy adhesive bonding agent shall be applied to the old surfaces according to the manufacturer’s written recommendations. This provision shall not apply to joints where waterstop is installed.

E. Conveyor Belts and Chutes: All ends of chutes, hopper gates, and all other points of concrete discharge throughout the CONTRACTOR’S conveying, hoisting and placing system shall be so designed and arranged that concrete passing from them will not fall separated into whatever receptacle immediately receives it. Conveyor belts, if used, shall
be of a type acceptable to the INSPECTOR. Chutes longer than 50 feet will not be permitted. Minimum slopes of chutes shall be such that concrete of the specified consistency will readily flow in them. If a conveyor belt is used, it shall be wiped clean by a device operated in such a manner that none of the mortar adhering to the belt will be wasted. All conveyor belts and chutes shall be covered. Sufficient illumination shall be provided in the interior of all forms so that the concrete at the places of deposit is visible from the deck or runaway.

F. Placement in Slabs: Concrete placed in sloping slabs shall proceed uniformly from the bottom of the slab to the top, for the full width of the pour. As the work progresses, the concrete shall be vibrated and carefully worked around the slab reinforcement, and the surface of the slab shall be screeded in an up-slope direction.

G. Temperature of Concrete: The temperature of concrete when it is being placed shall be not more than 90 degrees F nor less than 40 degrees F in moderate weather, and not less than 50 degrees F in weather during which the mean daily temperature drops below 40 degrees F. Concrete ingredients shall not be heated to a temperature higher than that necessary to keep the temperature of the mixed concrete, as placed, from falling below the specified minimum temperature. If concrete is placed when the weather is such that the temperature of the concrete would exceed 90 degrees F, the CONTRACTOR shall employ effective means, such as precooling of aggregates and mixing water using ice or placing at night, as necessary to maintain the temperature of the concrete, as it is placed, below 90 degrees F. The CONTRACTOR shall be entitled to no additional compensation on account of the foregoing requirements.

H. Cold Weather Placement: Earth foundations shall be free from frost or ice when concrete is placed upon or against them. Fly ash concrete shall not be placed when the air temperature falls below 50 degrees F.

I. Float Finish: Begin floating when bleed water sheen has disappeared and the concrete surface has stiffened sufficiently to permit operations. Float surfaces to true planes within a tolerance of 1/4 inch in 10 feet as determined by a 10-foot-long straightedge placed anywhere on the surface in any direction. The finished surface shall be free from humps, sags, blemishes or other irregularities. Cut down high spots and fill low spots. Refloat surface immediately to a uniform granular texture.

1. Medium-to-Broom Finish required on surfaces up to 6% slope: Draw a soft bristle broom across concrete surface, perpendicular to line of traffic, to provide a uniform fine line texture.

2. Ramps/ Slopes over 6%: Provide a heavy broom finish by striating surface 1/16 inch to 1/8 inch deep with a stiff-bristled broom, perpendicular to line of traffic.

J. Joints:

1. Joints: Joints in concrete curb, gutter, and walk shall be designated as expansion joints and weakened plane/score joints. Joints for concrete flatwork shall be provided every five (5) feet or less. Expansion joints for curbs / curb & gutter shall be placed no greater than 24 feet on center or as indicated on construction drawings.

a. Expansion Joints: Provide 1/4" premolded joint filler, material meeting Section 2.11 herein. Construct expansion joints in conformance with S.S.P.W.C. Section 303-5.4.2.
1) Extend expansion joint fillers full-width and depth of joint, and 1/4" below finished surface where joint filler is indicated. If no joint sealer is called for, place top of premolded joint filler flush with top of concrete or curb.

2) Where elastomeric sealer is noted on the construction documents, the premolded joint filler strips shall be placed 1/2" below the surface of the concrete or curb, the full width of the expansion joint. The remainder of all joints shall be filled to the surface of the concrete with the elastomeric sealant.

3) Joint filler strips between walk and curb shall be the depth of the walk plus 1 inch with the top set flush with the specified grade of the top of curb.

b. Weakened Plane/Score Joints:

1) Weakened plane joints in sitework concrete shall comply with SSPWC subsection 302-6.5.4 except that the configuration of the joint shall be as indicated on the architectural drawings or geotechnical report.

2) Weakened plane joints in concrete curbs, sidewalks and gutters shall comply with SSPWC subsection 303-5 4.3 except that the joint configuration shall be as indicated.

3) Location: As shown on architectural drawings, but in any case not more than five (5) feet O.C. both ways in concrete sidewalks. In gutters, including gutter integral with curb, joints shall be at regular intervals not exceeding eight (8) feet. Where integral curb and gutter is adjacent to concrete pavement the joint shall be aligned with the pavement joints where practical.

