BID DOCUMENTS & GENERAL CONDITIONS

FOR

Hawthorne Middle School ("HMS")

4366 West 129th Street

Hawthorne, CA 90250

CUPCCAA Bid No. C27-302-3

DSA Project No. 03-125961

HMS Turf Field & Track Improvements

Mandatory Pre-Bid Conference and Site Walk:	**November 17, 2026**	**11:00 AM Sharp!**
Bid Due Date:	**December 14, 2026**	**2:00 PM Sharp!**

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NOTICE INVITING BIDS

DISTRICT:	HAWTHORNE SCHOOL DISTRICT
PROJECT IDENTIFICATION:	HMS Turf Field & Track Improvements
CUPCCAA BID NO.:	Bid Number C27-302-3
DSA PROJECT NO.	03-125961
MANDATORY PRE-BIDDER'S CONFERENCE AND JOB WALK:	**November 17, 2026 @ 11:00AM Sharp!** Hawthorne Middle School Cafeteria 4366 West 129th Street Hawthorne, CA 90250
PREQUALIFICATION DOCUMENTS DUE BY:	November 24, 2026 by 2:00 PM
DEADLINE FOR RFIs:	November 24, 2026 by 4:00 PM
BIDS DUE BY:	**December 14, 2026 @ 2:00 PM Sharp**! Hawthorne School District, Purchasing Department **13021 S. Yukon Ave.** Hawthorne, CA 90250
BID DOCUMENTS AVAILABLE:	https://www.hawthornesd.org/departments/purchasing/bids

NOTICE IS HEREBY GIVEN that the Hawthorne School District, acting by and through its Governing Board, hereinafter referred to as "District", will receive prior to **2:00 PM on the 14th day of December 2026,** sealed bids for the award of a Contract for the following: CUPCCAA Bid No. C27-302-3 – HMS Turf Field & Track Improvements.

All bids shall be made and presented only on the forms presented by the District. Bids shall be received in the **Purchasing Departmen**t Office of the District located at **13021 S. Yukon Ave., Hawthorne**, **California 90250**, at the above-stated time and date, and all Bids shall be opened and publicly read aloud at the above-stated time and place. The District's time clock shall govern and control the time for all bids to be received by the District, and no other clock shall be used to determine the time when bids shall be received by the District in accordance with this Notice Inviting Bids. Any bids received after the time specified above or after any extensions due to material changes shall be returned unopened. *Allocate extra time due to parking restrictions in the area.*

There will be a mandatory Pre-Bid Conference and Job Walk on November 17, 2026, starting at 11:00 a.m. sharp, at the Hawthorne Middle School Cafeteria located at 4366 West 129th St., Hawthorne, CA 90250. Any Contractor bidding on the Project who fails to attend the entire mandatory pre-bid conference and job walk will be deemed a non-responsive bidder and will have its bid returned unopened. *Allocate extra time due to parking meters and parking restrictions in the area.*

This Project is being let in accordance with the formal bid requirements of the California Uniform Public Construction Cost Accounting Act ("CUPCCAA") set forth in Public Contract Code section 22000 et seq. (specifically, the formal bidding procedures in Section 22032(c)). Bidders shall comply with any requirements set forth in the CUPCCAA, including all guidelines and requirements in the current California Uniform Public Construction Cost Accounting Commission Cost Accounting Policies and Procedures Manual.

CONTRACTOR should consult the General Conditions, Supplementary Conditions, and General Requirements regarding Milestones and Liquidated Damages.

Prequalification of Bidders

As a condition of bidding for this Project, and in accordance with California Public Contract Code section 20111.5, prospective bidders are required to submit to PQBids on behalf of the District a completed set of prequalification documents on forms provided by PQBids on behalf of the District. These documents will be the basis for determining which bidders are qualified to bid on this Project.

Bids will not be accepted if a Contractor has not been prequalified for this project. Prequalification documents are available from the PQBid's Website at https://pqbids.com/hawthorne-sd/. Prequalification documents must be submitted to the PQBids' website on or before **November 24, 2026, by 2:00 pm**. Contractors will be notified by telephone, fax, email, or by mail of their prequalification rating within a reasonable period of time after submission of their prequalification documents, but not less than five (5) working days prior to the bid opening date.

As a condition of submitting a bid for this Project, and in accordance with California Public Contract Code section 20111.6, prospective bidders are required to submit to PQBids on behalf of the District a completed set of prequalification documents on forms provided by the PQBids on behalf of the District. These documents will be the basis for determining which bidders are qualified to bid on this Project.

If this Project includes work that will be performed by mechanical, electrical or plumbing ("MEP") subcontractors (contractors that **hold** C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43 or C-46 licenses), such MEP subcontractors must also be prequalified. A list of prequalified MEP subcontractors will be made available by the District to all bidders at least five business days prior to the bid opening date. It is the responsibility of the bidder to ensure that all MEP subcontractors **holding** any of the licenses listed above are properly prequalified before submitting a bid. This prequalification requirement applies even if the subcontractor will perform, or is designated to perform, work that does not require one of the licenses listed above, but the subcontractor **holds** one of the licenses listed above.

Miscellaneous Information

Bids shall be received in the place identified above, and shall be opened and publicly read aloud at the above-stated time and place.

The bid documents are available at https://www.hawthornesd.org/departments/purchasing/bids.

Each bidder shall be a licensed contractor pursuant to the California Business and Professions Code, and be licensed to perform the work called for in the Contract Documents. The successful bidder must possess a valid and active **Class B** License at the time of bid and throughout the duration of this Contract. The Contractor's California State License number shall be clearly stated on the bidder's proposal

Subcontractors shall be licensed pursuant to California law for the trades necessary to perform the Work called for in the Contract Documents.

Each bid must strictly conform with and be responsive to the Contract Documents as defined in the General Conditions.

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.

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Each bidder shall submit with its bid — on the form furnished with the Contract Documents — a list of the designated subcontractors on this Project as required by the Subletting and Subcontracting Fair Practices Act, California Public Contract Code section 4100 et seq.

In accordance with California Public Contract Code section 22300, the District will permit the substitution of securities for any moneys withheld by the District to ensure performance under the Contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the District, or with a state or federally chartered bank as the escrow agent, who shall then pay such moneys to the Contractor. Upon satisfactory completion of the Contract, the securities shall be returned to the Contractor.

Each bidder's bid must be accompanied by one of the following forms of bidder's security: ~~(1) cash~~; (2) a cashier's check made payable to the District; (3) a certified check made payable to the District; or (4) a bidder's bond executed by a California admitted surety as defined in Code of Civil Procedure section 995.120, made payable to the District in the form set forth in the Contract Documents. Such bidder's security must be in an amount not less than ten percent (10%) of the maximum amount of bid as a guarantee that the bidder will enter into the proposed Contract, if the same is awarded to such bidder, and will provide the required Performance and Payment Bonds, insurance certificates and any other required documents. In the event of failure to enter into said Contract or provide the necessary documents, said security will be forfeited.

The Contractor and all subcontractors shall comply with the requirements set forth in Division 2, Part 7, Chapter 1 of the Labor Code. The District has obtained from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this work is to be performed for each craft, classification or type of worker needed to execute the Contract. These per diem rates, including holiday and overtime work, as well as employer payments for health and welfare, pension, vacation, and similar purposes, are on file at the District, and are also available from the Director of the Department of Industrial Relations. Pursuant to California Labor Code section 1720 et seq., it shall be mandatory upon the Contractor to whom the Contract is awarded, and upon any subcontractor under such Contractor, to pay not less than the said specified rates to all workers employed by them in the execution of the Contract.

A Contractor or Subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in the Labor Code, unless currently registered and qualified to perform public work pursuant to Labor Code section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

All payroll records as detailed in Labor Code §1776 of the Contractor and all Subcontractors shall be certified and furnished directly to the Labor Commissioner in accordance with Labor Code §1771.4(a)(3) once every thirty (30) days while Work is being performed on the Project and within thirty (30) days after the final day of Work performed on the Project (or more frequently if required by the District or the Labor Commissioner). The Contractor and all Subcontractors shall submit their own payroll records to the Labor Commissioner on the internet website of the Department of Industrial Relations and such payroll records shall be in an electronic format prescribed by the Labor Commissioner. Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE).

To the extent applicable, each Bidder shall comply with all In-Use Off-Road Diesel-Fueled Fleets Regulations (the "Fleets Regulation") implemented by the California Air Resources Board ("CARB") which apply broadly to all self-propelled off-road diesel vehicles 25 horsepower or greater and other forms of equipment used in California. Bidders are required to comply with all CARB orders and Fleets Regulation requirements, including, without limitation, all applicable sections of the Fleets Regulation, as codified in Title 13 of the California Code of Regulations section 2449 et seq. throughout the duration of the Project. Bidders must provide, with their Bid, copies of the Bidder's and all listed subcontractors' most recent and valid Certificate(s) of Reported Compliance ("CRC")

issued by the CARB. Any Bidder's failure to provide valid CRCs as required herein may render such Bidder's Bid non-responsive. Additionally, any Bidder's failure to complete and submit the enclosed Fleet Compliance Certification form with its Bid, may render such Bid non-responsive.

No bidder may withdraw any bid for a period of ninety (90) calendar days after the date set for the opening of bids.

Separate payment and performance bonds, each in an amount equal to 100% of the total Contract amount, are required and shall be provided to the District prior to execution of the Contract and shall be in the form set forth in the Contract Documents.

All bonds (Bid, Performance, and Payment) must be issued by a California-admitted surety, registered with the State of California Department of Insurance, as defined in California Code of Civil Procedure section 995.120.

Where applicable, bidders must meet the requirements set forth in Public Contract Code section 10115 et seq., Military and Veterans Code section 999 et seq. and California Code of Regulations, Title 2, Section 1896.60 et seq. regarding Disabled Veteran Business Enterprise ("DVBE") Programs. Forms are included in this Bid Package.

Any request for substitutions pursuant to Public Contract Code section 3400 must be made at the time of Bid on the Substitution Request Form set forth in the Contract Documents and included with the bid.

No telephone or facsimile machine will be available to bidders on the District premises at any time.

It is each bidder's sole responsibility to ensure its bid is timely delivered and received at the location designated as specified above. Any bid received at the designated location after the scheduled closing time for receipt of bids shall be returned to the bidder unopened.

Inquiries and Clarifications. The Bidder is advised that all inquiries and clarifications about the Bid Documents, Drawings, Specifications, etc., shall be submitted to the district in writing prior to the question deadline noted above. The district will respond at its earliest possible opportunity. Verbal communication by either party with regard to this matter is invalid. Inquiries shall be sent in writing to Aneska I. Kekula, Purchasing Director, at ikekula@hawthorne.k12.ca.us by November 24, 2026, at 4:00 PM.

Publication:
Hawthorne School District online at http://www.hawthorne.k12.ca.us/Bids
Herald Publication: 1st Publication on November 5, 2026 and 2nd Publication on November 12, 2026
Trade Journals: November 5, 2026

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INSTRUCTIONS TO BIDDERS

1. Preparation of Bid Form. Proposals under these specifications shall be submitted on the blank forms furnished herewith at the time and place stated in the Notice Inviting Bids. The District's time clock shall govern and control the time for all bids to be received by the District and no other clock shall be used to determine the time when bids shall be received by the District in accordance with the Notice Inviting Bids. All blanks in the bid form must be appropriately filled in, and all proposed prices must be stated clearly and legibly in both words and numerals. All bids must be signed by the bidder in permanent black or blue ink and submitted to the District in accordance with the Notice Inviting Bids. The District reserves the right to reject any Bid if all of the above information is not furnished. It is each Bidder's sole responsibility to ensure its Bid is timely submitted and received by the District in accordance with the Notice Inviting Bids. Any bid received by the District after the scheduled closing time for the receipt of Bids shall be returned to the Bidder unopened.

2. Bid Security. Each bid must be accompanied by one of the following forms of bidder's security: ~~(1) cash~~; (2) a cashier's check made payable to the District; (3) a certified check made payable to the District; or (4) a bidder's bond executed by a California admitted surety as defined in Code of Civil Procedure section 995.120, made payable to the District, in the form set forth in the Contract Documents. Such bidder's security must be in an amount not less than ten percent (10%) of the maximum amount of such bidder's bid as a guarantee that the bidder will enter into the Contract, if the same is awarded to such bidder, and will provide the required Performance and Payment Bonds, insurance certificates and any other required documents. In the event that a bidder is awarded the Contract and such bidder fails to enter into said Contract or provide the surety bond or bonds within five (5) calendar days after award of the Contract to bidder, said security will be forfeited.

3. Signature. The bid form, all bonds, all designations of subcontractors, the Contractor's Certificate, the Agreement, and all Guarantees must be signed in permanent blue ink in the name of the bidder and must bear the signature in longhand of the person or persons duly authorized to sign the bid.

If bidder is a corporation, the legal name of the corporation shall first be set forth, together with two signatures: one from the President and one from the Secretary or Assistant Secretary. Alternatively, the signature of other authorized officers or agents may be affixed, if a certified copy of the resolution of the corporate board of directors authorizing them to do so is provided to the District. Such documents shall include the title of such signatories below the signature and shall bear the corporate seal.

If bidder is a partnership, the true name of the firm shall first be set forth, together with the names of all persons comprising the partnership or co-partnership. The bid must be signed by all partners comprising the partnership unless proof in the form of a certified copy of a statement of partnership acknowledging the signer to be a general partner is presented to the District, in which case the general partner may sign.

Bids submitted as joint ventures must so state and be signed by each joint venturer.

Bids submitted by individuals must be signed by the bidder unless an up to date power- of-attorney is on file in the District office, in which case, said person may sign for the individual.

The above rules also apply in the case of the use of a fictitious firm name. In addition, however, where a fictitious name is used, it must be so indicated in the signature.

4. Modifications. Changes in or additions to the bid form, recapitulations of the work bid upon, alternative proposals, or any other modification of the bid form which is not specifically called for in the Contract Documents may result in the District's rejection of the bid as not being responsive to the Notice Inviting Bids. **No oral or telephonic modification of any bid submitted will be considered**.

5. Erasures, Inconsistent or Illegible Bids. The bid submitted must not contain any erasures, interlineations, or other corrections unless each such correction creates no inconsistency and is suitably authenticated by affixing in the margin immediately opposite the correction the signature or signatures of the person or persons signing the bid. In the event of inconsistency between words and figures in the bid price, words shall control figures. In the event that the District determines that any bid is unintelligible, inconsistent, or ambiguous, the District may reject such bid as not being responsive to the Notice Inviting Bids.

6. Examination of Site and Contract Documents. Each bidder shall visit the site of the proposed work and become fully acquainted with the conditions relating to the construction and labor so that the facilities, difficulties, and restrictions attending the execution of the work under the Contract are fully understood. Bidders shall thoroughly examine and be familiar with the drawings and specifications and all others documents and requirements that are attached to and/or contained in the Project Manual or other documents issued to bidders. The failure or omission of any bidder to receive or examine any Contract Documents, form, instrument, addendum, or other document or to visit the site and become acquainted with conditions there existing shall not relieve any bidder from obligations with respect to the bid or to the contract. The submission of a bid shall be taken as prima facie evidence of compliance with this Section. Bidders shall not, at any time after submission of the bid, dispute, complain, or assert that there were any misunderstandings with regard to the nature or amount of work to be done.

7. Site Visit -Verify in Field (VIF). The Contractor shall be held to have examined the construction site, demolition and existing conditions, including off-site public rights-of-way, where work may be performed, and to have compared it with the Drawings and Specification, to have carefully examined all of the Contract Documents and to have been field measured and verified the quantities, conditions, and dimensions/measurements to have been satisfied as to the conditions under which the work is to be performed before entering into this Contract.

The accuracy of the Site Visit and VIF information shall solely lie with the Contractor, and not the District. No allowance shall subsequently be made on behalf of the Contractor on account of an error on the Contractor's part or the Contractor's negligence, failure to acquaint itself with the conditions of the site, or the requirements and conditions of the Contract Documents

8. Withdrawal of Bids. Any bid may be withdrawn, either personally or by written request, at any time prior to the scheduled closing time for receipt of bids. The bid security for bids withdrawn prior to the scheduled closing time for receipt of bids, in accordance with this paragraph, shall be returned upon demand therefor.

No bidder may withdraw any bid for a period of ninety (90) calendar days after the date set for the opening of bids.

9. Agreements, Insurance and Bonds. The Agreement form which the successful bidder, as Contractor, will be required to execute, and the forms and amounts of surety bonds and insurance endorsements which Contractor will be required to be furnished at the time of execution of the Agreement, are included in the bid documents and should be carefully examined by the bidder. The number of executed copies of the Agreement, the Performance Bond, and the Payment Bond required is

two (2). Payment and Performance bonds must be executed by an admitted surety insurer, registered with the State of California Department of Insurance, as defined in Code of Civil Procedure 995.120. Additionally, the Contractor must provide to the District with its executed Agreement: (i) a complete and accurate copy of the Contractor's Workplace Violence Prevention Plan in accordance with Labor Code Section 6401.9 that is applicable to the Project (the "Project WVPP"); and (ii) the name, position, and telephone number of each person having responsibility for implementing the Project WVPP and receiving reports of workplace violence, if and to the extent that information is not conspicuously specified in the Project WVPP.

10. Interpretation of Plans and Documents/Pre-Bid Clarification. If any prospective bidder is in doubt as to the true meaning of any part of the Contract Documents, or finds discrepancies in, or omissions, a written request for an interpretation or correction thereof may be submitted to the District. The bidder submitting the request shall be responsible for its prompt delivery. **Any interpretation or correction of the Contract Documents will only be made by Addendum duly issued, and a copy of such Addendum will be made available for each contractor receiving a set of the Contract Documents.** No person is authorized to make any oral interpretation of any provision in the Contract Documents, nor shall any oral interpretation be binding on the District. If discrepancies on drawings, specifications or elsewhere in the Contract Documents are not covered by addenda, bidder shall include in their bid methods of construction and materials for the higher quality and complete assembly. Each request for clarification shall be submitted in writing, via email, to only the following persons:

TO: Aneska Kekula, Purchasing Director
ikekula@hawthorne.k12.ca.us

CC: Marisela Vasquez, Director of Facilities, Maintenance & Operations
mvasquez@hawthorne.k12.ca.us

Each transmitted request shall contain the name of the person and/or firm filing the request, address, telephone, and fax number, specifications, and/or Drawing number. Bidder is responsible for the legibility of handwritten requests. Pre-bid clarification requests shall be filed no later than **November 24, 2026, by 4:00 pm**. Requests not received by November 24, 2026, by 4:00 pm, shall not be considered or responded to. A written response to timely pre-bid clarification requests which materially affects the bidder's price will be made by Addendum issued by the District not less than seventy-two (72) hours prior to bid opening.

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 prime bid for the same work unless alternate bids are specifically called for. A person, firm, or corporation that has submitted a proposal 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 making a prime proposal.

12. Award of Contract. The Contract will be awarded to the lowest responsive responsible bidder by action of the governing Board. 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. In the event an award is made to bidder, and such bidder fails or refuses to execute the Contract and provide the required documents detailed in Section 8 above within five (5) calendar days after award of the Contract to the bidder, the District may award the Contract to the next lowest responsible and responsive bidder or release all

bidders. Each bid must conform and be responsive to the Contract Documents as defined in the General Conditions.

13. Bid Protest Procedure. Any bidder may file a bid protest. The protest shall be filed in writing with the District's Purchasing Director not more than five (5) business days after the date of the bid opening. An e-mail address shall be provided, and by filing the protest, the protesting bidder consents to receipt of e-mail notices for purposes of the protest and protest-related questions and protest appeal, if applicable. The protest shall specify the reasons and facts upon which the protest is based. When a single shift is worked, a business day shall consist of eight (8) consecutive hours performed between 8:00 a.m. and 4:30 p.m.

a. Resolution of Bid Controversy: Once the bid protest is received, the apparent lowest responsible bidder will be notified of the protest and the evidence presented. If appropriate, the apparent low bidder will be given an opportunity to rebut the evidence and present evidence that the apparent low bidder should be allowed to perform the Work. If deemed appropriate by the District, an informal hearing will be held. District will issue a written decision within fifteen (15) calendar days of receipt of the protest, unless factors beyond the District's reasonable control prevent such resolution. The decision on the bid protest will be copied to all parties involved in the protest.

b. Appeal: If the protesting bidder or the apparent low bidder is not satisfied with the decision, the matter may be appealed to the Associate Superintendent of Business Services, or his or her designee, within three (3) business days after receipt of the District's written decision on the bid protest. The appeal must be in writing and sent via overnight registered mail with all accompanying information relied upon for the appeal and an e-mail address from which questions and responses may be provided to:

Hawthorne School District
ikekula@hawthorne.k12.ca.us

c. Appeal Review: The Associate Superintendent of Business Services or his or her designee shall review the decision on the bid protest from the Purchasing Director and issue a written response to the appeal, or if appropriate, appoint a Hearing Office to conduct a hearing and issue a written decision. The written decision of the Associate Superintendent of Business Services or the Hearing Officer shall be rendered within fifteen (15) calendar days and shall state the basis for the decision. The decision concerning the appeal will be final and not subject to any further appeals.

d. Reservation of Rights to Proceed with Project Pending Appeal. The District reserves the right to proceed to award the Project and commence construction pending an Appeal. If there is State Funding or a critical completion deadline, the District may choose to shorten the time limits set forth in this Section if written notice is provided to the protesting party. E-mailed notice with a written confirmation sent by First Class Mail shall be sufficient to constitute written notice. If there is no written response to a written notice shortening time, the District may proceed with the award.

e. Finality. Failure to comply with this Bid Protest Procedure shall constitute a waiver of the right to protest and shall constitute a failure to exhaust the protesting bidder's administrative remedies.

14. Reserved

a. Subcontractor Listing for Alternates. 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.

15. Evidence of Responsibility. Upon the request of the District, a bidder whose bid is under consideration for the award of the Contract shall submit promptly to the District satisfactory evidence showing the bidder's financial resources, surety and insurance claims experience, construction experience, completion ability, workload, organization available for the performance of the Contract, and other factors pertinent to a Project of the scope and complexity involved.

16. Listing Subcontractors. Each bidder shall submit with his bid, on the form furnished with the Contract Documents, a list of the names, license numbers, scopes of work, locations of the places of business, contact information, and Department of Industrial Relations ("DIR") registration numbers of each subcontractor who will perform work or labor or render service to the bidder in or about the project, or a subcontractor who under subcontract to the bidder, specially fabricates and installs a portion of the work, in an amount in excess of one-half of 1 percent of the bidder's total bid as required by the Subletting and Subcontracting Fair Practices Act (Public Contract Code section 4100, et seq.) Pursuant to Labor Code section 1725.5, all subcontractors (of any tier) performing work on this Project must be properly registered with DIR.

17. Workers' Compensation. In accordance with the provisions of Labor Code section 3700, the successful bidder as the Contractor shall secure payment of compensation to all employees. The Contractor shall sign and file with the District the following certificate prior to performing the work under this contract: "I am aware of the provisions of Section 3700 of the Labor Code, which requires 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." The form of such certificate is included as a part of the Bid Documents.

18. Contractor's License. To perform the work required by this notice, the Contractor must possess the Contractor's License as specified in the Notice Inviting Bids, and the Contractor must maintain the license throughout the duration of the contract. If, at the time of bid, bidder is not licensed to perform the Project in accordance with Division 3, Chapter 9, of the Business and Professions Code for the State of California and the Notice to Contractors calling for bids, such bid will not be considered and the Contractor will forfeit its bid security to the District.

19. Anti-Discrimination. It is the policy of the District that in connection with all work performed under contracts, there be no discrimination against any prospective or active employee engaged in the work because of race, color, ancestry, national origin, religious creed, sex, age, or marital status. The Contractor agrees to comply with applicable federal and California 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 Contractor agrees to require like compliance by any subcontractors employed on the work by such Contractor.

20. Preference for Materials and Substitutions.

a. One Product Specified. Unless the Plans and Specifications state that no Substitution is permitted, whenever the Contract Documents indicate any specific article, device, equipment, product, material, fixture, patented process, form, method, construction, or any specific name, make, trade name, or catalog number, with or without the words, "or equal," such specification shall be read as if the language "or equal" is incorporated.

b. Request for Substitution. Bidder may, unless otherwise stated, offer any material, process, article, etc., which is materially equal or better in every respect to that so indicated or specified

("Specified Item") and will completely accomplish the purpose of the Contract Document. If bidder desires to offer a Substitution for a Specified Item, such bidder must make a request in writing on the District's Substitution Request Form ("Request Form") and submit the completed Request Form with the bidder's bid. The Request Form must be accompanied by evidence as to whether the proposed substitution:

1) Is equal in quality, service, and ability to the Specified Item as demonstrated by a side-by-side comparison of key characteristics and performance criteria (CSI comparison chart);
2) Will entail no changes in detail, construction, and scheduling of related work;
3) Will be acceptable in consideration of the required design and artistic effect;
4) Will provide no cost disadvantage to the District;
5) Will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; and
6) Will require no change in the Contract Time.

In completing the Request Form, bidder must state with respect to each requested substitution whether bidder will agree to provide the Specified Item in the event that the District denies bidder's request for substitution of a Specified Item. In the event that bidder does not agree in the Request Form to provide the Specified Item and the District denies the requested Substitution, the bidder's bid shall be considered non-responsive and the District may award the Contract to the next lowest bidder or in its sole discretion, release all bidders. In the event that bidder has agreed in the Request Form to provide the Specified Item and the District denies bidder's requested substitution for a Specified Item, bidder shall execute the Agreement and provide the Specified Item without any additional cost or charge to the District, and if bidder fails to execute the Agreement with the Specified Item(s), bidder's bid bond will be forfeited.

After the bids are opened, the apparent lowest bidder shall provide, within five (5) calendar days of opening such bids, any and all Drawings, Specifications, samples, performance data, calculations, and other information as may be required to assist the Architect and the District in determining whether the proposed substitution is acceptable. The burden of establishing these facts shall be upon the bidder.

After the District's receipt of such evidence by bidder, the District will make its final decision as to whether the bidder's request for Substitution for any Specified Items will be granted. The District shall have sole discretion in deciding as to whether a proposed request for Substitution is equal to or better than a Specified Item. Any request for Substitution which is granted by the District shall be documented and processed through a Change Order. The District may condition its approval of any Substitution upon delivery to the District of an extended warranty or other assurances of adequate performance of the Substitution. Any and all risks of delay due to DSA, or any other governmental agency having jurisdiction, shall be on the bidder.

21. Disqualification of Bidders and Bid. More than one bid for the same work from any individual, firm, partnership, corporation, or association under the same or different names will not be accepted; and reasonable grounds for believing that any bidder is interested in more than one bid for the work will be cause for rejecting all bids in which such bidder is interested, and the bidder will forfeit their bid security to the District.

22. Unbalanced or Altered Bids. Proposals in which the prices are obviously unbalanced, and those which are incomplete or show any alteration of form, or contain any additions or conditional or alternate bids that are not called for or otherwise permitted, may be rejected. A proposal on which the signature of the bidder has been omitted may be rejected. If, in the District's sole discretion, it determines any pricing, costs or other information submitted by a bidder may result in an unbalanced bid, the District may deem such bid non-responsive. A bid may be determined by the District to be unbalanced if the bid is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the District even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advanced payment.

23. Employment of Apprentices. The Contractor and all Subcontractors shall comply with the provisions of California Labor Code including, but not limited to, sections 1777.5, 1777.6, and 1777.7 concerning the employment of apprentices. The Contractor and any Subcontractor under him shall comply with the requirements of said sections, including applicable portions of all subsequent amendments in the employment of apprentices; however, the Contractor shall have full responsibility for compliance with said Labor Code sections, for all apprenticeable occupations, regardless of any other contractual or employment relationships alleged to exist.

24. Non-Collusion Declaration. Public Contract Code section 7106 requires bidders to submit declaration of non-collusion with their bids. This form is included with the bid documents and must be signed and dated by the bidder under penalty of perjury.

25. Wage Rates, Travel and Subsistence.

a. The Contractor and all subcontractors shall comply with the requirements set forth in Division 2, Part 7, Chapter 1 of the Labor Code. Pursuant to Labor Code section 1770 et seq., the District has obtained from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this work is to be performed for each craft, classification or type of worker needed to execute the contract. Copies are available from the District to any interested party on request and are also available from the Director of the Department of Industrial Relations. The Contractor shall obtain copies of the above-referenced prevailing wage sheets and post a copy of such wage rates at appropriate, conspicuous, weatherproof points at the Site.

b. Any worker employed to perform work on the Project and such work is not covered by any classification listed in the published general prevailing wage rate determinations or per diem wages determined by the Director of the Department of Industrial Relations, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to the employment of such person in such classification.

c. Holiday and overtime work, when permitted by law, shall be paid for at the rate set forth in the prevailing wage rate determinations issued by the Director of the Department of Industrial Relations or at least one and one-half (1½) times the specified basic rate of per diem wages, plus employer payments, unless otherwise specified in the Contract Documents or authorized by law.

d. These per diem rates, including holiday and overtime work, and employer payments for health and welfare, pension, vacation, and similar purposes, are on file at the administrative office of the District, located as noted above and are also available from the Director of the Department of Industrial Relations. It is the Contractor's responsibility to ensure the appropriate prevailing rates of per diem

wages are paid for each classification. It shall be mandatory upon the Contractor to whom the Contract is awarded, and upon any subcontractor under such Contractor, to pay not less than the said specified rates to all workers employed by them in the execution of the Contract.

26. DIR Registration of Contractor and Subcontractors. A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in the Labor Code, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

27. This Project is a public works project as defined in Labor Code section 1720. Each contractor bidding on this Project and all subcontractors (of any tier) performing any portion of the Work must comply with the Labor Code sections 1725.5 and 1771.1 and must be properly and currently registered with DIR and qualified to perform public works pursuant to Labor Code section 1725.5 throughout the duration of the Project. For more information and up to date requirements, contractors are recommended to periodically review the DIR's website at www.dir.ca.gov. Contractor shall be solely responsible for ensuring compliance with Labor Code section 1725.5 as well as any requirements implemented by DIR applicable to its services or its subcontractors throughout the term of the Agreement and in no event shall contractor be granted increased payment from the District or any time extensions to complete the Project as a result of contractor's efforts to maintain compliance with the Labor Code or any requirements implemented by the DIR. Failure to comply with these requirements shall be deemed a material breach of this Agreement and grounds for termination for cause. The contractor and all subcontractors shall furnish certified payroll records as required pursuant Labor Code section 1776 directly to the Labor Commissioner in accordance with Labor Code section 1771.4(a)(3) once every thirty (30) days while Work is being performed on the Project and within thirty (30) days after the final day of Work performed on the Project (or more frequently if required by the District or the Labor Commissioner). The Contractor and all Subcontractors shall submit their own payroll records to the Labor Commissioner on the internet website of the Department of Industrial Relations and such payroll records shall be in an electronic format and manner prescribed by the Labor Commissioner. The District reserves the right to withhold contract payments if the District is notified, or determines as the result of its own investigation, that contractor is in violation of any of the requirements set forth in Labor Code section 1720 et seq. at no penalty or cost to the District. Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE).

28. No Telephone or Facsimile Availability. No telephone or facsimile machine will be available to bidders on the District premises at any time.

29. Obtaining Bidding Documents. Bidding Documents may be obtained from:

District website at: https://www.hawthornesd.org/departments/purchasing/bids

Hawthorne School District, 13021 S. Yukon Ave., Hawthorne, CA 90250

Contact Purchasing via email: purchasing@hawthorne.k12.ca.us

Bidder shall utilize a complete set of Bidding Documents in preparing a bid. The failure or omission of bidder to receive any Bidding Document, form, instrument, Addendum, or other document shall not relieve bidder from any obligations with respect to the bid and/or Contract.

30. Addenda. Clarification or any other notice of a change in the Bidding Documents will be issued only by the District and only in the form of a written Addendum, transmitted by fax, e-mail, or available for pick up or downloaded from the District's website listed above, to all who are known by the issuing office to have received a complete set of Bidding Documents. Any other purported Addenda are void and unenforceable.

Bidder is responsible for ascertaining the disposition of all Addenda issued regardless of District notification and to acknowledge all Addenda in the submitted sealed bid prior to the bid opening. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for inspection. Each Addendum will be numbered, dated, and identified with the Project number. Oral statements or any instructions in any form, other than Addendum as described above, shall be void and unenforceable. Addenda issued by the District and not noted as being acknowledged by bidder as required in the Bid Form, may result in the bid being deemed non-responsive.

31. CUPCCAA. This Project is being let in accordance with the California Uniform Public Construction Cost Accounting ("CUPCCAA") set forth in Public Contract Code section 22000 et seq. Bidders shall comply with any requirements set forth in the CUPCCAA including all guidelines and requirements in the current California Uniform Public Construction Cost Accounting Commission Cost Accounting Policies and Procedures Manual. Only Contractors included on the District's Qualified List shall submit bids for the Project as set forth in the CUPCCAA.

32. Debarment. Bidder may also be subject to debarment, in addition to seeking remedies for False Claims under Government Code section 12650 et seq. and Penal Code section 72, the District may debar a Contractor pursuant to Article 15 of the General Conditions if the Board, or the Board may designate a hearing officer who, in his or her discretion, finds the Contractor has done any of the following:

a. Intentionally or with reckless disregard, violated any term of a contract with the District

b. Committed an act or omission which reflects on the Contractor's quality, fitness or capacity to perform work for the District;

c. Committed an act or offense which indicates a lack of business integrity or business honesty; or,

d. Made or submitted a false claim against the District or any other public entity (See Government Code section 12650, et seq., and Penal Code section 72).

33. Fleet Compliance Certification Form. The District is a Public Works Awarding Body, as defined under Title 13 California Code of Regulations section 2449(c)(46). Accordingly, all Bidders must submit, with their Bids, valid Certificate(s) of Reported Compliance ("CRC") for the Bidder's fleet and for the fleet(s) of its listed subcontractors (including any applicable leased equipment or vehicles). Each Bidder must also complete and submit to the District, with its Bid, the enclosed Fleet Compliance Certification form for the Project. **FAILURE TO PROVIDE ALL APPLICABLE CRC'S TO THE DISTRICT FOR THE BIDDER, AND FOR ALL LISTED SUBCONTRACTORS, MAY RENDER A BID NON-RESPONSIVE. ADDITIONALLY, FAILURE TO COMPLETE AND SUBMIT THE**

ENCLOSED FLEET COMPLIANCE CERTIFICATION FORM, MAY RENDER A BID NON-RESPONSIVE.

34. Iran Contracting Act Certification Form. Each bidder shall submit a completed Iran Contracting Act Certification Form to the District with its Bid. Failure to (1) submit a fully executed Iran Contracting Act Certification Form to the District prior to the Bid Opening, or (2) complete any required portion of the Iran Contracting Act Certification Form may result in the bidder/Contractor being deemed non-responsive by the District.

35. False or Misleading Statements**.** A Bid which contains false or misleading statements, or which provides references which do not support an attribute or condition contended by the Bidder, may be rejected. If, in the opinion of the District, such information is deemed to be misleading, the District may reject the proposal.

36. Owner Contingency Amount. This Project shall have (1) contingency fund. The name of this fund shall be the Owner Contingency Fund. The Owner Contingency Fund shall be for the District's benefit and exclusive control and use. The contingency amount shall be fifteen percent (15%) of the base bid amount; any contingency amount is to cover unforeseen expenses that impact the scope of work. If unforeseen expenses arise, the contractor shall submit a written notice via email to Marisela Vasquez, Director of Facilities, Maintenance and Operations, at mvasquez@hawthorne.k12.ca.us, identifying the details of the unforeseen expense. Marisela Vasquez will review the written notice and may direct the Contractor to proceed with all or a portion of the contingencies described in the Contractor's written notice, or deny it. Any unused contingency funds shall be credited to the District upon completion of the project.

In the event that Contractor proceeds with any change in work without first notifying the District and obtaining the District's consent. Contractor waives any claim of additional compensation for such work, and Contractor takes the risk that a Notice of Non-compliance may be issued.

CHECKLIST OF MANDATORY BID FORMS

(For Contractor's use and reference only. Additional documents may be required so bidders should carefully review all Contract Documents and Bid Documents)

- ❑ Designation of Subcontractors
- ❑ Bid Form
- ❑ Contractor's Certificate Regarding Workers' Compensation
- ❑ Non-Collusion Declaration
- ❑ Bid Bond (or Bid Guarantee form if Security is other than Bid Bond)
- ❑ Substitution Request Form (If Substitution Request Form is not submitted then NO Substitutions will be allowed after the bids are opened)
- ❑ Acknowledgment of Bidding Practices Regarding Indemnity
- ❑ DVBE Participation Statement
- ❑ Contractor's Certificate Regarding Drug-Free Workplace
- ❑ Contractor's Certificate Regarding Alcoholic Beverage and Tobacco-Free Campus Policy
- ❑ Fleet Compliance Certification Form and All Applicable Certificates of Reported Compliance
- ❑ Iran Contracting Act Certification
- ❑ Contractor Certification Regarding Background Checks

PRE-BID CLARIFICATION FORM (For Contractor's Use)

PROJECT NAME:	HMS Turf Field & Track Improvements		
PROJECT NUMBER:	C27-302-03		
TO:	Aneska Kekula and Marisela Vasquez	EMAIL:	ikekula@hawthorne.k12.ca.us & mvasquez@hawthorne.k12.ca.us

DATE:			
FROM:		EMAIL:	
DOCUMENT/DIVISION NUMBER:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:
RESPONSE TO CLARIFICATION:

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

DESIGNATION OF SUBCONTRACTORS

In compliance with the Subletting and Subcontracting Fair Practices Act (California Public Contract Code section 4100 et seq.,) and any amendments thereof, each Bidder shall set forth below: (a) the name, license number, and location of the place of business of each subcontractor who will perform work or labor or render service to the Contractor, who will perform work or labor or work or improvement to be performed under this Contract, or a subcontractor licensed by the State of California who, under subcontract to the Contractor, specially fabricates and installs a portion of the work or improvements according to detailed Drawings contained in the Plans and Specifications in an amount in excess of one-half of one percent of the Contractor's total bid; and (b) the portion and description of the work which will be done by each subcontractor under this Act. The Contractor shall list only one subcontractor for each such portion as is defined by the Contractor in this bid. All subcontractors shall be properly licensed by the California State Licensing Board.

If a Contractor fails to specify a subcontractor, or if a 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 Contractor's total bid, the Contractor shall be deemed to have agreed that the Contractor is fully qualified to perform that portion, and that the Contractor alone shall perform that portion.

No Contractor whose bid is accepted shall (a) substitute any subcontractor, (b) permit any subcontractor to be voluntarily assigned or transferred or allow the relevant portion of the work 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 Contractor's total bid where 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 Contractor's total bid where no subcontractor was designated in the original bid shall only be permitted in cases of public emergency or necessity, and then only after a finding, reduced to writing as a public record, of the authority awarding this Contract setting forth the facts constituting the emergency or necessity.

All subcontractors (of any tier) performing any portion of the Work must comply with the Labor Code sections 1725.5 and 1771.1 and must be properly and currently registered with the California Department of Industrial Relations and qualified to perform public works pursuant to Labor Code section 1725.5 throughout the duration of the Project.

NOTE: If alternate bids are called for and bidder intends to use different or additional subcontractors on the alternates, a separate list of subcontractors must be provided for each such Alternate.

DESIGNATION OF SUBCONTRACTORS FORM

Scope of Work	Name of Subcontractor	Location & Place of Business	License Type and Number	DIR Registration Number	*E-Mail & Telephone**

55319186.1/000
834.00018

Scope of Work	Name of Subcontractor	Location & Place of Business	License Type and Number	DIR Registration Number	*E-Mail & Telephone**

* This information must be provided at the time of submission of bid or must be provided within 24 hours after the time set for the opening of bids. Bidders who choose to provide this information within 24 hours after the time set for the opening of bids are solely responsible to ensure the District receives this information in a timely manner. The District is not responsible for any problems or delays associated with emails, faxes, delivery, etc. Absent a verified fax or email receipt date and time by the District, the District's determination of whether the information was received timely shall govern and be determinative. Bidder shall not revise or amend any other information in this form submitted at the time of bid. The information submitted at the time of bid shall govern over any conflicts, discrepancies, ambiguities or other differences in any subsequent Subcontractor Designation Forms submitted by the bidder.

Proper Name of Bidder: _____

Date: _____

Name: _____

Signature of Bidder Representative: _____

Address: _____

Phone: _____

_____

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834.00018

BID FORM

FOR

HMS Turf Field & Track Improvements
4366 W. 129th Street, Hawthorne, CA 90250

CUPCCAA Bid No. C27-302-3

DSA Project No. 03-125961

FOR

HAWTHORNE SCHOOL DISTRICT

CONTRACTOR NAME: _____

ADDRESS: _____

_____

TELEPHONE: ( ) _____

FAX: ( ) _____

EMAIL _____

TO: Hawthorne School District, acting by and through its Governing Board, herein called "District".

1. Pursuant to and in compliance with your Notice Inviting Informal Bids and other documents relating thereto, the undersigned bidder, having thoroughly studied and familiarized himself with the terms of the Contract, the local conditions affecting the performance of the Contract, the cost of the work at the place where the work is to be done, the labor market, the supply chain market for materials and equipment necessary to complete the Project, with the Drawings and Specifications, and other Contract Documents, hereby proposes and agrees to perform within the time stipulated, the Contract, including all of its component parts, and everything required to be performed, including its acceptance by the District, and to provide and furnish any and all labor, materials, tools, expendable equipment, and utility and transportation services necessary to perform the Contract and complete all of the Work in a workmanlike manner required in connection with the construction of:

CUPCCAA BID NO. C27-302-3

DSA Project No. 03-125961

HMS Turf Field & Track Improvements

in the District described above, all in strict conformance with the drawings and other Contract Documents on file at the Purchasing Office of said District for amounts set forth herein.

2. BIDDER ACKNOWLEDGES THE FOLLOWING ADDENDUM:

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

Acknowledge the inclusion of all addenda issued prior to bid in the blanks provided above. Your failure to do so may render your bid non-responsive.

3. TOTAL CASH PURCHASE PRICE IN WORDS & NUMBERS:

Base Bid Amount $_____

15% Contingency Amount: $_____

Combined Total (Base Bid + Contingency): $_____

_____ DOLLARS

Write out the combined total amount. In the event of a conflict between the written and numeric versions of the combined bid amount, the written will prevail.