K. Protection: In hot, dry, and windy weather protect concrete from rapid moisture loss before and during finishing operations with an evaporation-control film. Apply according to manufacturer’s instructions after screeding and bull floating, but before floating.

3.3 TAMPPING AND VIBRATING

A. As concrete is placed in the forms or in excavations, it shall be thoroughly settled and compacted, throughout the entire depth of the layer which is being consolidated, into a dense, homogeneous mass, filling all corners and angles, thoroughly embedding the reinforcement, eliminating rock pockets, and bringing only a slight excess of water to the exposed surface of concrete during placement. Vibrators shall be high speed power vibrators (8000 to 10,000 rpm) of an immersion type in sufficient number and with (at least one) standby units as required.

B. Care shall be used in placing concrete around waterstops. The concrete shall be carefully worked by rodding and vibrating to make sure that all air and rock pockets have been eliminated. Where flat-strip type waterstops are placed horizontally, the concrete shall be worked under the waterstops by hand, making sure that all air and rock pockets have been eliminated. Concrete surrounding the waterstops shall be given additional vibration, over
and above that used for adjacent concrete placement to assure complete embedment of the waterstops in the concrete.

C. Concrete in walls shall be internally vibrated and at the same time rammed, stirred, or worked with suitable appliances, tamping bars, shovels, or forked tools until it completely fills the forms or excavations and closes snugly against all surfaces. Subsequent layers of concrete shall not be placed until the layers previously placed have been worked thoroughly as specified. Vibrators shall be provided in sufficient numbers, with standby units as required, to accomplish the results herein specified within 15 minutes after concrete of the prescribed consistency is placed in the forms. The vibrating head shall be kept from contact with the surfaces of the forms. Care shall be taken not to vibrate concrete excessively or to work it in any manner that causes segregation of its constituents.

3.4 CURING


1. Begin final curing procedures immediately following initial curing and before concrete has dried. Continue final curing for at least seven (7) days in accordance with ACI 301 procedures. Avoid rapid drying at end of final curing period.

B. Curing Methods: Perform curing of concrete by curing as herein specified.

1. Provide moisture-curing by the following methods:
   a. Keep concrete surface continuously wet by covering with water.
   b. Continuous water-fog spray.
   c. Covering concrete surface with specified absorptive cover, thoroughly saturating cover with water and keeping continuously wet. Place absorptive cover to provide coverage of concrete surfaces and edges, with 4 inch lap over adjacent absorptive covers.

2. Provide curing and sealing compound to exposed exterior slabs, walks, and curbs, as follows:
   a. Apply specified curing and sealing compound to concrete slabs as soon as final finishing operations are complete (within 2 hours). Apply uniformly in continuous operation by power-spray or roller in accordance with manufacturer’s directions. Re-coat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during curing period.
   b. Do not use membrane curing compounds on surfaces which are to be covered with coating material applied directly to concrete, liquid, floor hardener, waterproofing, dampproofing, membrane roofing, flooring (such as ceramic or quarry tile, glue-down carpet), painting, and other coatings and finish materials, unless otherwise acceptable to Architect.

C. Concrete slabs and paving shall be properly cured and protected against damage and defacement of nature during construction operations. If weather is hot or surface has dried out, spray surface with fine mist of water starting not later than two hours after final troweling. Surface of finish shall be kept continuously wet for at least ten days. Wetting is
considered emergency work and shall be performed on weekends and holidays if necessary.

D. The CONTRACTOR shall protect all concrete against injury or damage from excessive heat, lack of moisture, overstress, or any other cause until final acceptance by the Owner. Particular care shall be taken to prevent the drying of concrete and to avoid roughening or otherwise damaging the surface. Any concrete found to be damaged, or which may have been originally defective, or which becomes defective at any time prior to the final acceptance of the completed work, or which departs from the established line or grade, or which, for any other reason, does not conform to the requirements of the Contract Documents, shall be satisfactorily repaired or removed and replaced with acceptable concrete at the CONTRACTOR’S expense. Exclude traffic from concrete paving for at least 7 days after placement.

E. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep concrete paving not more than 2 days prior to date scheduled for Substantial Completion inspections.

3.5 PUMPING OF CONCRETE

A. General: If the pumped concrete does not produce satisfactory end results, the CONTRACTOR shall discontinue the pumping operation and proceed with the placing of concrete using conventional methods.

B. Pumping Equipment: The pumping equipment must have 2 cylinders and be designed to operate with one cylinder only in case the other one is not functioning. In lieu of this requirement, the CONTRACTOR may have a standby pump on the site during pumping.

C. The minimum diameter of the hose (conduits) shall be 4-inches.

D. Pumping equipment and hoses (conduits) that are not functioning properly, shall be replaced.

E. Aluminum conduits for conveying the concrete will not be permitted.

F. Proportioning: Minimum compressive strength, cement content, and maximum size of aggregates shall be as specified herein.