4. TIME FOR COMPLETION: The District may give a notice to proceed within ninety (90) days of the award of the bid by the District. Once the Contractor has received the notice to proceed, the Contractor shall complete the work in the time specified in the Agreement. By submitting this bid, Contractor has thoroughly studied this Project, the labor market, and the supply chain market for

materials and equipment that are necessary to complete the Project and Contractor agrees that the Contract Time for this Project is adequate for the timely and proper completion of the Project. Further, Contractor has included in the analysis of the time required for this Project, Rain Days, Governmental Delays, and the requisite time to complete the Punch List.

In the event that the District desires to postpone giving the notice to proceed beyond this ninety (90) day period, it is expressly understood that, with reasonable notice to the Contractor, giving the notice to proceed may be postponed by the District. It is further expressly understood by the Contractor, that the Contractor shall not be entitled to any claim of additional compensation as a result of the postponement of giving the notice to proceed.

If the Contractor believes that a postponement will cause a hardship to it, the Contractor may terminate the contract with written notice to the District within ten (10) days after receipt by the Contractor of the District's notice of postponement. Should the Contractor terminate the Contract as a result of a notice of postponement, the District shall have the authority to award the Contract to the next lowest responsible bidder, if applicable.

It is understood that the District reserves the right to reject any or all bids and/or waive any irregularities or informalities in this bid or in the bid process. The Contractor understands that it may not withdraw this bid for a period of ninety (90) days after the date set for the opening of bids.

5. Attached is bid security in the amount of not less than ten percent (10%) of the bid:

Bid bond (10% of the Bid), certified check, or cashier's check (circle one)

6. The required List of Designated Subcontractors is attached hereto.

7. The required Non-Collusion Declaration is attached hereto.

8. The Substitution Request Form, if applicable, is attached hereto.

9. It is understood and agreed that if written notice of the acceptance of this bid is mailed, telegraphed, or delivered to the undersigned after the opening of the bid, and within the time this bid is required to remain open, or at any time thereafter before this bid is withdrawn, the undersigned will execute and deliver to the District a Contract in the form attached hereto in accordance with the bid as accepted, and that he or she will also furnish and deliver to the District the Performance Bond and Payment Bond, all within five (5) calendar days after award of Contract, and that the work under the Contract shall be commenced by the undersigned bidder, if awarded the Contract, by the start date provided in the District's Notice to Proceed, and shall be completed by the Contractor in the time specified in the Contract Documents.

10. The names of all persons interested in the foregoing proposal as principals are as follows:

_____

_____

_____

_____

_____

(IMPORTANT NOTICE: If bidder or other interested person is a corporation, state the legal name of such corporation, as well as the names of the president, secretary, treasurer, and manager thereof; if a co-partnership, state the true names of the firm, as well as the names of all individual co-partners comprising the firm; if bidder or other interested person is an individual, state the first and last names in full.)

11. PROTEST PROCEDURES. If there is a bid protest, the grounds shall be submitted as set forth in the Instructions to Bidders.

12. The undersigned bidder shall be licensed and shall provide the following California Contractor's license information:

License Number: _____

License Expiration Date: _____

Name on License: _____

Class of License: _____

DIR Registration Number: _____

If the bidder is a joint venture, each member of the joint venture must include the above information.

13. Time is of the essence regarding this Contract, therefore, in the event the bidder to whom the Contract is awarded fails or refuses to post the required bonds and return executed copies of the Agreement form within five (5) calendar days from the date of receiving the Notice of Award, the District may declare the bidder's bid deposit or bond forfeited as damages.

14. The bidder declares that he/she has carefully examined the location of the proposed Project, that he/she has examined the Contract Documents, including the Plans, General Conditions, Supplemental Conditions, Addenda, and Specifications, all others documents and requirements that are attached to and/or contained in the Project Manual, all other documents issued to bidders and read the accompanying instructions to bidders, and hereby proposes and agrees, if this proposal is accepted, to furnish all materials and do all work required to complete the said work in accordance with the Contract Documents, in the time and manner therein prescribed for the unit cost and lump sum amounts set forth in this Bid Form. The undersigned bidder hereby acknowledges and agrees that such bidder shall not be entitled to any price increase to the Total Cash Purchase Price set forth above on account of or due to any external factors including, but not limited to, inflation, labor shortages, and/or supply chain issues/shortages.

15. DEBARMENT. In addition to seeking remedies for False Claims under Government Code section 12650 et seq. and Penal Code section 72, the District may debar a Contractor pursuant to Article 15 of the General Conditions if the Board, or the Board may designate a hearing officer who, in his or her discretion, finds the Contractor has done any of the following:

a. Intentionally or with reckless disregard, violated any term of a contract with the District;

b. Committed an act or omission which reflects on the Contractor's quality, fitness or capacity to perform work for the District;

c. Committed an act or offense which indicates a lack of business integrity or business honesty; or

d. Made or submitted a false claim against the District or any other public entity. (See Government Code section 12650, et seq., and Penal Code section 72)

16. DESIGNATION OF SUBCONTRACTORS. In compliance with the Subletting and Subcontracting Fair Practices Act (California Public Contract Code section 4100 et seq.) and any amendments thereof, each bidder shall list subcontractors on the District's form Subcontractor list. This subcontractor list shall be submitted with the bid and is a required form

I agree to receive service of notices at the e-mail address listed below.

I the below-indicated bidder, declare under penalty of perjury that the information provided and representations made in this bid are true and correct.

_____
Proper Name of Company

_____
Name of Bidder Representative

_____
Street Address

_____
City, State, and Zip

(_____)_____
Phone Number

(_____)_____
Fax Number

_____
E-Mail

By: _____ Date:_____
Signature of Bidder Representative

NOTE: If bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of authorized officers or agents and the document shall bear the corporate seal; if bidder is a partnership, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership; and if bidder is an individual, his signature shall be placed above.

All signatures must be made in permanent blue in

CONTRACTOR'S CERTIFICATE REGARDING WORKERS' COMPENSATION FORM

Labor Code section 3700 in relevant part provides:

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

1. By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this State.

2. By securing from the Director of Industrial Relations a certificate of consent to self-insure, 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 employees.

3. 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 provision before commencing the performance of the work of this Contract.

_____

(Signature)

_____

(Print)

_____

(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 submitted with the Contractor's bid.

NON-COLLUSION DECLARATION

The undersigned declares:

I am the _____ [Title] of _____ [Name of Company], the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

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

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

Signed: _____

Typed Name: _____

BID GUARANTEE FORM

(Use only when not using a Bid Bond)

Accompanying this proposal is a cashier's check payable to the order of the Hawthorne School District or a certified check payable to the order of the Hawthorne School District in an amount equal to ten percent (10%) of the base bid and alternates ($_____).

The proceeds of this check shall become the property of said District, if, this proposal shall be accepted by the District through the District's Governing Board, and the undersigned fails to execute a Contract with and furnish the sureties required by the District within the required time; otherwise, said check is to be returned to the undersigned.

_____

Bidder

Note: Use this form, in lieu of Bid Bond form, when a cashier's check or certified check is accompanying the bid

BID BOND FORM

KNOW ALL MEN BY THESE PRESENT that we, the undersigned, (hereafter called "Principal"), and _____ (hereafter called "Surety"), NAIC No. _____, are hereby held and firmly bound unto the Hawthorne School District (hereafter called "District") in the sum of _____ ($_____) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors, and assigns.

SIGNED this _____ day of _____, 20___.

The condition of the above obligation is such that whereas the Principal has submitted to the District a certain Bid, attached hereto and hereby made a part hereof, to enter into a Contract in writing for the construction of _____.

NOW, THEREFORE,

a. If said Bid is rejected, or

b. If said Bid is accepted and the Principal executes and delivers a Contract or the attached Agreement form within five (5) calendar days after acceptance (properly completed in accordance with said Bid), and furnishes bonds for his faithful performance of said Contract and for payment of all persons performing labor or furnishing materials in connection therewith,

Then this obligation shall be void; otherwise, the same shall remain in force and effect.

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 the work to be performed thereunder, or the specifications accompanying the same, shall in anyway 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 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 without limitation, attorneys' fees to be fixed by the court.

IN WITNESS WHEREOF, Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year first set forth above.

By _____
Principal's Signature

(Corporate Seal)

_____
Typed or Printed Name

_____
Principal's Title

By _____
Surety's Signature

(Corporate Seal)

_____
Typed or Printed Name

_____
Title

_____
Surety's Name

(Attached Attorney in Fact Certificate)

_____
Surety's Address

_____
Surety's Phone Number

IMPORTANT:

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code section 105, and if the work or project is financed, in whole or in part, with federal, grant, or loan funds, it must also appear on the Treasury Department's most current list (Circular 570 as amended).

THIS IS A REQUIRED FORM.

Any claims under this bond may be addressed to:

(Name and Address of Surety)

_____

_____

_____

(Name and Address of agent or representative for
service of process in California if different from above)

_____

_____

_____

(Telephone Number of Surety and agent or
representative for service of process in California).

_____

_____

_____

REQUEST FOR SUBSTITUTION AT TIME OF BID

Pursuant to Public Contract Code section 3400, bidder submits the following request to Substitute with the bid that is submitted. I understand that if the request to substitute is not an "or equal" or is not accepted by District and I answer "no" I will not provide the specified item, then I will be held non-responsive and my bid will be rejected. With this understanding, I hereby request Substitution of the following articles, devices, equipment, products, materials, fixtures, patented processes, forms, methods, or types of construction:

	Specification Section	Specified Item	Requested Substituted Item	Contractor Agrees to Provide Specified Item if request to Substitute is Denied[1] (circle one)	District Decision (circle one)
1.				Yes No	Grant Deny
2.				Yes No	Grant Deny
3.				Yes No	Grant Deny
4.				Yes No	Grant Deny
5.				Yes No	Grant Deny
6.				Yes No	Grant Deny
7.				Yes No	Grant Deny
8.				Yes No	Grant Deny
9.				Yes No	Grant Deny
10.				Yes No	Grant Deny
11.				Yes No	Grant Deny
12.				Yes No	Grant Deny

This Request Form must be accompanied by evidence as to whether the proposed Substitution (1) is equal in quality, service, and ability to the Specified Item; (2) will entail no change in detail,

[1] Bidder must state whether bidder will provide the Specified Item in the event the Substitution request is evaluate and denied. If bidder states that bidder will not provide the Specified Item the denial of a request to Substitute shall result in the rejection of the bidder as non-responsive. However, if bidder states that bidder will provide the Specified Item in the event that bidder's request for Substitution is denied, bidder shall execute the Agreement and provide the Specified Item(s). If bidder refuses to execute the Agreement due to the District's decision to require the Specified Item(s) at no additional cost, bidder's Bid Bond shall be forfeited.

construction, and scheduling of related work; (3) will be acceptable in consideration of the required design and artistic effect; (4) will provide no cost disadvantage to the District; (5) will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; (6) will require no change of the construction schedule or milestones for the Project; and, (7) Contractor agrees to pay for any DSA Fees or other Governmental Plan check costs associated with this Substitution Request. (See General Conditions Section 3.6)

The undersigned states that the following paragraphs are correct:

1. The proposed Substitution does not affect the dimensions shown on the Drawings.

2. The undersigned will pay for changes to the building design, including Architect, engineering, or other consultant design, detailing, DSA plan check or other governmental plan check costs, and construction costs caused by the requested substitution.

3. The proposed substitution will have no adverse effect on other trades, the Contract Time, or specified warranty requirements.

4. Maintenance and service parts will be available locally for the proposed substitution.

5. In order for the Architect to properly review the substitution request, within five (5) days following the opening of bids, the Contractor shall provide samples, test criteria, manufacturer information, and any other documents requested by Architect or Architect's engineers or consultants, including the submissions that would ordinarily be required under Article 3.7 for Shop Drawings along with a document which provides a side by side comparison of key characteristics and performance criteria (often known as a CSI side by side comparison chart).

6. If Substitution Request is accepted by the District, Contractor is still required to provide a Submittal for the substituted item pursuant to Article 3.7 and shall provide required Schedule information (including schedule fragnets, if applicable) for the substituted item as required under Article 8.3.2.1. The approval of the Architect, Engineer, or District of the substitution request does not mean that the Contractor is relieved of Contractor's responsibilities for Submittals, Shop Drawings, and schedules under Article 3.7 and 8.3.2 if the Contractor is awarded the Project.

Name of Bidder: _____

By: _____

District: _____

By: _____

ACKNOWLEDGMENT OF BIDDING PRACTICES REGARDING INDEMNITY FORM

TO: Hawthorne School District

RE: Project Number _____

Construction Contract for _____

Please be advised that with respect to the above-referenced Project the undersigned Contractor on behalf of itself and all subcontractors hereby waives the benefits and protection of Labor Code section 3864, which provides:

"If an action as provided in this chapter is prosecuted by the employee, the employer, or both jointly against the third person results in judgment against such third person, the employer shall have no liability to reimburse or hold such third person harmless on such judgment or settlement in the absence of a written agreement to do so executed prior to the injury."

This Agreement has been signed by an authorized representative of the contracting party and shall be binding upon its successors and assignees. The undersigned further agrees to promptly notify the District of any changes of ownership of the contracting party or any subcontractor while this Agreement is in force.

_____

Contracting Party

_____

Name of Agent/Title

DISABLED VETERAN BUSINESS ENTERPRISE (DVBE) PARTICIPATION STATEMENT

Each bidder must complete this form in order to comply with the Hawthorne School District ("District") policy for participation of disabled veteran business enterprises (School District projects funded in whole or in part by the State of California pursuant to the Leroy F. Greene School Facilities Act of 1998. (Education Code §17070.10, *et seq*.)

Project Name: _____

CUPCCAA Bid No.: _____

DSA No.: _____

The undersigned, on behalf of the Contractor named below, certifies that the Contractor has made reasonable efforts to secure participation by DVBE in the Contract to be awarded for the above-referenced CUPCCAA Bid No., including participation by DVBE subcontractors and/or material suppliers. **Check only one of the following**:

- ☐ The Contractor was unable after reasonable efforts to secure DVBE participation in the Contract for the above-referenced Project/CUPCCAA Bid No. However, the Contractor will use DVBE services if the opportunity arises at any time during construction of the Project. Upon completion of the Project, the Contractor will report to the District the total dollar amount of DVBE participation in any Contract awarded to Contractor, and in any change orders, for the above-referenced Project.

- ☐ The Contractor has secured DVBE participation in the Contract for the above referenced Project/CUPCCAA Bid No., and anticipates that such DVBE participation will equal approximately _____dollars ($_____), which represents approximately _____percent (___%) of the total Contract for such Project. Upon completion of the Project, Contractor will report to the District the actual total dollar amount of DVBE participation in the Contract awarded to Contractor, and in any change orders, for such Project

Company: _____

Name: _____

Title: _____

Signature: _____

Date: _____

CONTRACTOR'S CERTIFICATE REGARDING DRUG-FREE WORKPLACE

This Drug-Free Workplace Certification form is required from all successful bidders pursuant to the requirements mandated by Government Code section 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 or grant for the procurement of any property or service from any State agency must certify that it will provide a drug-free workplace by performing certain specified acts. In addition, the Act provides that each contract or grant awarded by a State agency may be subject to suspension of payments or termination of the contract or grant, and the Contractor or grantee may be subject to debarment from future contracting, if the contracting agency determines that specified acts have occurred.

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

1. 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.

2. Establishing a drug-free awareness program to inform employees about all of the following:

   a. The dangers of drug abuse in the workplace;
   b. The person's or organization's policy of maintaining a drug-free workplace;
   c. The availability of drug counseling, rehabilitation and employee-assistance programs; and
   d. The penalties that may be imposed upon employees for drug abuse violations;

3. Requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required by subdivision (a) and that, as a condition of employment on the contract or grant, 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 (a) publish a statement notifying employees concerning the prohibition of controlled substance at the workplace, (b) establish a drug-free awareness program, and (c) require each employee engaged in the performance of the contact be given a copy of the statement required by section 8355(a) and require such employee agree to abide by the terms of that statement.

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

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

DATE:_____ _____

CONTRACTOR

By:_____

Signature

CONTRACTOR'S CERTIFICATE REGARDING ALCOHOLIC BEVERAGE AND TOBACCO-FREE CAMPUS POLICY

The Contractor agrees that it will abide by and implement the District's Alcoholic Beverage and Tobacco-Free Campus Policy, which prohibits the use of alcoholic beverages and tobacco products, of any kind and at any time, in District-owned or leased buildings, on DISTRICT property and in DISTRICT vehicles. The Contractor shall procure signs stating "ALCOHOLIC BEVERAGE AND TOBACCO USE IS PROHIBITED" and shall ensure that these signs are prominently displayed in all entrances to school property at all times.

DATE:_____

_____
CONTRACTOR

By:_____
Signature

FLEET COMPLIANCE CERTIFICATION

Bidder hereby acknowledges that they have reviewed the California Air Resources Board's policies, rules and regulations and are familiar with the requirements of Title 13, California Code of Regulations, Division 3, Chapter 9, effective on January 1, 2024 (the "Regulation"). Bidder hereby certifies, subject to penalty for perjury, that the option checked below relating to the Bidder's fleet, and that of their subcontractor(s) (collectively the "Fleet") is true and correct:

- ☐ The Fleet is subject to the requirements of the Regulation, and the appropriate Certificate(s) of Reported Compliance have been attached hereto.

- ☐ The Fleet is exempt from the Regulation under section 2449.1(f)(2), and a signed description of the subject vehicles, and reasoning for exemption has been attached hereto.

- ☐ Bidder and/or their subcontractor is unable to procure R99 or R100 renewable diesel fuel as defined in the Regulation pursuant to section 2449.1(f)(3). Bidder shall keep detailed records describing the normal refueling methods, their attempts to procure renewable diesel fuel and proof that shows they were not able to procure renewable diesel (i.e. third party correspondence or vendor bids).

- ☐ The Fleet is exempt from the requirements of the Regulation pursuant to section 2449(i)(4) because this Project has been deemed an Emergency, as defined under section 2449(c)(18). Bidder shall only operate the exempted vehicles in the emergency situation and records of the exempted vehicles must be maintained, pursuant to section 2449(i)(4).

- ☐ The Fleet does not fall under the Regulation or are otherwise exempted and a detailed reasoning is attached hereto.

Name of Bidder: _____

Signature: _____

Name: _____

Title: _____

Date: _____

IRAN CONTRACTING ACT CERTIFICATION
OF ELIGIBILITY TO PROPOSAL FOR
CONTRACTS OF $ 1 MILLION OR MORE
(Public Contract Code sections 2202-2208)

Pursuant to Public Contract Code 2204. (a) A public entity shall require a person that submits a proposal or proposal to, or otherwise proposes to enter into or renew a contract with, a public entity with respect to a contract for goods or services of one million dollars ($1,000,000) or more to certify, at the time the proposal is submitted or the contract is renewed, that the person is not identified on a list created pursuant to subdivision (b) of Section 2203 as a person engaging in investment activities in Iran described in subdivision (a) of Section 2202.5, or as a person described in subdivision (b) of Section 2202.5, as applicable. A state agency shall submit the certification information to the Department of General Services.

To comply with this requirement, please insert your Contractor or financial institution name and Federal ID Number (if available) and complete **one** of the options below. Please note: California law establishes penalties for providing false certifications, including civil penalties equal to the greater of $250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to proposal on contracts. (Public Contract Code section 2205.)

OPTION #1 – CERTIFICATION
I, the official named below, certify I am duly authorized to execute this certification on behalf of the Contractor/financial institution identified below, and the Contractor/financial institution identified below is not on the current list of persons engaged in investment activities in Iran created by DGS and is not a financial institution extending twenty million dollars ($20,000,000) or more in credit to another person/vendor, for 45 days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

Contractor Name/Financial Institution	*Federal ID Number (or n/a)*
By (Authorized Signature)	
Printed Name and Title of Person Signing	
Date Executed	*Executed in*

OPTION #2 – EXEMPTION

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a contractor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to proposal on, submit a proposal for, or enters into or renews, a contract for goods and services.

If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below, and attach documentation demonstrating the exemption approval.

Contractor Name/Financial Institution	*Federal ID Number (or n/a)*
By (Authorized Signature)	
Printed Name and Title of Person Signing	*Date Executed*

Sample – Do not submit with bid

AGREEMENT FORM

THIS AGREEMENT, entered into this____ day of_____, 20__ in the County of Orange of the State of California, by and between the Hawthorne School District, hereinafter called the "District", and _____, hereinafter called the "Contractor". Contractor acknowledges that this Project is being awarded in accordance with the California Uniform Public Construction Cost Accounting ("CUPCCAA") set forth in Public Contract Code section 22000 et seq. Bidders shall comply with any requirements set forth in the CUPCCAA including all guidelines and requirements in the current California Uniform Public Construction Cost Accounting Commission Cost Accounting Policies and Procedures Manual. Contractor shall cooperate with the District and provide any requested information or documents as requested by the District to comply with the CUPCCAA including, but not limited to, all Project cost data, invoices, accounting records, payroll records, etc.