G. Gradation of coarse aggregates shall conform to ASTM C 33 and shall be as close to the middle range as possible.

H. Gradation of fine aggregate shall conform to ASTM C 33, with 15 to 30 percent passing the number 50 screen and 5 to 10 percent passing the number 100 screen. The fineness modulus of sand used shall not be over 3.00.

I. Water and slump requirements shall conform to the requirements of this Section.

J. Cement and admixtures shall conform to the requirements of this Section.

K. Field Control: Concrete samples for slump per ASTM C 143 and test cylinders per ASTM C 31 and C 39.
3.6 TREATMENT OF SURFACE DEFECTS

A. As soon as forms are removed, all exposed surfaces shall be carefully examined and any irregularities shall be immediately rubbed or ground in a satisfactory manner in order to secure a smooth, uniform, and continuous surface. Plastering or coating of surfaces to be smoothed will not be permitted. No repairs shall be made until after inspection by the ENGINEER. In no case will extensive patching of honeycombed concrete be permitted. Concrete containing minor voids, holes, honeycombing, or similar depression defects shall have them repaired as specified herein. Concrete containing extensive voids, holes, honeycombing, or similar depression defects, shall be completely removed and replaced.

1. All repairs and replacements herein specified shall be promptly executed by the CONTRACTOR at its own expense.

B. Defective surfaces to be repaired shall be cut back from trueline a minimum depth of 1/2-inch over the entire area. Feathered edges will not be permitted. Where chipping or cutting tools are not required in order to deepen the area properly, the surface shall be prepared for bonding by the removal of all laitance or soft material, and not less than 1/32-inch depth of the surface film from all hard portions, by means of an efficient sandblast. After cutting and sandblasting, the surface shall be wetted sufficiently in advance of shooting with shotcrete or with cement mortar so that while the repair material is being applied, the surfaces under repair will remain moist, but not so wet as to overcome the suction upon which a good bond depends. The material used for repair purposes shall consist of a mixture of one sack of cement to 3 cubic feet of sand. For exposed walls, the cement shall contain such a proportion of Atlas white portland cement as is required to make the color of the patch match the color of the surrounding concrete.

C. Holes left by tie-rod cones shall be reamed so as to leave the surfaces of the holes clean and rough. These holes then shall be repaired in an approved manner with non-shrink grout. Holes left by form-tying devices having a rectangular cross-section, and other imperfections having a depth greater than their least surface dimension, shall not be reamed but shall be repaired in an approved manner with non-shrink grout.

D. All repairs shall be built up and shaped in such a manner that the completed work will conform to the requirements of this Section, as applicable, using approved methods which will not disturb the bond, cause sagging, or cause horizontal fractures. Surfaces of said repairs shall receive the same kind and amount of curing treatment as required for the concrete in the repaired section.

E. Prior to filling any structure with water, all cracks that may have developed shall be repaired to the satisfaction of the ENGINEER. This repair method shall be done on the water bearing face of members. Prior to backfilling, faces of members in contact with fill, which are not covered with a waterproofing membrane, shall also have cracks repaired as specified herein.

3.7 FIELD QUALITY CONTROL

A. Flood Tests: Concrete gutters and concrete pavement shall be given a flood test in the presence of the Inspector. Concrete work where water ponds and does not run off in a reasonable amount of time, shall be removed to the nearest score or joint line and replaced to provide proper drainage.
3.8 OFF-SITE CONCRETE WORK

A. Concrete driveway aprons, street sidewalks, curbs and gutters, etc., indicated to be constructed outside of property lines shall conform to the standards and specifications of the public agency having jurisdiction and shall be subject to inspection by its representative. The CONTRACTOR shall obtain and pay for necessary permits and inspection fees. The Owner shall reimburse the Contractor for said permits and all necessary inspection fees.

3.9 CARE AND REPAIR OF CONCRETE

A. General: The CONTRACTOR shall protect all concrete against injury or damage from excessive heat, lack of moisture, overstress, or any other cause until final acceptance by the Owner. Particular care shall be taken to prevent the drying of concrete and to avoid roughening or otherwise damaging the surface. Any concrete found to be damaged, or which may have been originally defective, or which becomes defective at any time prior to the final acceptance of the completed work, or which departs from the established line or grade, or which, for any other reason, does not conform to the requirements of the Contract Documents, shall be satisfactorily repaired or removed and replaced with acceptable concrete at the CONTRACTOR’S expense.

B. The contractor shall barricade and protect placed Portland Cement Concrete from all damage, marks, mars and/or graffiti. Any Portland Cement Concrete damaged, defaced, discolored or defective shall be replaced at the contractor’s expense.