WITNESSETH that the District and the Contractor for the consideration stated herein agree as follows:

ARTICLE 1 - SCOPE OF WORK: The Contractor shall furnish all labor, materials, equipment, tools, and utility and transportation services, and perform and complete all work required in connection with _____ ("Project") in strict accordance with the Contract Documents enumerated in Article 7 below. The Contractor shall be liable to the District for any damages arising as a result of a failure to comply with that obligation, and the Contractor shall not be excused with respect to any failure to so comply by an act or omission of the Architect, Engineer, Inspector, Division of the State Architect (DSA), or representative of any of them, unless such act or omission actually prevents the Contractor from fully complying with the Contract Documents and the Contractor protests, in accordance with the Contract Documents, that the act or omission is preventing the Contractor from fully complying with the Contract Documents. Such protest shall not be effective unless reduced to writing and filed with the District office within seven (7) days of the date of occurrence of such act or omission preventing the Contractor from fully complying with the Contract Documents.

ARTICLE 2 - TIME OF COMPLETION: The District may give notice to proceed within ninety (90) days of the award of the bid by the District. Once the Contractor has received a notice to proceed, the Contractor shall reach Substantial Completion (See Article 1.1.46) of the Work within eighty (80) working days from receipt of the Notice to Proceed. This shall be called Contract Time. (See Article 8.1.1). It is expressly understood that time is of the essence.

Contractor has thoroughly studied the Project, the labor market, and the supply chain market for materials and equipment that are necessary to complete the Project, and has satisfied itself that the time period for this Project was adequate for the timely and proper completion of the Project within each milestone and within the Contract time. Further, Contractor has included in the analysis of the time required for this Project, items set forth in General Conditions Article 8.3.2.1, Submittal Schedules, Rain Day Float, and Governmental Delay Float.

In the event that the District desires to postpone giving the notice to proceed beyond this ninety (90) day period, it is expressly understood that with reasonable notice to the Contractor, giving the notice

to proceed may be postponed by the District. It is further expressly understood by the Contractor, that the Contractor shall not be entitled to any claim of additional compensation as a result of the District's postponement of giving the notice to proceed.

If the Contractor believes that a postponement will cause hardship to it, the Contractor may terminate the Contract with written notice to the District within ten (10) days after receipt by the Contractor of the District's notice of postponement. It is further understood by the Contractor that in the event that the Contractor terminates the Contract as a result of postponement by the District, the District shall only be obligated to pay the Contractor for the work performed by the Contractor at the time of notification of postponement. Should the Contractor terminate the Contract as a result of a notice of postponement, the District shall have the authority to award the Contract to the next lowest responsible bidder.

ARTICLE 3 - LIQUIDATED DAMAGES: It being impracticable and infeasible to determine the amount of actual damage, it is agreed that the Contractor will pay the District the sum of one thousand five hundred dollars ($1,500.00) per calendar day for each and every day of delay beyond the Contract Time set forth in Article 2 of this Agreement (inclusive of Milestones that are critical on the critical path or noted as critical to the District) as liquidated damages and not as a penalty or forfeiture. In the event Liquidated Damages are not paid, the Contractor further agrees that the District may deduct such amount thereof from any money due or that may become due the Contractor under the Contract (See Article 9.6 and 2.2 of the General Conditions).

ARTICLE 4 - CONTRACT PRICE: The District shall pay to the Contractor as full consideration for the faithful performance of the Contract, subject to any additions or deductions as provided in the Contract Documents, the sum of _____ DOLLARS ($_____), said sum being the total amount stipulated in the Bid Contractor submitted. Payment shall be made as set forth in the General Conditions.

Should any Change Order result in an increase in the Contract Price, the cost of such Change Order shall be agreed to in advance by the Contractor and the District, subject to the monetary limitations set forth in Public Contract Code section 20118.4. In the event that the Contractor proceeds with a Change in work without an agreement between the District and Contractor regarding the cost of a Change Order, the Contractor waives any Claim of additional compensation for such additional work. In no event shall the Contractor be entitled to increase the Contract Price set forth above on account of any external factors including, but not limited to, inflation, labor shortages, and/or supply chain issues/shortages.

ARTICLE 5 - HOLD HARMLESS AGREEMENT: Contractor shall defend, indemnify and hold harmless District, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from any and all liabilities, claims, actions, liens, judgments, demands, damages, losses, costs or expenses of any kind arising from death, personal injury, property damage or other cause based or asserted upon any act, omission, or breach connected with or arising from the progress of Work or performance of service under this Agreement or the Contract Documents. As part of this indemnity, Contractor shall protect and defend, at its own expense, District, Architect, Construction Manager, Inspector, the State of California and their officers, employees, agents and independent contractors from any legal action including attorney's fees or other proceeding based upon such act, omission, breach or as otherwise required by this Article.

Furthermore, Contractor agrees to and does hereby defend, indemnify and hold harmless District, Architect, Construction Manager, Inspector, the State of California and their officers, employees, agents and independent contractors from every claim or demand made, and every liability, loss, damage, expense or attorney's fees of any nature whatsoever, which may be incurred by reason of:

(a) Liability for (1) death or bodily injury to persons; (2) damage or injury to, loss (including theft), or loss of use of, any property; (3) any failure or alleged failure to comply with any provision of law or the Contract Documents; or (4) any other loss, damage or expense, sustained by any person, firm or corporation or in connection with the Work called for in this Agreement or the Contract Documents, except for liability resulting from the sole or active negligence, or the willful misconduct of the District.

(b) Any bodily injury to or death of persons or damage to property caused by any act, omission or breach of Contractor or any person, firm or corporation employed by Contractor, either directly or by independent contract, including all damages or injury to or death of persons, loss (including theft) or loss of use of any property, sustained by any person, firm or corporation, including the District, arising out of or in any way connected with Work covered by this Agreement or the Contract Documents, whether said injury or damage occurs either on or off District property, but not for any loss, injury, death or damages caused by the sole or active negligence or willful misconduct of the District.

(c) Any dispute between Contractor and Contractor's subcontractors/suppliers/ Sureties, including, but not limited to, any failure or alleged failure of the Contractor (or any person hired or employed directly or indirectly by the Contractor) to pay any Subcontractor or Materialman of any tier or any other person employed in connection with the Work and/or filing of any stop notice or mechanic's lien claims.

(d) Any claims, allegations, penalties, assessments, or liabilities to the extent caused by the Contractor's failure or the failure of any Subcontractor of any tier, to fully comply with the DIR registration requirements under Labor Code section 1725.5 at all times during the performance of any Work on the Project and shall reimburse the District for any penalties assessed against the District arising from any failure by the Contractor or any Subcontractor of any tier from complying with Labor Code sections 1725.5 and 1771.1. Nothing in this paragraph, however, shall require the Contractor or any Subcontractor to be liable to the District or indemnify the District for any penalties caused by the District in accordance with Labor Code section 1773.3 (g).

(e) Any claims, allegations, penalties, assessments, liabilities, costs, or interest arising out of or founded upon any failure or alleged failure of the Contractor or its Subcontractors to comply with the Fleets Regulation.

Contractor, at its own expense, cost, and risk, shall defend, with counsel of the District's choosing, any and all claims, actions, suits, or other proceedings that may be brought or instituted against the District, its officers, agents or employees, on account of or founded upon any cause, damage, or injury identified herein Article 5 and shall pay or satisfy any judgment that may be rendered against the District, its officers, agents or employees in any action, suit or other proceedings as a result thereof.

The Contractor's and Subcontractors' obligation to defend, indemnify and hold harmless the Owner, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors hereunder shall include, without limitation, any and all claims, damages, and costs for the following: (1) any damages or injury to or death of any person, and damage or injury to, loss (including theft), or loss of use of, any property; (2) breach of any warranty, express or implied; (3) failure of the

Contractor or Subcontractors to comply with any applicable governmental law, rule, regulation, or other requirement; (4) products installed in or used in connection with the Work; and (5) any claims of violation of the Americans with Disabilities Act ("ADA").

Contractor shall reimburse Owner, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. The only limitations on this provision shall be those imposed by Civil Code Section 2782. Such indemnification shall extend to all claims, demands, or liabilities occurring after completion of the Project as well as during the progress of the Work.

This Hold Harmless Agreement shall survive termination of this Agreement, for any reason whatsoever, and binds each party's legal representatives, successors, and assigns.

ARTICLE 6 - PROVISIONS REQUIRED BY LAW: Each and every provision of law and clause required to be inserted in this Contract shall be deemed to be inserted herein, and this Contract 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 inserted correctly, then upon application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

ARTICLE 7 - COMPONENT PARTS OF THE CONTRACT: The Contract entered into by this Agreement consists of the following Contract Documents, all of which are component parts of the Contract as if herein set out in full or attached hereto.

Notice Inviting Bids
Instructions to Bidders
Designation of Subcontractors
Non-Collusion Declaration
Bid Guarantee Form
Bid Bond
Bid Form
Contractor's Certificate Regarding Worker's Compensation
Acknowledgment of Bidding Practices Regarding Indemnity
DVBE Participation Statement and Close-Out Forms
Agreement Form
Payment Bond
Performance Bond
Guarantee
Escrow Agreement for Security Deposit In Lieu of Retention
Workers' Compensation/Employers Liability Endorsement
General Liability Endorsement
Automobile Liability Endorsement
Contractor's Certificate Regarding Drug-Free Workplace
Contractor's Certificate Regarding Alcohol and Tobacco
Contractor's Certificate Regarding Background Checks
Iran Contracting Act Certification Form
Fleet Compliance Certification Form
All Certificates of Reported Compliance and/or written Exemption(s) related to Contractor compliance with the Fleets Regulation (for Contractor and all listed Subcontractors)

General Conditions
Supplementary and Special Conditions
Specifications
All Addenda as Issued
Drawings/Plans
Substitution Request Form
Requirements, Reports and/or Documents in the Project Manual or Other Documents Issued to Bidders
All other applicable provisions, requirements, documents and/or reports that are incorporated herein the Contract by reference in any of the Contract Documents detailed above

All of the above named Contract Documents are intended to be complementary. Work required by one of the above named Contract Documents and not by others shall be done as if required by all.

ARTICLE 8 - PREVAILING WAGES: Wage rates for this Project shall be in accordance with the general prevailing rate of holiday and overtime work in the locality in which the work is to be performed for each craft, classification, or type of work needed to execute the Contract as determined by the Director of the Department of Industrial Relations. Copies of schedules of rates so determined by the Director of the Department of Industrial Relations are on file at the administrative office of the District and are also available from the Director of the Department of Industrial Relations. Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE).

The following are hereby referenced and made a part of this Agreement and Contractor stipulates to the provisions contained therein.

1. Chapter 1 of Part 7 of Division 2 of the Labor Code (Section 1720 et seq.)

2. California Code of Regulations, Title 8, Chapter 8, Subchapters 3 through 6 (Section 16000 et seq.)

ARTICLE 9 - RECORD AUDIT: In accordance with Government Code section 8546.7(and Davis Bacon, if applicable) and Article 13.11 of the General Conditions, records of both the District and the Contractor shall be subject to examination and audit for a period of five (5) years after a Final Retention Payment or the Recording of a Notice of Completion, whichever occurs first.

ARTICLE 10 - CONTRACTOR'S LICENSE: The Contractor must possess throughout the Project a **Class B** Contractor's License, issued by the State of California, which must be current and in good standing.

IN WITNESS WHEREOF, this Agreement has been duly executed by the above-named parties, on the day and year first above written.

HAWTHORNE SCHOOL DISTRICT

Mara Pagniano

Associate Superintendent, Business Services

_____

Signature

Dated: _____

CONTRACTOR:

_____

Typed or Printed Name

_____

Title

_____

Signature

_____

Type or Printed Name

_____

Title (Authorized Officers or Agents)

_____

Signature

Dated: _____

(CORPORATE SEAL)

PAYMENT BOND

(CALIFORNIA PUBLIC WORK)

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, the HAWTHORNE SCHOOL DISTRICT (sometimes referred to hereinafter as "Obligee") has awarded to _____ (hereinafter designated as the "Principal" or "Contractor"), an agreement for the work described as follows: _____ (hereinafter referred to as the "Public Work"); and

WHEREAS, said Contractor is required to furnish a bond in connection with said Contract, and pursuant to California Civil Code section 9550;

NOW, THEREFORE, We, _____, the undersigned Contractor, as Principal; and _____, a corporation organized and existing under the laws of the State of _____, NAIC #_____, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the HAWTHORNE SCHOOL DISTRICT and to any and all persons, companies, or corporations entitled by law to file stop notices under California Civil Code section 9100, or any person, company, or corporation entitled to make a claim on this bond, in the sum of _____ Dollars ($_____), such sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which payment will and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, its heirs, executors, administrators, successors, or assigns, or subcontractor, shall fail to pay any person or persons named in Civil Code section 9100; or fail to pay for any materials, provisions, 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 Unemployment Insurance Code section 13020 with respect to work and labor thereon of any kind, then said Surety will pay for the same, in an amount not exceeding the amount herein above set forth, and in the event suit is brought upon this bond, also will pay such reasonable attorneys' fees as shall be fixed by the court, awarded and taxed as provided in California Civil Code section 9550 et seq.

This bond shall inure to the benefit of any person named in Civil Code section 9100 giving such person or his/her assigns a right of action 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, or specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described; or pertaining or relating to the furnishing of labor, materials, or equipment therefor; nor by any change or modification of any terms of payment or

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extension of time for payment pertaining or relating to any scheme or work of improvement herein above 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 the Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the Obligee and the Contractor or on the part of any obligee named in such bond; that the sole condition of recovery shall be that the claimant is a person described in California Civil Code section 9100, and who has not been paid the full amount of his or her claim; and that the Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned.

IN WITNESS WHEREOF this instrument has been duly executed by the Principal and Surety above named, on the_____ day of _____, 20___.

PRINCIPAL/CONTRACTOR:

_____

By: _____

SURETY:

_____

By: _____
Attorney-in-Fact

IMPORTANT: THIS IS A REQUIRED FORM.

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)	(Name and Address of agent or representative for service for service of process in California)
_____	_____
_____	_____
Telephone:_____	Telephone: _____

A notary public or other office completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

On _____, before me, _____, personally appeared _____, who proved on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) as the Attorney-in-Fact of _____ (Surety) and acknowledged to me that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____ (SEAL)
Notary Public in and for said State

Commission expires:_____

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be attached hereto.

PERFORMANCE BOND

(CALIFORNIA PUBLIC WORK)

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, the HAWTHORNE SCHOOL DISTRICT (sometimes referred to hereinafter as "Obligee") has awarded to _____ (hereinafter designated as the "Principal" or "Contractor"), an agreement for the work described as follows: _____ (hereinafter referred to as the "Public Work"); and

WHEREAS, the work to be performed by the Contractor is more particularly set forth in that certain contract for said Public Work dated _____ _____, (hereinafter referred to as the "Contract"), which Contract is incorporated herein by this reference; and

WHEREAS, the Contractor is required by said Contract to perform the terms thereof and to provide a bond both for the performance and guaranty thereof.

NOW, THEREFORE, we, _____, the undersigned Contractor, as Principal, and _____, a corporation organized and existing under the laws of the State of _____, NAIC #_____sand duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the HAWTHORNE SCHOOL DISTRICT in the sum of _____ Dollars ($_____), said sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which amount 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 the bounded Contractor, his or her heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in said Contract and any alteration thereof made as therein provided, on his or her part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill guarantees of all materials and workmanship; and indemnify, defend and save harmless the Obligee, its officers and agents, as stipulated in said Contract, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

The Surety, for value received, hereby stipulates and agrees that it shall not be exonerated or released from the obligation of this bond (either by total exoneration or pro tanto) by any change, extension of time, alteration in or addition to the terms of the contract or to the work to be performed there under or the specifications accompanying the same, nor by any change or modification to any terms of payment or extension of time for any payment pertaining or relating to any scheme of work of improvement under the contract. Surety also stipulates and agrees that it shall not be exonerated or released from the obligation of this bond (either by total exoneration or pro tanto) by any overpayment or underpayment by the Obligee that is based upon estimates approved by the Architect. The Surety stipulates and agrees that none of the aforementioned changes, modifications, alterations, additions,

extension of time or actions shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, modifications, alterations, additions or extension of time to the terms of the contract, or to the work, or the specifications as well notice of any other actions that result in the foregoing.

Whenever Principal shall be, and is declared by the Obligee to be, in default under the Contract, the Surety shall promptly either remedy the default, or shall promptly take over and complete the Contract through its agents or independent contractors, subject to acceptance and approval of such agents or independent contractors by Obligee as hereinafter set forth, in accordance with its terms and conditions and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of Liquidated Damages; or, at Obligee's sole discretion and election, Surety shall obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Obligee of the lowest responsible bidder, arrange for a contract between such bidder and the Obligee and make available as Work progresses (even though there should be a default or succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the "balance of the Contract Price" (as hereinafter defined), and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of Liquidated Damages. The term "balance of the Contract Price," as used in this paragraph, shall mean the total amount payable to Principal by the Obligee under the Contract and any modifications thereto, less the amount previously paid by the Obligee to the Principal, less any withholdings by the Obligee allowed under the Contract. Obligee shall not be required or obligated to accept a tender of a completion contractor from the Surety.

Surety expressly agrees that the Obligee may reject any agent or contractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal. Unless otherwise agreed by Obligee, in its sole discretion, Surety shall not utilize Principal in completing the Contract nor shall Surety accept a bid from Principal for completion of the work in the event of default by the Principal.

No final settlement between the Obligee and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

The Surety shall remain responsible and liable for all patent and latent defects that arise out of or relate to the Contractor's failure and/or inability to properly complete the Public Work as required by the Contract and the Contract Documents. The obligation of the Surety hereunder shall continue so long as any obligation of the Contractor remains.

Contractor and Surety agree that if the Obligee is required to engage the services of an attorney in connection with enforcement of the bond, Contractor and Surety shall pay Obligee's reasonable attorneys' fees incurred, with or without suit, in addition to the above sum.

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

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

PRINCIPAL/CONTRACTOR:

_____

By: _____

SURETY:

_____

By: _____
Attorney-in-Fact

The rate of premium on this bond is _____ per thousand.

The total amount of premium charged: $_____ (This must be filled in by a corporate surety).

IMPORTANT: THIS IS A REQUIRED FORM.

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)	(Name and Address of agent or representative for service for service of process in California)
_____	_____
_____	_____
Telephone:_____	Telephone: _____

A notary public or other office completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

On _____, before me, _____, personally appeared _____, who proved on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) as the Attorney-in-Fact of _____ (Surety) and acknowledged to me that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____ (SEAL)
Notary Public in and for said State

Commission expires:_____

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be attached hereto.

GUARANTEE

Guarantee for _____. We hereby guarantee that the _____, which we have installed in _____ _____ has been done in accordance with the Contract Documents, including without limitation, the drawings and specifications, and that the work as installed will fulfill the requirements included in the bid documents. The undersigned and its surety agrees to repair or replace any or all such work, together with any other adjacent work, which may be displaced in connection with such replacement, that may prove to be defective in workmanship or material within a period of One (1) year from the date of the Notice of Completion of the above-mentioned structure by the Hawthorne School District, ordinary wear and tear and unusual abuse or neglect excepted.

In the event the undersigned or its surety fails to comply with the above-mentioned conditions within a reasonable period of time, as determined by the District, but not later than ten (10) days after being notified in writing by the District or within forty eight (48) hours in the case of an emergency or urgent matter, the undersigned and its surety authorizes the District to proceed to have said defects repaired and made good at the expense of the undersigned and its surety, who will pay the costs and charges therefor upon demand. The undersigned and its surety shall be jointly and severally liable for any costs arising from the District's enforcement of this Guarantee.

	Countersigned
_____	_____
(Proper Name)	(Proper Name)
By: _____	By: _____
_____	_____
(Signature of Subcontractor or Contractor)	(Signature of General Contractor if for Subcontractor)

Representatives to be contacted for service:

Name: _____

Address: _____

_____

Phone Number: _____

ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into by and between the Hawthorne School District, 14120 S. Hawthorne Blvd., Hawthorne, CA 90250, hereinafter called "Owner", and _____ whose address is _____, hereinafter called "Contractor", and _____ whose address is _____, hereinafter called "Escrow Agent".

For the consideration hereinafter set forth, the Owner, 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 Owner pursuant to the Construction Contract entered into between the Owner and Contractor for ____ _____in the amount of _____ dated _____ (hereinafter referred to as the "Contract"). Alternatively, on written request of the Contractor, the Owner shall make payments of the Retention earnings directly to the escrow agent. When Contractor deposits the securities as a substitute for Contract earnings, the Escrow Agent shall notify the Owner within ten (10) days of 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 Contract between the Owner and Contractor. Securities shall be held in the name of the Owner, and shall designate the Contractor as beneficial owner.

2. The Owner shall make progress payments to the Contractor for such funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds securities in the form and amount specified above.

3. When the Owner makes payments of Retentions earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until such time as the escrow created under this Contract is terminated. The Contractor may direct the investment of the payments into securities. All terms and conditions of this Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the Owner 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 Owner. These expenses and payment terms shall be determined by the Owner, 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 Owner.

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 Owner to the Escrow Agent that Owner consents to the withdrawal of the amount sought to be withdrawn by Contractor.

7. The Owner 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 Owner of the notice of default under

Article 2.2, Article 9.6 or Article 14, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the Owner.

8. Upon receipt of written notification from the Owner certifying that the Contract is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Contract, 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 moneys and securities on deposit and payment of fees and charges.

9. Escrow Agent shall rely on the written notifications from the Owner and the Contractor pursuant to Sections (5) to (8), inclusive, of this Agreement and the Owner 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 Owner and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of Owner:

_____

Title

_____

Name

_____

Signature

_____

Address

On behalf of Contractor:

_____

Title

_____

Name

_____

Signature

_____

Address

On behalf of Agent:

Title

Name

Signature

Address

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

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

OWNER	CONTRACTOR
Title	Title
Name	Name
Signature	Signature

INSURANCE DOCUMENTS & ENDORSEMENTS

The following insurance endorsements and documents must be provided to the Hawthorne School District within five (5) calendar days after receipt of notification of award. The insurance company must be a California admitted surety insurer registered with the State of California Department of Insurance. In addition, and without limiting anything else, each general liability and automotive liability policy shall provide, or be endorsed to provide, that each of the District, the Governing Board and each member thereof, the Superintendent, and all other District officers, employees, agents, and volunteers are added as additional insureds. A Waiver of Subrogation to be granted in favor of the additional insureds with respect to General Liability and Worker's Compensation.

If the apparent low bidder fails to provide the documents required below, the District may award the Contract to the next lowest responsible and responsive bidder or release all bidders, and the bidder's bid security will be forfeited. All insurance provided by the bidder shall fully comply with the requirements set forth in Article 11 of the General Conditions.

1. General Liability Insurance: Certificate of Insurance with all specific insurance coverages set forth in Article 11 of the General Conditions, proper Project description, designation of the District as the Certificate Holder, a statement that the insurance provided is primary to any insurance obtained by the District and minimum of 30 days' cancellation notice. Bidder shall also provide required additional insured endorsement(s) designating all parties required in Article 11 of the General Conditions. The required additional insured endorsement shall be an ISO CG 20 10 (04/13) and ISO CG 20 37 (04/13), or their equivalent as determined by the District in its sole discretion.

Incidents and claims are to be reported to the insurer at:

Attn: _____
(Title) (Department)

_____
(Company)

_____
(Street Address)

_____
(City) (State) (Zip Code)

(_____) _____
(Telephone Number)

2. Workers' Compensation/ Employer's Liability Insurance: Certificate of Workers' Compensation Insurance meeting the coverages and requirements set forth in Article 11 of the General Conditions, minimum of 30 days' cancellation notice, proper Project description, waiver of subrogation and any applicable endorsements.

3. Automobile Liability Insurance: Certificate of Automobile Insurance meeting the coverages and requirements set forth in Article 11 of the General Conditions, minimum 30 days' cancellation notice, any applicable endorsements and a statement that the insurance provided is primary to any insurance obtained by the District.

Incidents and claims are to be reported to the insurer at:

Attn: _____
(Title) (Department)

_____
(Company)

_____
(Street Address)

_____
(City) (State) (Zip Code)

(_____) _____
(Telephone Number)

DATE:_____ _____
CONTRACTOR

By:_____

Signature

DISABLED VETERAN BUSINESS ENTERPRISE (DVBE) CONTRACTOR CLOSE-OUT STATEMENT

The Contractor shall complete this form, as a condition to Final Payment, for purposes of reporting participation by Disabled Veteran Business Enterprises (DVBE) in the Contract for the Project/CUPCCAA Bid No. specified below.

Project Name: _____

CUPCCAA Bid No.: _____

DSA No.: _____

Name	Address/Phone	Category of Work*	$ Amount of Contract

* Categories of work include: (1) construction services (specify services that DVBE will provide); (2) architecture and engineering services; (3) procurement of materials, supplies and equipment; and (4) information technology.

The undersigned, on behalf of the Contractor, certifies that DVBE participation on the Contract for CUPCCAA Bid No. _____equaled _____ dollars ($_____), which represents approximately ____ percent (___%) of the total Contract price including change orders for the Project.

Company: _____

Name:_____

Title: _____

Signature: _____

Date: _____

CONTRACTOR CERTIFICATION REGARDING BACKGROUND CHECKS

(Improvement Project)

_____ certifies that it has performed one of the following:
[Name of Contractor]

☐ Pursuant to Education Code section 45125.1, Contractor has conducted criminal background checks, through the California Department of Justice, of all employees providing services to the Hawthorne School District at **Hawthorne Middle School**, pursuant to the Contract dated _____, and that none have been convicted of, or have an arrest pending final adjudication for, any serious or violent felonies, as specified in Penal Code sections 1192.7(c) and 667.5(c), respectively.

As further required by Education Code section 45125.1, attached hereto as Attachment "A" is a list of the names of the employees of the undersigned who may come in contact with pupils.

OR

☐ Pursuant to Education Code section 45125.2, Contractor will ensure the safety of pupils by one or more of the following methods:

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

☐ 2. Continual supervision and monitoring of all employees of the entity by an employee of the entity whom the Department of Justice has ascertained has not been convicted of a violent or serious felony.

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

Date_____, 20___

_____
[Name of Contractor]

_____

By its:_____

ATTACHMENT A:

CONTRACTOR CERTIFICATION REGARDING BACKGROUND CHECKS

(INSERT NAMES OF EMPLOYEES WHO MAY COME IN CONTACT WITH PUPILS)

ARTICLE 1
DEFINITIONS

1.1 BASIC DEFINITIONS

NOTE: The following shall not be construed as a comprehensive list of all definitions in the Contract Documents and there may be other definitions set forth in the Contract Documents. Additionally, any references to any DSA forms, documents or requirements shall be construed to incorporate any updates, supplements, or additions. The Contractor shall be required to meet the latest DSA requirements applicable to the Project.

1.1.1 Action of the Governing Board is a vote of a majority of the District's Governing Board.

1.1.2 Approval means written authorization through action of the Governing Board. The Governing board has delegated to the Associated Superintendent the authority to approve certain modifications, Change Orders or Immediate Change Directives (Subject to the limits of the Delegation of Authority provided by the Board). In no case shall the Associate Superintendent have authority to approve total Change Orders or Modifications to the Project exceeding 10% of the Contract Sum.

1.1.3 Architect means the architect, engineer, or other design professional engaged by the District to design and perform general observation of the work of construction and interpret the Drawings and Specifications for the Project. (See ARTICLE 4)

1.1.4 As-Builts are a set of Plans and Specifications maintained by the Contractor clearly showing all changes, revisions, substitutions, field changes, final locations, and other significant features of the Project. The As-Builts shall be maintained continuously throughout the Work for the Project and is both a prerequisite to the issuance of Payment Application and a requirement for Contract Close-Out. (See Article 3.17)

1.1.5 Beneficial Occupancy is the point in time when a building or buildings are fit for occupancy is fit for occupancy and its intended use. Basic requirements are the building is safe, at or near Substantial Completion, and all fire/ life safety items are approved and operational. The fact that a building is occupied does not mean that the building is ready for Beneficial Occupancy if there are elements that are unsafe or if fire/ life safety items are not approved and operational. Taking occupancy on a structure that is under a fire watch is not considered beneficial occupancy. Further, taking of Beneficial Occupancy is not a point in time when retention is due unless the entire school has obtained a Certificate of Substantial Completion that meets the definition of 1.1.46.

1.1.6 Claims. A Claim is a request for payment, supported by back-up documentation which includes, invoices time sheets, or other documents substantiating legitimacy or entitlement that is submitted during the Project or immediately following the Project made prior to the Final Retention Payment Application and prior to Final Completion of the Project. A "Claim" means a separate demand by the Contractor for (1) time extension, (2) payment of money or damages arising from Work done by or on behalf of the Contractor pursuant to the CONTRACT and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (3) and amount the payment of which is disputed by the District. (See Article 4.6)

1.1.7 Change Order (CO). A CO is a written instrument prepared by the Architect and signed by the District (as authorized by the District's Governing Board), the Contractor, and the Architect, stating their agreement upon (1) A description of a change in the Work, (2) The amount of the adjustment in the Contract Sum, if any; and (3) The extent of the adjustment in the Contract Time, if any. (See Article 7.2)

1.1.8 Change Order Request (COR). A COR is a written request supported by backup documentation prepared by the Contractor requesting that the District and the Architect issue a CO based upon a proposed change, or a change that results in an adjustment in cost, time or both, or arising from an RFP, CCD or ICD. (See Article 7.6)

1.1.9 Close-Out means the process for Final Completion of the Project, but also includes the requirements for the DSA Certification that the Project is Complete (See DSA Certification Guide). (See Article 9.9)

1.1.10 Construction Change Document (CCD). A Construction Change Document is a DSA term that is utilized to address changes to the DSA approved Plans and Specifications. There are two types of Construction Change Documents. (1) DSA approved CCD Category A for work affecting structural, access or fire/ life safety of the Project which will require a DSA approval; and, (2) CCD Category B for work NOT affecting structural safety, access compliance or fire/ life safety that will not require a DSA approval (except to confirm that no approval is required). Both CCD Category A and Category B shall be set forth in DSA Form 140 and submitted to DSA as required. (See Article 7.3)

1.1.11 Complete/ Completion/ Final Completion means that all Work in the Contract Documents is finished, the requirements of the Contract Documents have been met, the Project has been Closed Out, and all Work has ceased on the Project. This may also be referred to as Final Completion. In most cases, the recording of a Notice of Completion shall represent Completion of the Project. Beneficial Occupancy does not mean the Work is Complete.

1.1.12 Completion Date is the date when all Work for the Project shall be Substantially Complete and is the date assigned at the end of the Contract Time for the Project. (See Article 1.1.46

1.1.13 Construction Manager. The Construction Manager is a consultant to the District contracted to assist in Project planning, management and construction of the Project. If there is a Construction Manager, they may assist in various aspects of the Project including, but not limited to Monitoring the progress of the construction, reviewing and monitoring the schedule, progress of work, monitoring pay requests, facilitating communications, advising the District and its Board of Education on various aspects of the construction process, monitoring the RFI, COR, CCD, ICD, RFP, Claims, Disputes and other Project related processes.

1.1.14 Contract or Agreement when the terms are used in these General Conditions shall be references to the Contract Documents as defined herein.

1.1.15 Contract Documents (sometimes referred to as Construction Documents) consist of the Agreement between District and Contractor (hereinafter the Agreement or Contract), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to bid, instructions to bidders, notice to bidders, and the requirements contained in the Bid Documents, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is a written amendment to the Contract signed by parties, a Change Order, a

Construction Change Document, or a written order for a minor change in the Work issued by the Architect. The Contract Documents collectively form the Contract. The Contract represents the entire and integrated Agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a written Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Architect and Contractor, between the District and any Subcontractor or Sub-subcontractor, or between any persons or entities other than the District and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

1.1.16 Contract Time is the time period specified in the Contract Documents in which the Project shall be completed. This is sometimes referred to a Contract Duration, or "time in which the Contractor has to complete the Project". (See Article 8.1.1)

1.1.17 Contractor, District, and Architect are those mentioned as such in the Agreement. They are treated throughout the Contract Documents as if they are of singular number and neuter gender. Any reference to "Owner" shall mean "District" or Hawthorne School District.

1.1.18 Cure is the act of remedying a material failure to perform under the terms of the Contract Documents during the time provided to correct Contractor's Default. Specific time periods are provided to Cure and Correct a Contractor Default under Article 14 and for a Partial Default under Article 2.2 as well as elsewhere in the Contract Documents.

1.1.19 Days mean calendar days unless otherwise specifically stated.

1.1.20 Default is a material breach of Contract. A Termination for Cause under Article 14 is a declaration of Default of the Contract and shall act as a demand upon the Surety to perform under the terms of the Performance Bond. Partial Defaults may also be tendered to the Surety at District's discretion. (See Article 2.2)

1.1.21 Dispute. A dispute is a disagreement on terms or conditions of the Project where the Contractor's opinion of the Project, Payment, Change Order or Request for Proposal differs from that of the District or Architect. A dispute only rises to the level of a claim once the dispute is assembled with back-up documentation and presented for evaluation. (See Article 4.6)

1.1.22 District Representative is the person designated by the District to represent the District during the Construction for the Project. This District Representative shall have the delegated authority as further defined in Article 1.1.2. This District Representative may be an employee of the District who may have the delegated authority as set forth in Article 1.1.3, and may also include Construction Managers. In some cases, the District and its Board may be assisted by a Construction Manager. When a Construction Manager is assisting the District, the Contractor, Architect, and Inspector shall have a primary contact with the District's Construction Manager who will advise the District.

1.1.23 Drawings/Plans are graphic and pictorial portions of the Contract Documents prepared for the Project and approved changes thereto, wherever located and whenever issued, showing the design, location, and scope of the Work, generally including Plans, elevations, sections, details, schedules, and diagrams as drawn or approved by the Architect. Sometimes Drawings will also be included in Addenda, Change Orders, and Specifications.

1.1.24 DSA is the Division of State Architect. DSA is the agency that provides design and construction oversight for K-12 Schools, Community Colleges, and State Funded Charter School Projects. DSA is the responsible agency for this Project and Contractor has submitted a bid for the Project since Contractor is familiar with Contractor's responsibilities under the DSA requirements more thoroughly set forth at Title 24 of the California Code of Regulations. Contractor agrees to abide by the jurisdiction of DSA and shall construct the Project to conform with the approved Plans, Specifications, Addenda, and Change Orders (inclusive of approved CCD's and ICD's issued by the District pending CCD approval). See DSA website.

1.1.25 Emergency shall be defined as a sudden, unexpected occurrence, involving a clear and imminent threat to the continuation of school classes, a critical path delay that will result in not being able to occupy the school when students arrive to use the facility, danger from the facility or from outside the facility, Act of God, or other action which requires immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services.

1.1.26 Float the total number of days an activity may be extended or delayed without delaying the Completion Date shown in the schedule. Float will fall into three categories: (1) Rain Days; (2) Governmental Delays; and, (3) Project Float. (See Article 8.1.4)

1.1.27 Immediate Change Directive. (ICD) A written order prepared by the Architect and signed by the District and the Architect, directing a change in the Work where the Work must proceed immediately and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. (See Article 7.3)

1.1.28 Inspector of Record (IOR)/ Project Inspector (PI) is the individual retained by the District in accordance with Title 24 of the California Code of Regulations and who will be assigned to the Project

1.1.29 Notice of Non-Compliance (DSA Form 154) is a document issued by the Inspector if there is a deviation from the DSA approved Plans, Specifications, and Change Orders. (See Article 7.1.2)

1.1.30 Payment Application or Certificate of Payment is the Contractor's certified representation of the actual level of Work performed on the Project. Payment Applications are sometimes also called "Certificate of Payment", "Request for Payment", "Payment Application", or similar terms, and shall follow the Schedule of Values that are approved by the Architect, Inspector and District. (See Article 9.3)

1.1.31 Project is the complete construction of the Work performed in accordance with the Contract Documents.

1.1.32 Project Manual is the volume assembled for the Work which may include, without limitation, the bidding requirements, sample forms, Conditions of the Contract, and Specifications.

1.1.33 Provide shall include "provide complete in place," that is "furnish and install complete."

1.1.34 Punch List/ Punch Item/ Incomplete Punch Item is a list of minor repair items, prepared after the issuance of a Certificate of Substantial Completion, by the Inspector and Architect of Work required in order to complete the Contract Documents and ensure compliance with the DSA

Approved Plans so the Project may be Closed Out. Issuance of the Retention Payment is dependent of the proper completion of the Punch List. (See Article 9.9)

1.1.34.1 *Contractor's List of Punch Items* is a list of minor repair items the Contractor submits when the Contractor considers the Work Substantially Complete. Submission of this List of Incomplete Punch Items is the Contractor's representation that the Project is Substantially Complete. (See Article 9.9.1.1)

1.1.35 Request for Information (RFI) is a written request prepared by the Contractor requesting the Architect to provide additional information necessary to clarify or amplify an item which the Contractor believes is not clearly shown or called for in the Drawings or Specifications, or to address problems which have arisen under field conditions. (See Article 7.4)

1.1.36 Request for Proposal (RFP) is a written request prepared by the Architect (and/or CM) requesting the Contractor to submit to an estimate of the effect of a proposed change on the Contract Price and (if applicable) the Contract Time. (See Article 7.5)

1.1.37 Safety Orders are those issued by any city, county, state or federal agency having jurisdiction over the Project.

1.1.38 Schedule is the Contractor's view of the practical way in which the Work will be accomplished. In this Agreement there is a requirement for a Baseline Schedule and regular Schedule Updates that show all Work to be completed during the Contract Time and shall include all items listed under Article 8.3.2.9. See Article 8 of the General Conditions.

1.1.39 Schedule of Values is a detailed breakdown of the Contract Price for each Project, building, Phase of Work or Site as determined by the District. This Schedule of Values shall adequately detail the price for the Work so Progress Payments Applications can be meaningfully reviewed by the Inspector, Architect of Record, Engineer of Record, and District. (See Article 9.2)

1.1.40 Separate Contracts are Contracts that the District may have with other Contractors, vendors, suppliers, or entities to perform Work on the Project. This may include, but is not limited to Multi-Prime Trade Contractors, furniture installers, testing agencies, clean-up contractors, or network or low voltage contractors. Contractor shall plan for certain other contractors that may also be working on the Project site and address these other contractors in Contractor's Schedule. (See Article 6)

1.1.41 Site refers to the grounds of the Project as defined in the Contract Documents and such adjacent lands as may be directly affected by the performance of the Work.

1.1.42 Specifications are that portion of the Contract Documents consisting of the written requirements for material, equipment, construction systems, instructions, quality assurance standards, workmanship, and performance of related services.

1.1.43 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. Federal, state and local regulations are incorporated into the Contract Documents by reference.

1.1.44 Stop Work Order, or an Order to Comply, is issued when either (1) the Work proceeds without DSA approval; (2) the Work proceeds without a DSA Inspector of Record, or (3) where DSA

determines that the Work is not being performed in accordance with applicable rules and regulations, and would compromise the structural integrity of the Project or would endanger lives. If a Stop Work Order is issued, the Work in the affected area shall cease until DSA withdraws the Stop Work Order. Pursuant to Education Code section 17307.5(b), the District shall not be held liable in any action filed against the District for any delays caused by compliance with the Stop Work Order

1.1.45 Subcontractor, as used herein, includes those having direct or indirect contracts with Contractor and ones who furnished labor, material or services for a special design according to Plans, Drawings, and Specifications of this Work.

1.1.46 Substantial Completion/ Substantially Complete(d) is not reached unless and until each of the following four (4) conditions have been met: (1) all contractually required items have been installed with the exception of only minor and Incomplete Punch List Items (See Article 9.9.1.2); (2) All Fire/Life Safety Systems have been installed, and are working and signed off on the DSA Form 152 Inspection Card, and all building systems including mechanical, electrical and plumbing are all functioning; (3) all other items on the DSA Form 152 Inspection Card for the Project have been approved and signed off; and (4) the Project is fit for occupancy and its intended use. For the purposes of this Contract, any references to Completion Date means Substantial Completion Date.

1.1.47 Substitution is a change in product, material, equipment, or method of construction from those required by the Construction Documents proposed by the Contractor. For this Project, a Substitution is subject to the filing of a Construction Substitution Request Form at the time of bid and meeting the requirements of Article 3.10.

1.1.48 Supplementary Conditions/ Supplementary General Conditions/ Special Conditions are terms that are sometimes used interchangeably and refer to any additional requirements or changes to the General Conditions as noted.

1.1.49 Surety is the person, firm, or corporation that executes as a bid bond, Payment Bond or Performance Bond guarantor on the Contractor's Bid, Contractor's Performance on the Contract and Payment of the Contractor's Subcontractors, material suppliers, vendors and labor on the Project. The Surety is bound to the same extent as the Contractor is bound once a Default occurs. A default includes a Termination for Substantial Failure to Perform under Article 14, but also includes any breach of Contract and is subject to the requirements and responsibilities as set forth in the Performance Bond.

1.1.50 Work shall include all labor, materials, services and equipment (including, without installation, equipment and appliances), incorporated in, or to be incorporated into the Project and which is necessary for the Contractor to complete in order to fulfill all of its obligations set forth in the Contract Documents. It shall include the initial obligation of any Contractor or Subcontractor who performs any portion of the Work, to visit the Site of the proposed Work (a continuing obligation after the commencement of the Work), to fully acquaint and familiarize itself with the conditions as they exist and the character of the operations to be carried out under the Contract Documents, and make such investigation as it may see fit so that it shall fully understand the facilities, physical conditions, and restrictions attending the Work under the Contract Documents. Each such Contractor and its Subcontractors shall also thoroughly examine and become familiar with the Drawings, Specifications, and associated Contract Documents and bid documents before preparing and submitting any bid.

1.1.51 Workers include laborers, workers, and mechanics.

1.2 EXECUTION, CORRELATION AND INTENT

1.2.1 Correlation and Intent

1.2.1.1 *Documents Complementary and Inclusive*. The Contract Documents are complementary and are intended to include all items required for the proper execution and completion of the Work. All Contract Documents form the Contractor's Contract with the District. Any item of Work mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be provided by Contractor as if shown or mentioned in both. The Contractor is bound to provide the Work complete and is under a legal duty to carefully study Plans and schedule operations well ahead of time and identify inconsistencies with the Plans and Specifications and call such inconsistencies to the attention of the Architect or Registered Engineer through the Inspector under Section 4-343(b) of Title 24.