END OF SECTION 02770
SECTION 02890 POST-MOUNTED SIGNAGE

PART 1 - GENERAL

1.01 SUMMARY

A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, Special Conditions and Division 1.

B. Section Includes:
   1. Traffic entry warning signs.
   2. Parking space signs.

1.02 REFERENCES

A. American Society for Testing and Materials.
   1. ASTM A53 - Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
   2. ASTM A500 - Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.

B. California Code of Regulations.

C. Americans with Disabilities Act.
   1. ADA – Title III.

D. Federal Specifications.
   1. FED-STD-595 - Colors used in Government Procurement.

1.03 SUBMITTALS

A. Submit under provisions of Section 01330.

B. Submit product data listing sign styles, lettering and locations and overall dimensions of each sign.

C. Submit three samples illustrating full size sample sign, of type, style and color specified.

1.04 REGULATORY REQUIREMENTS

A. Comply with CBC Chapter 11B and ADA for provisions of the physically disabled.

1.05 DELIVERY, STORAGE AND HANDLING

A. Store and protect products until installation.
PART 2 - PRODUCTS

2.01 CONSTRUCTION

A. Post mounted and wall mounted signs shall be fabricated from 16 gage enameling iron with porcelain enamel finish.

B. Mount signs to posts with minimum two 3/16 inch diameter round head bolts with tamperproof nuts, galvanized.

C. Posts: ASTM A63; two-inch diameter galvanized steel pipe weighing a minimum of 3.65 lbs per foot schedule 40 or 2 by 2 inch galvanized steel tubing, weighing a minimum of 4.31 lbs per foot and complying with ASTM A500, grade B, 3/16 inch thick wall thickness.

2.02 TRAFFIC ENTRY WARNING SIGNS

A. Single post mount, not less than 17 by 22 inches with white reflectorized copy on blue background complying with No. 15090, FED-STD 595, one inch high letters shall read: "Unauthorized vehicles parked in designated accessible spaces not displaying distinguishing placards or license plates issued for persons with disabilities may be towed away at owner’s expense. Towed vehicles may be reclaimed at the Chula Vista Police Department or by telephoning (619) 691-5151."

1. All information shall be part of permanent fabrication of sign. See architectural detail for information.

B. Missing information is on Drawings.

C. Position sign in a conspicuous location immediately adjacent to each entrance to off-street parking facility or immediately adjacent to and visible from each stall or space, or as indicated on the Drawings.

1. Verify and coordinate sign locations to prevent conflict with underground utilities.

D. Sign shall be mounted 80 inches from bottom of sign to the adjacent finish grade, ground or sidewalk or as shown on the Drawings.

2.03 PARKING STALL SIGNS

A. Single post mount, not less than 70 square inches with white reflectorized copy on blue background complying with No. 15090, FED-STD 595B. Sign shall display the international symbol of accessibility in white on blue background.

B. Position one sign at the end of each parking space designated for disabled usage.

C. One in every eight spaces, but not less than one, also shall display a “Van Accessible” sign below the symbol of accessibility. Comply with layout indicated on Drawings for number, type, spacing and location of parking stall signs.

D. Sign shall be mounted 80 inches from bottom of sign to finish grade of parking space or centered on wall at interior end of parking space at a minimum height of 36 inches above the parking space, finished grade, ground or sidewalk.

2.04 Circulation Path Signs:
A. Circulation path signs leading from public right of ways, public transportation, and/or parking lots that are not accessible or do not lead to accessible entrances to the building shall be located at decision points directing people with disabilities to the accessible routes and/or entrances. Signs shall include the ISA. (ANSI 117.1. 703.7) Such signs shall be installed so those steps will not have to be retraced. (CBC 1117B.5.7).

B. Accessible Path of Travel Signs:

1. 0.080 inch aluminum rounded corners; white on dark blue background; non-glare, high contrast signs. ISA minimum 4-1/2 inches high, conforming to ANSI 117.1-1198 (703.7). Text to conform to ANSI 117.1 (703.4). H. Toji and Company Style 3.1, or equal.

2. Sign to be mounted on post or wall with the lower edge of the sign between 48 inches and 60 inches above the ground or surface.

C. Other Informational and Directional Signs: Signs to be non-glare and high contrast. Text to conform to ANSI 117.1 (703.4). H. Toji and Company Style 3.1, or equal.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are ready to receive work.

B. Beginning of installation means installer accepts existing surfaces.

3.02 INSTALLATION

A. Set posts in concrete base per Drawings.

B. Signs set in asphaltic paving surfaces or concrete sidewalks shall be mounted in core drilled holes minimum 12 inch diameter, 16 inches deep with top of base flush to finish.

C. Signs mounted to walls shall be attached firmly with appropriate, non-corrosive, vandal-proof fasteners. Seal all holes in substrate water tight.

D. Clean and polish.

END OF SECTION 02890