1.2.1.2 *Work to be Complete*. Contractor has thoroughly studied the Contract Documents and understands that the District contracted with Contractor to provide a complete Project which means complete systems and buildings. The entire set of Contract Documents shows a complete Project and Contractor agrees that there are multiple disciplines putting together a set of Contract Documents. Thus, if portions of a system are shown on some Drawings and not others, this does not mean the Contractor is to only provide part of a system. For example, if an air conditioning unit is shown on the mechanical Drawings, the plumbing for the air conditioning is shown on another Drawing, and the electrical shown on the electrical Drawings, the Contractor is to provide a complete and working air conditioning system. The only time when an item is supplied incomplete is if the system is shown specifically as incomplete since others will be completing the system. Work includes, but is not limited to materials, workmanship, and manufacture of fabrication of components for the Project.

1.2.1.3 *Coverage of the Drawings and Specifications*. The Drawings and Specifications generally describe the Work to be performed by Contractor. Generally, the Specifications describe Work which cannot be readily indicated on the Drawings and indicate types, qualities, and methods of installation of the various materials and equipment required for the Work. It is not intended to mention every item of Work in the Specifications, which can be adequately shown on the Drawings, or to show on the Drawings all items of Work described or required by the Specifications even if they are of such nature that they could have been shown. All materials or labor for Work, which is shown on either the Drawings or the Specifications (or is reasonably inferable therefrom as being necessary to complete the Work), shall be provided by the Contractor. The Contractor is responsible for the whole Project as contractually set forth as the Contract Documents. It is intended that the Work be of sound, quality construction, and the Contractor shall be responsible for the inclusion of adequate amounts to cover installation of all items indicated, described, or implied in the portion of the Work to be performed by them.

1.2.1.4 *Conflicts*. In the event there is a discrepancy between the various Contract Documents, it is intended that the more stringent, higher quality, and greater quantity of Work shall apply.

1.2.1.5 *Conformance with Laws*. Each and every provision of law required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein, even if through mistake or otherwise any such provision is not inserted, or is not correctly inserted.

Before commencing any portion of the Work, Contractor shall check and review the Drawings and Specifications for such portion for conformance and compliance with all laws, ordinances, codes, rules and regulations of all governmental authorities and public and municipal utilities affecting the construction and operation of the physical plant of the Project, all quasi-governmental and other regulations affecting the construction and operation of the physical plant of the Project, and other special requirements, if any, designated in the Contract Documents. Such checking shall include review of Title 24 of the California Code of Regulations, California Building Code, local utility, local water connection, local grading and all other applicable agencies. In the event Contractor observes any violation of any law, ordinance, code, rule or regulation, or inconsistency with the Contract Documents, Contractor shall, within five (5) days, notify the Inspector, Architect and District in writing of same and shall ensure that any such violation or inconsistency shall be corrected in the manner provided hereunder prior to the construction of that portion of the Project. (See Title 24 Section 4-343)

The Contractor shall bear all expenses of correcting Work done contrary to said laws, ordinances, rules, and regulations 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.

1.2.1.6 *Ambiguity and Inconsistency*. Before commencing any portion of the Work, Contractor shall carefully examine all Drawings and Specifications and other information given to Contractor as to materials and methods of construction and other Project requirements. Prior to commencing any portion of the Work, Contractor shall notify Architect and District in writing of any perceived or alleged error, inconsistency, conflict, ambiguity, or lack of detail or explanation in the Drawings and Specifications in the manner provided herein. If the 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 Contract 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 without increase or adjustment to the Contract Price or the time for performance. Contractor shall maintain an adequate inspection system and perform personal observations and review work and pre-plan the project to ensure the Work performed under the Contract conforms to Contract requirements. Contractor shall maintain records of such review and observation to ensure strict compliance with the terms of the Contract.

1.2.1.7 *Typical Parts and Sections.* Whenever typical parts or sections of the Work are completely detailed on the Drawings, and other parts or sections which are of the same construction are shown in outline only, the complete or more detailed shall apply to the Work which is shown in outline.

1.2.1.8 *Dimensions.* Dimensions of Work shall not be determined by scale or rule. Figured dimensions shall be followed at all times. If figured dimensions are lacking on Drawings, Architect shall supply them on request. The Architect's decisions on matters relating to aesthetic effect will be final.

1.2.2 Addenda and Deferred Approvals

1.2.2.1 *Addenda* are the changes in Specifications, Drawings, Contract Documents, and Plans which have been authorized in writing by the District or Architect, and which alter,

explain, or clarify the Contract Documents. Addenda shall govern over all other Contract Documents. Subsequent addenda issued shall govern over prior addenda unless otherwise specified in the addenda.

1.2.2.2 *Deferred Approvals*. Deferred Approvals are Submittals that are reviewed by the Architect (or Engineer of Record) and submitted to DSA for approval based on thorough detailing of manufacturer and Project specific design. See Article 3.9.1and 3.9.3. The Deferred Approval item cannot be fully detailed on the originally approved Drawings or Specifications because of variations in product design and manufacture. Contract Documents which require Deferred Approval items are meant to be for illustration purposes only. Approval of Plans for such a portion of the Work may be deferred until the material suppliers and Subcontractors are selected. All Deferred Approvals are noted in the Plans and Specifications. Contractor is responsible for all Deferred Approval requirements set forth in the Contract Documents. Contractor is responsible to comply with all laws, building codes, Title 24 and regulations necessary to obtain all necessary approvals, including those required from the Division of the State Architect ("DSA") and the State Fire Marshall. Contractor shall not be granted an extension of time for failure to plan, schedule for and obtain necessary approvals. Contractor shall Schedule all Deferred Approval items in the Baseline Schedule and Schedule Updates under Article 3.9.6

1.2.3 Specification Interpretation

1.2.3.1 *Titles*. The Specifications are separated into titled sections for convenience only and not to dictate or determine the trade or craft involved.

1.2.3.2 *As Shown, Etc*. Where "as shown," "as indicated," "as detailed," or words of similar import are used, reference is made to the Drawings accompanying the Specifications unless otherwise stated. Where "as directed," "as required," "as permitted," "as authorized," "as accepted," "as selected," or words of similar import are used, the direction, requirement, permission, authorization, approval, acceptance, or selection by Architect is intended unless otherwise stated.

1.2.3.3 *General Conditions*. The General Conditions and Supplementary General Conditions are a part of the Contract Documents which further defines and refines the Contract entered between the Contractor and District.

1.2.3.4 *Abbreviations*. In the interest of brevity, the Specifications are written in an abbreviated form and may not include complete sentences. Omission of words or phrases such as "Contractor shall," "shall be," etc., are intentional. Nevertheless, the requirements of the Specifications are mandatory. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings. In the interest of brevity, the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

1.2.3.5 *Plural*. Words in the singular shall include the plural whenever applicable or the context so indicates.

1.2.3.6 *Metric*. The Specifications may indicate metric units of measurement as a supplement to U.S. customary units. When indicated thus: 1" (25 mm), the U. S. customary unit is specific, and the metric unit is nonspecific. When not shown with parentheses, the unit is specific. The metric units correspond to the "International System of Units" (SI) and generally follow ASTM E 380, "Standard for Metric Practice."

1.2.3.7 *Standard Specifications*. Any reference to standard specifications of any society, institute, association, or governmental authority is a reference to the organization's standard specifications, which are in effect at the date of the Contractor's proposal unless directed otherwise. If applicable specifications are revised prior to completion of any part of the Work, the Contractor may, if acceptable to Architect, perform such Work in accordance with the revised specifications. The standard specifications, except as modified in the Specifications for the Project, shall have full force and effect as though printed in the Specifications. Architect will furnish, upon request, information as to how copies of the standard specifications referred to may be obtained.

1.2.4 Rules of Document Interpretation

1.2.4.1 In the event of conflict within the Drawings, the following rules shall apply:

a. General Notes, when identified as such, shall be incorporated into other portions of Drawings.

b. Schedules, when identified as such, are complementary with other notes and other portions of Drawings including those identified as General Notes.

c. Larger scale Drawings shall take precedence over smaller scale Drawings.

d. At no time shall the Contractor base construction on scaled Drawings.

1.2.4.2 Specifications shall govern as to materials, workmanship, and installation procedures.

1.2.4.3 If Contractor observes that Drawings and Specifications are in conflict, Contractor shall, prior to commencing work, notify the Architect in writing for the purposes of obtaining an interpretation of the Contact Documents.

1.2.4.4 In the case of conflict or inconsistencies, the order of precedence shall be as follows:

a. General Conditions take precedence over Drawings and Specifications.

b. Supplemental Conditions take precedence over General Conditions.

c. The Agreement Form shall take precedence over the Supplemental Conditions.

d. In the case of disagreement or conflict between or within Specifications and Drawings, the more stringent, higher quality, and greater quantity of Work shall apply.

e. Addenda shall take precedence over Drawings and Specifications.

f. General Conditions shall take precedence over Addenda.

g. Drawings and Specifications take precedence over the Soils Report.

1.3 OWNERSHIP AND USE OF ARCHITECT'S DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

The Drawings, Specifications, and other Contract Documents for the Project are the property of the District and/or Architect pursuant Contract requirements between the District and Architect. The Contractor may retain one Contract record set. Neither the Contractor nor any Subcontractor, or material or equipment supplier shall own or claim a Copyright in the Drawings, Specifications, and other documents prepared by the Architect. All copies except the Contractor's record set, shall be returned or properly accounted for upon completion of the Work. The Drawings, Specifications, and other documents prepared by the Architect, and copies thereof furnished to the Contractor are not to be used by the Contractor or any Subcontractor, Sub-subcontractor, or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work. The District and/or Architect hereby grants the Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers a limited license to use applicable portions of the Drawings, Specifications, and other documents prepared for the Project in the execution of their Work under the Contract Documents. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the District's property interest or other reserved right.

ARTICLE 2
DISTRICT

2.1 INFORMATION AND SERVICES REQUIRED OF THE DISTRICT

2.1.1 Site Survey

The District will furnish, at its expense, a legal description of the Site and when applicable a land survey showing the boundaries of the Site. Contractor shall be responsible for all surveys regarding location of construction, grading and site work.

2.1.2 Soils

When required by the scope of the Project, the District will furnish, at its expense, the services of geotechnical engineers or consultants when reasonably required and deemed necessary by the Architect or as required by local or state codes. Such services, with written reports and appropriate written professional recommendations, may include test boring, test pits, soil bearing values, percolation tests, air and water pollution tests, and ground corrosion and resistivity tests, including necessary operations for determining subsoil, air, and water conditions.

2.1.3 Soils Report Part of the Contract Documents: Contractor Reliance

A soils investigation report has been obtained from test holes at the Site, and such report is incorporated into this Contract and made available for the Contractor's use in preparing its bid and Work under this Contract. Where the Plans and Specifications are more specific and provide more significant structure, systems, reinforcing, thicknesses, or construction methods, the Drawings shall control over the soils report. The soils report is available at the Architect's office for review and it is Contractor's responsibility to ensure that Contractor has reviewed the soils investigation report. Any information obtained from such report or any other information given on Drawings as to subsurface soil condition or to elevations of existing grades or elevations of underlying rock is approximate only. If, during the course of Work under this Contract, Contractor encounters subsurface conditions which differ materially from those indicated in the soils report, then Contractor shall notify the District within five (5) calendar days of discovery of the condition, and changes to the Contract Price may be made in accordance with Article 7 entitled "Changes in the Work." Contractor agrees that no claim against District will be made by Contractor for damages and hereby waives any rights to damages in the event the Contractor fails to notify District within the five-day period mentioned above.

WARNING: DISTRICT DOES NOT WARRANT THE SOILS AT THE PROJECT SITE. CONTRACTOR HAS REVIEWED AND IS FAMILIAR WITH THE REQUIREMENTS OF THE SOILS INVESTIGATION REPORT. CONTRACTOR UNDERSTANDS THAT PLANS, DRAWINGS AND SPECIFICATIONS SUPERSEDE THE SOILS REPORT IF THERE ARE CONFLICTS. FURTHER, IN ADDITION TO THE INFORMATION IN THE SOILS REPORT, CONTRACTOR HAS CONDUCTED AN INDEPENDENT INVESTIGATION OF THE PROJECT SITE AND THE SOILS CONDITIONS OF THE SITE. DISTRICT DOES NOT WARRANT THE SOILS CONDITIONS OF THE SITE AND CONTRACTOR IS FULLY RESPONSIBLE TO ASCERTAIN SITE CONDITIONS FOR THE PURPOSES OF DETERMINING

CONSTRUCTION MEANS AND METHODS PRIOR TO COMMENCING CONSTRUCTION.

2.1.4 Utilities

2.1.4.1 *Location of Point of Connection*. The locations shown for the point of connection are approximate. It shall be the responsibility of the Contractor to determine the exact location of all service connections.

2.1.4.2 *Regional Notification Center.* Contractor, except in an emergency, shall contact the appropriate regional notification center at least two (2) business days prior to commencing any excavation if the excavation will be conducted in an area or in a private easement which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the District, and obtain an inquiry identification number from that notification center. See Government Code section 4216.3. No excavation shall be commenced and carried out by the Contractor unless such an inquiry identification number has been assigned to the Contractor or any Subcontractor of the Contractor and the District has been given the identification number by the Contractor. Any damages arising from failure to make appropriate regional notification shall be at the sole risk of Contractor. Contractor shall solely be responsible for any fines, penalties or damages for violation of this Article and Government Code section 4216.6 or 4216.7. Any delays caused by failure to make appropriate regional notification shall be at the sole risk of Contractor and shall not be considered for extension of time pursuant to Article 8.4.

2.1.4.3 *Utilities - Removal and Restoration.* The District has endeavored to determine the existence of utilities at the Site of the Work from the records of the District of known utilities in the vicinity of the Work. The positions of these utilities as derived from such records are shown in the Contract Documents. Thus, the locations of the main or trunklines located on the Drawings are approximate locations and not exact.

No excavations were made to verify the locations shown for underground utilities. Other than the main or trunkline, which the District has endeavored to locate on the Plans, service connections or laterals to these utilities may not be shown on the Plans. It shall be the responsibility of the Contractor to determine the exact location of all service connections. The Contractor shall make its own investigations, including exploratory excavations, to determine the locations and type of service connections, prior to commencing work which could result in damage to such utilities. The Contractor shall immediately notify the District's representative as to any utility main or trunkline discovered by Contractor in a different position than provided by the Regional Notification Center. With respect to main or trunklines, Contractor is to immediately notify District if the location is substantially different than as shown in the Contract Documents.

Contractor shall coordinate its Work with all utilities, including, but not limited to electricity, water, gas and telephone and meet with said utilities prior to the start of any work. Contractor shall show timing of all utility coordination activities under the Scheduling requirements of Article 8.

2.1.4.4 *Other Utilities.* In case it should be necessary to remove, relocate, or temporarily maintain a utility because of interference with the Work, the work on the utility shall be performed and paid for as follows:

When it is necessary to remove, relocate or temporarily maintain a service connection, the cost of which is not required to be borne by the owner of the service connection, the Contractor shall bear all expenses incidental to the work on the service connection. The work on the service connection shall be done in a manner satisfactory to the owner thereof; it being understood that the owner of the service connection has the option of doing such work with his own forces or permitting the work to be done by the Contractor.

When it is necessary to remove, relocate, or temporarily maintain a utility which is in the position shown on the Plans, the cost of which is not required to be borne by the owner thereof, the Contractor shall bear all expenses incidental to the work on the utility. The work on the utility shall be done in a manner satisfactory to the owner thereof; it being understood that the owner of the utility has the option of doing such work with his own forces or permitting the work to be done by the Contractor.

When it is necessary to remove, relocate, or temporarily maintain a utility which is not shown on the Plans or is in a position different from that shown on the Plans and were it in the position shown on the Plans would not need to be removed, relocated, or temporarily maintained, and the cost of which is not required to be borne by the owner thereof, the District will make arrangements with the owner of the utility for such work to be done at no cost to the Contractor, or will require the Contractor to do such work in accordance with Article 7 or will make changes in the alignment and grade of the Work to obviate the necessity to remove, relocate, or temporarily maintain the utility. Changes in alignment and grade will be ordered in accordance with Article 7 herein.

No representations are made that the obligations to move or temporarily maintain any utility and to pay the cost thereof is or is not required to be borne by the owner of such utility, and it shall be the responsibility of the Contractor to investigate to find out whether said cost is required to be borne by the owner of the utility.

The right is reserved to governmental agencies and to owners of utilities to enter at any time upon any street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the Work and for the purpose of maintaining and making repairs to their property.

2.1.5 Existing Utility Lines; Removal, Relocation

2.1.5.1 *Main or Trunkline Facilities*. If the Contractor while performing the Contract discovers utility facilities not identified in the Contract Documents, Contractor shall notify the District and utility in writing prior to commencing work.

The owner of the public utility shall have the sole discretion to perform repairs or relocation work or permit the Contractor to do such repairs or relocation work at a reasonable price.

The Contractor shall exercise reasonable care and shall be compensated by the District for the actual verified field costs of locating, and removing, relocating, protecting or temporarily maintaining such main or trunkline utility facilities located in a substantially different location than in the Plans and Specifications, and for equipment in use on the project necessarily idled during such work. This Work shall be performed in accordance with Article 7 of these General Conditions.

2.1.5.2 *Assessment*. Nothing in these subparagraphs 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 Site can be inferred from the presence of other visible facilities, such as buildings, or meter junction boxes on or adjacent to the Site and could be inferred from the Main or Trunkline shown on the Drawings.

2.1.5.3 *Notification*. If the Contractor, while performing Work under this Contract, discovers utility facilities not identified by the District in the Contract Documents. Contractor shall, within five (5) days, notify the District and the utility in writing. If Contractor fails to notify the District within forty eight hours after discovery of any utility facilities not identified by District in the Contract Documents, Contractor waives all rights to be compensated for any extra Work or damages resulting from such discovered utilities.

2.1.6 Easements

District shall secure and pay for easements for permanent structures or permanent changes in existing facilities, if any, unless otherwise specified in the Contract Documents.

2.2 DISTRICT'S RIGHT TO CARRY OUT THE WORK DUE TO PARTIAL DEFAULT IN A SPECIFIC SEGREGATED AREA OF WORK (48 HOUR NOTICE TO CURE AND CORRECT)

If the Contractor Defaults or neglects to carry out the Work in accordance with the Contract Documents, the District may provide forty-eight (48) hour written notice to cure (a shorter period of time in the case of Emergency or a critical path delay as defined in Article 2.2.1) Contractor's Partial Default in a specific segregated area of work. The District's right to issue a Partial Default of the Contractor's Work and take over that segregated area of Work includes, but is not limited to:

1. Failure to supply adequate workers on the entire Project or any part thereof;

2. Failure to supply a sufficient quantity of materials;

3. Failure to perform any provision of this Contract;

4. Failure to comply with safety requirements, or due to Contractor is creation of an unsafe condition;

5. Cases of bona fide emergency;

6. Failure to order materials in a timely manner;

7. Failure to prepare Deferred Approval items or Shop Drawings in a timely manner;

8. Failure to comply with Contractor's Baseline or Update Schedule, meet critical Milestones which would result in a delay to the critical path, or delay the Contract Time;

9. Failure to comply with the Subletting and Subcontracting Fair Practices, Public Contract Code section 4100, et seq.

10. Failure to meet the requirements of the Americans with Disabilities Act;

11. Failure to complete Punch List work;

12. Failure to proceed on an Immediate Change Directive

13. Failure to correct a Notice of Deviation

If during the forty eight (48) hour period, the Contractor fails to Cure and correct the deficiency noted in the 48 hour notice of Partial Default with diligence and promptness, the District may correct such deficiencies without prejudice to other remedies the District may have, including a Termination for Cause as set forth in Article 14. If there are inadequate funds remaining the Project balance or in the Retention Escrow to address at least 150% of the costs set forth in the Article 2.2 notice, the District may copy the Surety on the written notice of Partial Default. If a notice to the Surety is provided, except in the cases of emergency or critical path delay, the Surety has the option to take over and complete the Work described in the written notice if Surety personally delivers notice to District that it intends to perform such work. In the case where written notice has been provided, the District shall allow Surety seven (7) days to perform the Work.

2.2.1 Service of Notice of Partial Default with Right to Cure

A written notice of Partial Default and right to cure under Article 2.2 ("Article 2.2 Notice" or "Notice of Partial Default") shall be served by e-mail (with a copy provided by regular mail) to the e-mail address provided on the Bid submitted and copied to the Project Superintendent.

2.2.2 Shortened Time for Partial Default in the Case of Emergencies.

In an Emergency situation, the District may correct any of the deficiencies described in Article 2.2 without prejudice to other remedies by providing service of written notice of Emergency requiring a shortened time for Partial Default specifying the time given to cure, if any.

2.2.3 Shortened Time for Partial Default in the Case of Critical Path Delay

In the case of critical path delay, the District may correct any of the deficiencies described in Article 2.2 without prejudice to other remedies providing service of written notice of critical path delay to the Contractor with a specific description of the critical path delay items noting the line item or area of Work that is on the critical path and prescribe the length of shortened time to cure, if any.

2.2.4 Written Notice of Partial Default to be Deducted by Deductive Change Order

The District shall have the right to determine the reasonable value of the Article 2.2 Partial Default Work, or if there is an actual value for the Work, shall use that value and issue a Deductive Change Orders under Article 7.7.4

ARTICLE 3
THE CONTRACTOR

3.1 SUPERVISION AND CONSTRUCTION PROCEDURES

3.1.1 Contractor

The Contractor shall continually supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, procedures; and shall coordinate all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. The Contractor shall not perform the Work without utilizing the Contract Documents or, where required, approved Submittals, Shop Drawings, or samples for any such portion of the Work. If any of the Work is performed by contractors retained directly by the District, Contractor shall be responsible for the coordination and sequencing of the work of those other contractors so as to avoid any impact on the Project Schedule pursuant to the requirements of Article 6 and Article 8. Specific duties of the Contractor shall include those set out in Section 43 of Title 21 of the California Code of Regulations and Section 4-343 of Title 24 of the California Code of Regulations. These duties include, but are not limited to the following:

3.1.1.1 *Responsibilities*. It is the duty of the Contractor to complete the Work covered by his or her Contract in accordance with the approved Plans and Specifications. The Contractor in no way is relieved of any responsibility by the activities of the Architect, Engineer, Inspector or DSA in the performance of their duties.

3.1.1.2 Performance of the Work. The Contractor shall carefully study the approved Plans and Specifications and shall plan its schedule of operations well ahead of time. If at any time it is discovered that work is being done which is not in accordance with the approved Plans and Specifications, the Contractor shall correct the Work immediately.

3.1.2 Contractor Responsibility to Study the Plans and Specifications

All inconsistencies or timing or sequences which appear to be in error in the Plans and Specifications shall promptly be called to the attention of the Architect or, Engineer, for interpretation or correction. Local conditions which may affect the structure shall be brought to the Architect's attention at once. In no case, shall the instruction of the Architect be construed to cause work to be done which is not in conformity with the approved Plans, Specifications, change orders, construction change documents, and as required by law. (See Title 24, Section 4-343)

3.1.3 All Work Under the Direction of Inspector

Pursuant to Title 24 requirements, the Contractor shall not carry on Work except with the knowledge of the Inspector. (See Title 24 generally)

3.1.4 Contractor to Establish Timing and Protocol with Inspector

Contractor shall establish a protocol for requesting inspection with Inspector so as to not delay the Work and provide adequate time for the Inspector to perform inspection. If such a protocol is

not established ahead of time, Inspector may utilize the time criteria set by Title 24 of 48 hours in advance of submitting form DSA 156 for each new area. DSA requirements under PR 13-01 specifically gives the Special Inspector fourteen (14) days to post to the DSA website. Contractor is responsible for delays and for failure to plan.

For some Projects, there may be a need to incrementally install certain assemblies. It is up to Contractor to identify areas and assemblies that may be constructed incrementally. Contractor must identify and establish incremental areas of construction and establish protocols with Inspector for DSA 152 approvals so they may be presented to DSA. (See PR-13 item 1.17 for further discussion)

3.1.5 Verified Reports

The Contractor shall make and submit to the office from time to time, verified reports as required in Title 24 Section 4-366. As part of the Close-Out of the Project (see Article 9.9), Contractor shall be required to execute a Form 6-C as required under Title 24 Sections 4-343.

Contractor shall fully comply with any and all reporting requirements of Education Code sections 17315, et seq., in the manner prescribed by Title 24, as applicable.

3.1.6 Contractor Responsibility

The Contractor shall be responsible to the District for acts and omissions of the Contractor's employees, Subcontractors, material and equipment suppliers, and their agents, employees, invitees, and other persons performing portions of the Work under direct or indirect contract with the Contractor or any of its Subcontractors.

3.1.7 Obligations not Changed by Architect's Actions

The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract or by tests, inspections, or approvals required or performed by persons other than the Contractor.

3.1.8 Acceptance/Approval of Work

The Contractor shall be responsible to determine when any completed portions of the Work already performed under this Contract or provided pursuant to Article 6 are suitable to receive subsequent Work thereon.

3.2 SUPERVISION

3.2.1 Full Time Supervision

Unless personally present on the Project site where the Work is being performed, the Contractor shall keep on the Work at all times during its progress a competent, English speaking construction Superintendent satisfactory to the District. The Superintendent shall be present on a full-time basis, shall be dedicated exclusively to the Project and shall not share superintendency duties with another project or job. The Superintendent shall not be replaced except with written consent of the District. The Superintendent shall represent the Contractor in its absence and shall be fully authorized to

receive and fulfill any instruction from the Architect, the Inspector, the District or any other District Representative (including CM in the cases where the District has a CM representative). All Requests for Information shall be originated by the Superintendent and responses thereto shall be given to the Superintendent. No Work shall begin on any day by any Subcontractor or other person on the Project site until the Superintendent has arrived, or shall any Work continue during the day after the Superintendent has departed from the Project site. The Superintendent shall have authority to bind Contractor through the Superintendent's acts. The Superintendent shall represent the Contractor, and communications given to the Superintendent shall be binding on the Contractor. Before commencing the Work, Contractor shall give written notice to District (and CM representative) and Architect of the name and a Statement of Qualifications of such superintendent. 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. Contractor shall provide a replacement superintendent approved by the District prior to performing additional work.

3.2.2 Staff

Notwithstanding other requirements of the Contract Documents, the Contractor and each Subcontractor shall: (1) furnish a competent and adequate staff as necessary for the proper administration, coordination, supervision, and superintendence of its portion of the Work; (2) organize the procurement of all materials and equipment so that the materials and equipment will be available at the time they are needed for the Work; and (3) keep an adequate force of skilled and fit workers on the job to complete the Work in accordance with all requirements of the Contract Documents.

3.2.3 Right to Remove

District shall have the right, but not the obligation, to require the removal from the Project of any superintendent, staff member, agent, or employee of any Contractor, Subcontractor, material or equipment supplier.

3.3 LABOR AND MATERIALS

3.3.1 Contractor to Provide

Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, material, equipment, tools, construction equipment and machinery, water, heat, air conditioning, utilities, transportation, and other facilities, services and permits necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

3.3.2 Quality

Unless otherwise specified, all materials and equipment to be permanently installed in the Project shall be new and shall be of the highest quality or as specifically stated in the Contract Documents. The Contractor shall, if requested, furnish satisfactory evidence as to kind and quality of all materials and equipment within ten (10) days of a written request by the District, including furnishing the District with bona fide copies of invoices for materials or services provided on the Project. All labor shall be performed by workers skilled in their respective trades, and shall be of the same or higher quality as with the standards of other school construction.

3.3.3 Replacement

Any work, materials, or equipment, which do not conform to these requirements or the standards set forth in the Contract Documents, may be disapproved by the District, in which case, they shall be removed and replaced by the Contractor at no additional cost or extension of time to the District.

3.3.4 Discipline

The Contractor shall enforce strict discipline and good order among the Contractor's and Subcontractor's employees, and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. As used in this subsection, "unfit" includes any person who the District concludes is improperly skilled for the task assigned to that person, who fails to comply with the requirements of this article, or who creates safety hazards which jeopardize other persons and/or property.

3.3.5 Fingerprinting (Applicable at the time Project is Occupied and on all Projects where Workers will come in Contact with Pupils, such as Modernization Projects)

If applicable, Contractor shall comply with the applicable provisions of Education Code section 45125.1 in a method as determined by the District. Pursuant to Education Code section 45125.1, Contractor shall either conduct criminal background checks of all employees of Contractor assigned to the Project site, and shall certify that no employees who have been convicted of or who have an arrest pending final adjudication for any serious or violent felonies, as specified in Education Code section 45125.1, will have contact with pupils, by utilizing the Contractor Certification Regarding Background Checks and the corresponding Attachment "A" as found in the Contract Documents or shall be separated by a physical barrier from students.

If it is determined that Contractor must provide certification of employees, as part of such certification, Contractor must provide the District with a list of all employees providing services pursuant to this Agreement, and designate which sites such employees will be assigned. In performing the services set forth in this Agreement, Contractor shall not utilize any employees who are not included on the above-referenced list.

Contractor's failure to comply with this law shall be considered a material breach of this Agreement upon where this Agreement may be terminated, at District's sole discretion, without any further compensation to Contractor.

In the case of new construction Projects where there are no students, if the Project Schedule provides for Beneficial Occupancy or portions of the Project or if the Project should be delayed, then Contractor, at no additional costs, shall meet the requirements of either fingerprinting or providing a physical barrier as required by the District.

3.3.6 Noise, Drugs, Tobacco, and Alcohol

Contractor shall take all steps necessary to insure that employees of Contractor or any of its Subcontractors' employees do not use, consume, or work under the influence of any alcohol, tobacco or illegal drugs while on the Project. Contractor shall further prevent any of its employees or its Subcontractor employees from playing any recorded music devices or radios or wearing any radio headphone devices for entertainment while working on the Project. Likewise, Contractor shall prevent its

employees or Subcontractor's employees from bringing any animal onto the Project. Contractors shall not violate any written school policies.

3.3.7 Delivery of Material

Contractor shall place orders for materials or equipment so that the Work may be completed in accordance with the Construction schedule for the Work as set forth in Article 8 of this Agreement. Contractor shall, upon demand from the Architect, furnish to the Architect documentary evidence including, but not limited to purchase orders, invoices, bills of materials, work orders and bills of lading, showing that orders have been placed. Contractor shall have a system to receive materials and to ensure that the proper materials are being delivered, including in the case of critical materials to the Project, checking the delivery against Shop Drawings and ensuring that the materials meet the requirements of not only the Plans and Specifications, but also the approved Shop Drawings and Submittals and in conformance with Contractor's plan for delivery of materials (including but not limited to Contractor's representations in the Schedules for the Project and Contractor's equipment and materials schedule under Article 3.7.2.2). Contractor shall be responsible for all costs of accepting non-conforming materials delivered to the Project given Contractor's responsibilities and system for acceptance of deliveries. Contractor shall notify Inspector and District Representative (including CM) as early as possible, in writing, of the delivery of materials for the Project. The deliveries shall include documentation identifying the shipment sufficiently so that the Inspector, Architect or District Representative (including CM) may review the materials that are received. Under no circumstances shall materials be delivered to the Project site that are meant for another Project.

3.3.8 Liens and Other Security Interests of Subcontractors and Material Suppliers

No material, supplies, or equipment for the Work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in Work and agrees upon completion of all Work to deliver premises, together with all improvements and appurtenances constructed or placed thereon by it, to District free from any claims, security interests, 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 Contract shall have any right to place a lien upon the premises or any improvement or appurtenance thereof, except that Contractor may install metering devices or other equipment of a utility company or political subdivision, title to which is commonly retained by the utility company or political subdivision. In event of installation of any such metering device or equipment, Contractor shall advise District as to its owner within five (5) days of such installation in writing, prior to making the installation.

Contractor agrees to indemnify, defend and hold the District harmless from any liens, stop notices, or assertion of security interests, including judgments and levies. If after written notice Contractor fails to address the lien, stop notice, or other security interest, the District may proceed to address the lien, stop notice or claim and seek reimbursement from Contractor.

3.3.9 Title to Materials

The title to new materials or equipment for the Work of this Contract shall remain with Contractor until incorporated in the Work of this Contract until final acceptance of the Project; no part of said materials shall be removed from its place of storage, and Contractor shall keep an accurate inventory of all said materials and equipment in a manner satisfactory to the District or its authorized representative.

Responsibility for materials remains with Contractor and Contractor shall replace materials in case of loss. District similarly may pay for materials stored off site, but Contractor shall remain responsible for the materials that are stored off site.

3.3.10 Assemblies

For all material and equipment specified or indicated in the Drawings, the Contractor shall provide all labor, materials, equipment, and services necessary, (including engineering as specifically required with Shop Drawings or Deferred Approvals) for complete assemblies and complete working systems. Incidental items not indicated on the Drawings, nor mentioned in the Specifications, that can legitimately and reasonably be inferred to belong to the Work described, or be necessary in good practice to provide a complete assembly or system, shall be furnished as though itemized in the Contract Documents in every detail. In all instances, material and equipment shall be installed in strict accordance with each manufacturer's most recent published recommendations and Specifications.

3.3.11 Noise Control

The Contractor shall be responsible for the installation of noise reducing devices on construction equipment. Contractor shall comply with the requirements of the city and county having jurisdiction with regard to noise ordinances governing construction sites and activities. Construction equipment noise is subject to the control of the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations). If school is in session at any point during the progress of the Project, and, in the District's reasonable discretion, the noise from such Work disrupts or disturbs the students or faculty or the normal operation of the school, at the District's request, the Contractor shall schedule the performance of all such Work around normal school hours or make other arrangements so that the Work does not cause such disruption or disturbance. There are specific periods of testing at operational schools and it is critical that Contractor control noise during periods of testing. In no event shall Contractor have a right to receive additional compensation or an extension to the Contract time as a result of any such rescheduling or the making of such arrangements. These controls shall be implemented during site preparation and construction. All noise related issues, including school operations, and noise during testing should be detailed in the Schedule provided pursuant to Article 8.

3.3.12 Prevention and Reporting of Workplace Violence

3.3.12.1 *Statutory Requirements*. Each employer required by Labor Code Section 6401.7 to have in effect an Injury and Illness Prevention Plan ("IIPP") must also establish, implement and maintain a written Workplace Violence Prevention Plan in accordance with Labor Code Section 6401.9 ("WVPP"). The WVPP may be incorporated as a stand-alone section of the IIPP, or may be a separate document. As described in Subdivision (b)(2) of Section 6401.9, certain employers, employees, and places of employment may be exempt from the WVPP requirements. However, in accordance with Subdivision (b)(3) of Section 6401.9, and notwithstanding an applicable exemption, the California Department of Industrial Relations, Division of Occupational Safety and Health ("Cal OSHA") may issue special orders requiring compliance with WVPP requirements.

3.3.12.2 *Project WVPP*. Not later than five (5) days following receipt of the Notice of Award, and as a condition precedent to commencing any work or services on or at the Project Site, the Contractor shall provide to the District: (i) a complete and accurate copy of the Contractor's WVPP applicable to the Project ("Project WVPP"); and (ii) the name, position, and telephone number of each person having responsibility for implementing the Project WVPP and receiving reports of workplace

violence, if and to the extent that information is not conspicuously specified in the Project WVPP. Notwithstanding the District's receipt of the Project WVPP and related information, and subject to coordination requirements specified in Section 3.3.12.3 hereinbelow, the Contractor shall at all times retain sole responsibility for: (i) implementing and maintaining the Project WVPP; and (ii) ensuring compliance with Project WVPP requirements by each subcontractor, consultant, supplier, and other entity under contract with or otherwise subject to the Contractor's control that, for any length of time, will be present on or at the Project Site (each an "Other Employer").

3.3.12.3 *Coordination Requirements*. The Contractor shall implement procedures to effectively coordinate the Project WVPP with the District and all Other Employers, to ensure that they and their employees understand their respective roles in connection with the Project WVPP. Such procedures shall ensure that: (i) all employees are trained in regard to workplace violence prevention; (ii) each workplace violence incident involving any employee is reported, investigated, and recorded; and (iii) if any employee experiences a workplace violence incident, the Contractor shall record the information in a violent incident log and shall provide a copy of that log to the District upon request. In addition, and without limiting the foregoing, the Contractor, during weekly safety meetings conducted at the Project Site, shall reiterate the requirements of the Project WVPP and the procedures for reporting and logging workplace violent incidents, and for otherwise complying with requirements of the Project WVPP. The Contractor shall require that all employees who will be on or at the Project Site in connection with the Project (whether employed by the Contractor or any Other Employer) attend (and sign an attendance sheet for) the weekly safety meetings. If attendance at any weekly safety meeting reasonably is not possible with respect to any particular Other Employer (e.g., a supplier whose employee(s) will only temporarily be at the Project Site), the Contractor shall provide and describe directly to each such Other Employer and its applicable employee(s) the requirements of the Project WVPP and the procedures for reporting and logging workplace violent incidents, and for otherwise complying with requirements of the Project WVPP.

3.3.12.4 *Compliance and Indemnification*. In connection with the Project, and without limiting anything else in the Contract, the Contractor shall: (i) fully comply with all applicable requirements of the Project WVPP, Labor Code Section 6401.7, and Labor Code Section 6401.9 (collectively, the "IIPP and WVPP Requirements"); and (ii) ensure that all Other Employers fully comply with all applicable IIPP and WVPP Requirements. With respect to any and each failure by the Contractor or any of the Other Employers to full comply with all appliable IIPP and WVPP Requirements, and in accordance with Section 3.3.12 of these General Conditions, the Contractor shall indemnify, defend, and hold-harmless the District, the District's governing board and each individual member thereof, and the District's other officers, employees, agents and representatives, and each of them.

3.3.13 California Air Resources Board ("CARB")

3.3.13.1 Contractor shall comply, and shall ensure all subcontractors comply, with all applicable requirements of the most current version of the regulations imposed by the California Air Resources Board ("CARB") including, without limitation, all applicable terms of Title 13, California Code of Regulations Division 3, Chapter 9 and all pending amendments ("Fleets Regulation").

3.3.13.2 Throughout the Project, and for three (3) years thereafter, Contractor shall make available for inspection and copying any and all documents or information associated with Contractor's and its Subcontractors' fleets including, without limitation, the Certificates of Reported Compliance ("CRCs"), fuel/refueling records, maintenance records, emissions records, and any other

information the Contractor is required to produce, keep or maintain pursuant to the Fleets Regulation upon two (2) calendar days' notice from the District.

3.3.13.3 Contractor shall be solely liable for any and all costs associated with compliance with the Fleets Regulation as well as for any and all penalties, fines, damages, or costs associated with any and all violations, or failures to comply with the Fleets Regulation.

3.4 WARRANTY

The Contractor warrants to the District and Architect that material and equipment furnished under the Contract will be of the highest quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. Contractor's warranty to District includes, but is not limited to, the following representations:

3.4.1 In addition to any other warranties provided elsewhere, Contractor shall, and hereby does, warrant all Work after the date of Notice of Completion of Work by District and shall repair or replace any or all such Work, together with any other Work, which may be displaced in so doing that may prove defective in workmanship or materials within a one (1) year period from date of Final Completion which shall be no later than the final date of Punch List as noted at Article 9.11) without expense whatsoever to District, ordinary wear and tear, unusual abuse or neglect excepted. District will give notice of observed defects with reasonable promptness. Contractor shall notify District upon completion of repairs.

3.4.2 In the event of failure of Contractor to comply with above mentioned conditions within one week after being notified in writing, District is hereby authorized to proceed to have defects repaired and made good at expense of Contractor who hereby agrees to pay costs and charges therefore immediately on demand.

3.4.3 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, the District will attempt to give the notice required by this Article. If the Contractor cannot be contacted or does not comply 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 attention which shall be charged against Contractor. Such action by the District will not relieve the Contractor of the guarantee provided in this Article or elsewhere in this Contract.

3.4.4 This Article does not in any way limit the guarantee on any items for which a longer warranty is specified or on any items for which a manufacturer gives a guarantee for a longer period. Contractor shall furnish District all appropriate guarantee or warranty certificates upon completion of the Project.

3.5 TAXES

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 Contract Documents. District is exempt from Federal Excise Tax, and a Certificate of Exemption shall be provided upon request.

3.6 PERMITS, FEES AND NOTICES

3.6.1 Payment

The Contractor shall secure and pay for all permits and governmental fees, licenses, and inspections necessary for proper execution and completion of the Work which are necessary after execution of the Contract and are legally required by any authority having jurisdiction over the Project, except those required by the Division of the State Architect (DSA). District shall be responsible for all testing and inspection as required by the DSA on-site or within the distance limitations set forth in Article 13.5.2, unless a different mileage range is specified in the Supplemental Conditions.

3.6.1.1 *DSA Fees*. DSA policy is to charge CCD review fees for processing and approval of changes in the Plans and Specifications through the Construction Change Document process. Contractor is specifically directed to the current DSA IR A-30 which provides fee structure and charges that will be incurred for proceeding with respect to the CCD process, a process that must be followed for each change in the Plans and Specifications.

3.6.2 Compliance

The Contractor shall comply with and give notices required by any law, ordinance, rule, regulation, and lawful order of public authorities bearing on performance of the Work. Specifically, the Division of State Architect provides State oversight of the Project and enforcement of Title 24 rules and regulations. Contractor is directed to the DSA website. There will be local governmental oversight from City, County or both. Finally, Regional Water Quality Control Board, State Fire Marshall, local fire marshal, Department of Industrial Relations, Department of Labor Standards Enforcement, and Air Quality Management District (Local and State) are some of the agencies that provide oversight and may require specific permits, fees, or provide oversight over the Project. Contractor represents understanding and specialized knowledge of the rules governing school districts and Contractor shall maintain compliance over the applicable rules and will file all documents required in order to ensure compliance with State, local, and other rules that apply to the Project.

3.6.3 Responsibility

The Contractor shall perform all Work in conformance with every law, statute, ordinance, building code, rule or regulation. The Contractor shall assume full responsibility for such Work and shall bear the attributable cost of correction or project delay.

Pursuant to Title 24 Section 4-343(b):

> "Contractor shall carefully study the approved Plans and Specifications and shall plan a schedule of operations well ahead of time.... All inconsistencies or items which appear to be in error in the Plans and Specifications shall be promptly called to the attention of the architect or registered engineer, through the inspector, for interpretation or correction."

To help Contractor plan its operations, Contractor is directed to study the current version of the DSA 152 Inspection Card Manual identifying the exact steps the Inspector is to follow in the review and sign off process for the DSA 152. The DSA 152 Inspection Card Manual provides specific detail as to the order of operations, review items and compliance items beyond the Specifications and Plans which are reviewed for DSA compliance. The most current version of this manual is located on DSA's website.

Contractor is also specifically directed to the time periods for posting of Special Inspection Reports and Inspector Notifications under DSA PR 13-01 since the timing of Inspection is not a Governmental Entity related delay.

3.7 SUBMITTALS REQUIRED AT THE COMMENCEMENT OF THE PROJECT

3.7.1 Requirements Within Ten (10) Calendar Days

Within ten (10) calendar days after Notice to Proceed, Contract shall submit the following:

3.7.1.1 Detailed Schedule of Values (See Article 9.2)

3.7.1.2 Submittal Listing and Schedule for Submittals

3.7.1.3 Critical Path Baseline Schedule (See Article 8)

3.7.2 Requirements Within Thirty-Five (35) Calendar Days

Within thirty-five (35) calendar days after Notice to Proceed, Contractor shall submit the following:

3.7.2.1 *All Submittals for the Project* except those specifically agreed upon by District and Architect, in writing, and shall be specifically incorporated into the Submittal section of the Schedule so as to not delay the Work. The agreement to allow a later Submittal does not mean that Article 3.3.7 is waived. Contractor shall order materials and ensure prices are honored and secured for the Project.

a. Structural Steel may be included as a later Submittal than 35 days if Structural Steel is a significant portion of the Work, at least one or some of the Project is a structural steel structural system, or as specifically agreed upon by the Architect or District.

b. It is specifically agreed that submissions of structural steel Submittals shall not be piecemeal (unless some portion is requested separately by the District or Architect), shall provide complete designs, shall be stamped by the structural steel Subcontractor, Contractor, and structural steel Subcontractor's structural engineer at time of submission and as further addressed in Article 3.9.

c. In no case shall the submission of structural steel Drawings delay the critical path for the schedule. If a Milestone is provided for submission of complete structural steel Shop Drawings then the date shall be no later than as set forth in the Milestone

3.7.2.2 *Exceptions to Submittal Within Thirty-Five (35) Days by Written Agreement*. A written request detailing the specific reasons for a submission later than 35 days due to complexity of design or non-critical path status of the Submittal shall be submitted at the time the Baseline Schedule is submitted. The Baseline Schedule shall not include a delayed Submittal until

written agreement is provided. In addition to the request for providing a Submittal after the thirty-five (35) day period, a copy of the Contract with the Subcontractor who shall be performing the Submittal, a written statement from the Subcontractor verifying that work has commenced on the Submittal and providing Subcontractor's own schedule of Milestones and completion dates, and a corresponding Submittal designation in the Schedule as required under Article 8. Approval of a delayed Submittal shall not result in any increase in the Contract Price or result in an extension of time for the completion of the Project.

3.7.2.3 *Piecemeal Submissions of Submittals*. Piecemeal Submittals mean providing portions of Shop Drawings or Submittals as they are being completed. The submission of piecemeal Submittals results in the appearance of a submission when there is inadequate information for the Architect or Engineer to adequately review a submission. Piecemeal differs from submission of complete buildings or phases of buildings or complete assemblies. The Architect may agree to allow submission of single buildings or areas as long as the Submittals are complete. .

3.8 DOCUMENTS, SAMPLES, AND COMPUTER AT THE SITE

The Contractor shall maintain at the Site for the District one current copy of the California Building Code, Titles 19 and 24 of the California Code of Regulations, any other document required by DSA, and one record copy of the Drawings, Specifications, Addenda, Change Orders, and other Modifications, in good order and marked currently to record changes and selections made during construction. In addition, the Contractor shall maintain at the Site approved Shop Drawings, Product Data, Samples, and similar required Submittals. These documents shall be available to the Architect and shall be delivered to the Architect for delivery to the District upon completion of the Work.

Contractor shall have an operational computer with internet access so Contractor can review and post documents as required for the Project, including but not limited to the filing and posting of DSA required documents for the Project.

Contractor shall be prepared to review documents posted to the DSA Project website.

3.9 SUBMITTALS INCLUDING SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

3.9.1 Definitions

3.9.1.1 *Deferred Approvals*. Approval of certain aspects of the construction may be deferred until the construction Contract has been awarded. To facilitate the design process, DSA grants Deferred Approval to the design and detailing of certain elements of the Project at the request of the Architect or Engineer of Record. Design elements that may be deferred may include, but are not limited to access floors, bleachers, elevator guide rails and related elevator systems, exterior wall systems - precast concrete, glass fiber reinforced concrete, etc., skylights, window wall systems, storefronts, stage rigging, and other systems as noted in the Contract Documents. (Also see Article 1.2.2.2 and 3.9.3)

3.9.1.2 *Shop Drawings.* The term "Shop Drawings" as used herein means Drawings, diagrams, equipment or product schedules, and other data, which are prepared by Contractor, Subcontractors, manufacturers, suppliers, or distributors illustrating some portion of the Work, and includes: illustrations; fabrication, erection, layout and setting Drawings; manufacturer's standard Drawings; schedules; descriptive literature, instructions, catalogs, and brochures; performance and test data including charts; wiring and control diagrams; and all other Drawings and descriptive data pertaining

to materials, equipment, piping, duct and conduit systems, and methods of construction as may be required to show that the materials, equipment, or systems and their position conform to the requirements of the Contract Documents.

3.9.1.3 *Manufactured* applies to standard units usually mass-produced, and "Fabricated" means items specifically assembled or made out of selected materials to meet individual design requirements. Shop Drawings shall: establish the actual detail of all manufactured or Fabricated items, indicate proper relation to adjoining work, amplify design details of mechanical and electrical systems and equipment in proper relation to physical spaces in the structure, and incorporate minor changes of design or construction to suit actual conditions.

3.9.1.4 *Submittals* is a term used interchangeably and sometimes refers to Shop Drawings, Product Data, and samples since all Subcontractor submissions are tracked in a Submittal Log and may include any of the noted items. However, generally, a Submittal is a manufacturer's product information and Product Data including description, characteristics, size, physical characteristics, and requirements to prepare the jobsite for receiving of the particular manufactured item.

3.9.1.5 *Samples*. The term "samples" as used herein are physical examples furnished by Contractor to illustrate materials, equipment, or quality and includes natural materials, Fabricated items, equipment, devices, appliances, or parts thereof as called for in the Specifications, and any other samples as may be required by the Architect to determine whether the kind, quality, construction, finish, color, and other characteristics of the materials, etc., proposed by the Contractor conform to the required characteristics of the various parts of the Work. All Work shall be in accordance with the approved samples.

3.9.2 Shop Drawings.

3.9.2.1 *When Shop Drawings Are Required.* Shop Drawings are required for prefabricated components and for installation and coordination of these prefabricated components into the Project. In addition, Shop Drawings, are prepared to address the actual size and installation of components from various Subcontractors and provides an opportunity for the Contractor to coordinate and address conflicts between the subcontracting trades. In some cases, each Subcontractor or trade will provide Shop Drawings in a BIM format or other format as agreed by District.

3.9.2.2 *Purpose for Shop Drawings.* Shop Drawings are the Contractor's manufacturer, Subcontractor, supplier, vendor or the Contractor's detailed drawings showing particularized method for assembly, specifics to a manufacturer, manufacturer component installation requirements, specifics as to a manufactured item, alterations to a manufactured, a custom created item, or drawn version of more detailed information expanding on the Architect's design shown in the Contact Documents. The Shop Drawings address the appearance, performance, size, weight, characteristics and prescriptive descriptions associated with the Contractor or Contractor's Subcontractor's plan for installation or assembly based on the design in the Specifications and Contract Documents. The Shop Drawing often is more detailed than the information shown in the Contract Documents to give the Architect and Engineer the opportunity to review the fabricator's version of the product (along with particulars specific to that particular product), prior to fabrication. References to the Contract Documents, Construction Documents, Drawings, Plans, and Specifications assist the Architect and Engineer in their review of the Shop Drawings. Attachment of manufacturer's material Specifications, "catalog cut sheets," and other manufacturer's information may be provided to accompany Shop Drawings. Because Shop

Drawings facilitate the Architect's and Engineer's approval of the system, they should be as clear and complete as possible so they may be reviewed by Architect or Engineer for the Project.

3.9.2.3 *Shop Drawing Requirements.* The Contractor shall obtain and submit with Shop Drawings all seismic and other calculations and all Product Data from equipment manufacturers. "Product Data" as used herein are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate a material, product, or system for some portion of the Work.

3.9.2.4 *Not a Reproduction of Architectural or Engineering Drawings.* The Shop Drawings are not a reproduction of the architectural or engineering Drawings. Instead, they must show more detail than the Construction Documents and details the fabrication and/or installation of the items to the manufacturer's production crew or Contractor's installation crews.

3.9.2.5 *Shop Drawings Engineering Requirements*: Some Shop Drawings require an engineer stamp to be affixed on the Drawings and calculations. In such cases, a current and valid engineering stamp shall be affixed by a California registered engineer. No out of State engineers shall stamp Shop Drawings. (See DSA IR A-18). In most cases, an engineer means California registered mechanical, structural, electrical or plumbing engineer. California Registered Civil Engineers will not be accepted for structural details unless specifically approved by DSA.

3.9.2.6 *DSA Approvals Required Prior to Work*. No work on a Shop Drawing that requires DSA approval may proceed until DSA approval is received. Contractor has provided DSA approval time and allowed adequate time for corrections in Contractor's Schedule as required pursuant to Article 8.

3.9.2.7 *Shop Drawing Identification.* All Shop Drawings must be properly identified with the name of the Project and dated, and accompanied by a letter of transmittal referring to the name of the Project and to the Specification section number for identification of each item clearly stating in narrative form, as well as "clouding" all qualifications, departures, or deviations from the Contract Documents. Shop Drawings, for each section of the Work shall be numbered consecutively and the numbering system shall be retained throughout all revisions. All Subcontractor submissions shall be made through the Contractor. Each drawing shall have a clear space for the stamps of Architect and Contractor.

3.9.3 Deferred Approvals

Deferred approvals shall be submitted and processed to ensure all DSA and other governmental approvals are secured so as to not delay the Project. There may be additional requirements for Deferred Approvals at Division 1 of the Specifications. All Deferred Approvals shall be prepared by Contractor or Contractor's agent early enough so as to not delay the Project. Contractor is aware that Title 24 California Code of Regulations Section 4-317 have specific requirements for Deferred Approval as to governing agencies and as to the Architect and Engineer for the Project. As a result, any delay associated with the time for approval by applicable agencies or by the Architect or Architect's consultants shall be Contractor's. Contractor is required to comply with inclusion of Deferred Approvals in the Schedule as required under Article 3.9.6*DSA Approvals Required Prior to Work.* No work on a Deferred Approval item may proceed on the components until DSA approval is received. Contractor has provided DSA approval time and allowed adequate time for any DSA revisions in Contractor's Schedule as required pursuant to Article 8.

3.9.4 Submittals and Samples

3.9.4.1 *Information Required With Submittals*: Manufacturer, trade name, model or type number and quantities: Information provided must be of sufficient detail to allow Architect and Engineer to compare the submitted item with the specified products and acceptable products listed, in the Specifications and addenda.

3.9.4.2 *Description of Use and Performance Characteristics*: Information should be furnished describing the normal use and expected performance of the product. The Architect and Contractor review this information to confirm that the product is appropriate for the intended use.

3.9.4.3 *Size and Physical Characteristics:* The size and physical characteristics, such as adjustment capabilities, which is reviewed by both the Contractor and Architect. The Contractor has the most available information for comparing adjoining materials and equipment. The Contractor also needs to know the size and weight of the equipment for lifting and handling considerations.

3.9.4.4 *Finish Characteristics:* The Architect reviews the available finishes and selects the appropriate finish, if the finish was not previously specified in the documents. The Contractor should confirm that finish requirements in the Specifications are being met by the product.

3.9.4.5 *Contractor Responsible for Jobsite Dimensions*: Some material is custom-Fabricated to job conditions, requiring dimensions from the jobsite. These jobsite dimensions are provided by the Contractor as part of the Contractor's responsibilities for the Project and shall be provided prior to release of the product for manufacture. Contractor shall not rely on Architect or Engineers to provide jobsite dimensions.

3.9.4.6 *Full Range of Samples Required (When Specific Items Not Specified).* Except in cases where the exact color and type of item is specified since the District is utilizing items Standardized or pre-selected by District, the full range of color, graining, texture, or other characteristics are anticipated for review in finished products, a sufficient number of samples of the specified materials shall be furnished by the Contractor to indicate the full range of characteristics which will be present in the finished products. Products delivered or erected without Submittal and approval without providing a full range of samples shall be subject to rejection. Except for range samples, and unless otherwise called for in the various sections of the Specifications or Specification Section 1, samples shall be submitted in duplicate.

3.9.4.7 *Labeling of Samples.* All samples shall be marked, tagged, or otherwise properly identified with the name of the submitting party, the name of the Project, the purpose for which the samples are submitted and the date.

3.9.4.8 *Transmittal letter.* All samples shall be accompanied by a letter of transmittal containing similar information, together with the Specification section number.

3.9.4.9 *Labels and Instructions.* All samples of materials shall be supplied with the manufacturer's descriptive labels and application instructions. Each tag or sticker shall have clear space for the review stamps of Contractor and Architect.

3.9.4.10 *Architect's Review.* The Architect will review and, if appropriate, approve submissions and will return them to the Contractor with the Architect's stamp and signature

applied thereto, indicating the timing for review and appropriate action in compliance with the Architect's (or District's) standard procedures. In the cases where a CM is hired by the District, CM may be the party that receives and performance logging and initial processing of the Samples. CM may, in some cases, reject samples that are not in conformance with Contract requirements.

3.9.5 Submittal Submission Procedure

3.9.5.1 *Transmittal Letter and Other Requirements.* All Submittals must be properly identified with the name of the Project and dated, and each lot submitted must be accompanied by a letter of transmittal referring to the name of the Project and to the Specification section number for identification of each item clearly stating in narrative form, as well as "clouding" on the submissions, all qualifications, departures, or deviations from the Contract Documents. Shop Drawings, for each section of the Work shall be numbered consecutively and the numbering system shall be retained throughout all revisions. All Subcontractor submissions shall be made through the Contractor. Each drawing shall have a clear space for the stamps of Architect and Contractor. Refer to Division 1. In the case where a CM is hired on the Project, the CM may be designated to receive the Submittals for the Project, log the Submittals, and in some cases reject Submittals that do not conform to Contract requirements. Submittal Procedures for further information.

3.9.5.2 *Copies Required.* Each Submittal shall include one (1) legible, reproducible (if electronic is available, electronic copies shall also be provided) and five (5) legible prints of each drawing or schedule, table, cut sheet, etc., including fabrication, erection, layout and setting drawings, and such other drawings as required under the various sections of the Specifications, until final acceptance thereof is obtained. Subcontractor shall submit copies, in an amount as requested by the Contractor, of: (1) manufacturers' descriptive data for materials, equipment, and fixtures, including catalog sheets showing dimensions, performance, characteristics, and capacities; (2) wiring diagrams and controls; (3) schedules; (4) all seismic calculations and other calculations; and (5) other pertinent information as required by the District or Architect. (See also Division 1)

3.9.5.3 *Corrections.* The Contractor shall make all corrections required by Architect, District or CM and shall resubmit, as required by Architect or CM, corrected copies of Shop Drawings or new samples until approved. Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections required by the Architect on previous submissions. Professional services required for more than one (1) re-review of required Submittals of Shop Drawings, Product Data, or samples are subject to charge to the Contractor pursuant to Article 4.5.

3.9.5.4 *Approval Prior to Commencement of Work.* No portion of the Work requiring a Shop Drawing or sample submission or other Submittal shall be commenced until the submission has been reviewed by Contractor and Architect (and CM, if applicable) and approved by Architect (and CM where applicable) unless specifically directed in writing by the Architect. All such portions of the Work shall be in accordance with approved Shop Drawings and samples.

3.9.5.5 *District's Property.* All Submittals, Shop Drawings, computer disks, BIM modeling information, clash checks, schedules, annotated Specifications, samples and other Submittals shall become the District's property upon receipt by the District or Architect.

3.9.6 Schedule Requirements for Submittals

Contractor shall obtain and shall submit all required Submittals (i.e. Shop Drawings, Deferred Approvals, Samples, etc.), in accordance with Contractor's "Schedule for Submission of Shop Drawings and Samples" as required in the scheduling portion of the General Conditions at Articles 8 and the Specifications (as long as the Specifications do not conflict with General Conditions. In the case of conflict, the conflicting provision shall be controlled by the General Conditions and the remaining Specifications sections shall be interpreted as if the general conditions language is inserted) with such promptness as to cause no delay in its own Work or in that of any other contractor or subcontractor but in no event later than thirty five (35) days after the Notice to Proceed is issued except in the specific cases noted as an exception under Article 3.7.2.1. No extensions of time will be granted to Contractor or any Subcontractor because of its failure to have Shop Drawings and samples submitted in accordance with Division 1 and the Schedule. Each Subcontractor shall submit all Shop Drawings, samples, and manufacturer's descriptive data for the review of the District, the Contractor, and the Architect through the Contractor.

3.9.6.1 *Consideration of Schedule.* Contractor has considered lead times, DSA or other agency governmental review times, Architect or Engineer review times, manufacturing seasons, and specific long lead procurement concerns for all submittals for the Project.

3.9.7 General Submittal Requirements

3.9.7.1 *Contractor Submittal Representations and Coordination.* By submitting Shop Drawings, Product Data, samples, etc., the Contractor represents that it has determined and verified all materials, field measurements, catalog numbers, related field construction criteria, and other relevant data in connection with each such submission, and that it has checked, verified, and coordinated the information contained within such Submittals with the requirements of the Work and of the Contract Documents, including the construction schedule.

3.9.7.2 *Contractor Coordination.* Contractor shall stamp, sign, and date each Submittal indicating its representation that the Submittal meets all of the requirements of the Contract Documents and evidence Contractor's review through execution of the following stamp to be placed on each Shop Drawings:

> "[Contractor] has reviewed and approved the field dimensions and the construction criteria, and has also made written notation regarding any information in the Shop Drawings and Submittals that does not conform to the Contract Documents. This Shop Drawing or Submittal has been coordinated with all other Shop Drawings and Submittals received to date by me as 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 and date

3.9.7.3 *No Deviation from Contract Documents.* The submission of the Shop Drawings, Product Data, samples, etc., shall not deviate from the *requirement*s of the Contract Documents including detailing and design intent which is specifically outlined in Contract Documents except as specifically authorized by the Architect or through an accepted substitution pursuant to Article 3.10.4. All deviations from the Contract Documents shall be narratively described in a transmittal accompanying the Shop Drawings. However, Shop Drawings shall not be used as a means of requesting a substitution, the procedure for which is defined in Article 3.10.4, "Substitutions."

3.9.7.4 *Contractor Responsibility for Shop Drawings Conformance to Contract Documents*. Review by District and Architect shall not relieve the Contractor or any Subcontractor from its responsibility in preparing and submitting proper Shop Drawings in accordance with the Contract Documents.

3.9.7.5 *Incomplete Submittals.* Any submission, which in Architect's opinion is incomplete, contains errors, or has been checked superficially, will be returned not reviewed by the Architect for resubmission by the Contractor. Refer to Submittal Procedures of the Specifications for additional information. The Contractor shall be responsible for any related delays and shall not be the basis for any Claim.

3.9.7.6 *Shop Drawings and Submittals Shall Not Be Used as a Method to Make a Substitution.* Shop Drawings and Submittals shall not be used as a means of requesting a substitution or to make changes in the Contract Documents. If changes are made to the Contract Documents through the Shop Drawings, the Architect shall have the right to reject the Submittal. If the Architect does not note the deviation from the approved Plans and Specifications, the Contractor is still responsible for the change and the Architect or the District may require the Shop Drawings be revised to properly reflect the approved Contract Documents. The Architect or District may also require that the Contractor bear all costs under Article 4.5 and consequential damages associated with a CCD to revise Plans and Specifications to accommodate the deviation from approved Plans and Specifications.

3.9.7.7 Extent of Review. In reviewing Shop Drawings, the Architect will not verify dimensions and field conditions. The Architect will review and approve Shop Drawings, Product Data, samples, etc., for aesthetics and for conformance with the design concept of the Work and the information in the Contract Documents. The Architect's review shall neither be construed as a complete check which relieves the Contractor, Subcontractor, manufacturer, fabricator, or supplier from responsibility for any deficiency that may exist or from any departures or deviations from the requirements of the Contract Documents unless the Contractor has, in writing, called the Architect's attention to the deviations at the time of submission. The Architect's review shall not relieve the Contractor or Subcontractors from responsibility for errors of any sort in Shop Drawings or schedules, for proper fitting of the Work, coordination of the differing Subcontractor trades and Shop Drawings and Work which is not indicated on the Shop Drawings at the time of submission of Shop Drawings. Contractor and Subcontractors shall be solely responsible for any quantities which may be shown on the Submittals or Contract Documents.

3.10 SUBSTITUTIONS

3.10.1 Definition

A Substitution is a change in product, material, equipment, or method of construction from those required by the Construction Documents proposed by the Contractor. For this Project, a Substitution is subject to the filing of a Construction Substitution Request Form at the time of bid and meeting the requirements of this Article.

3.10.2 One Product Specified

Unless the Specifications state that no substitution is permitted, whenever the Contract Documents indicate any specific article, device, equipment, product, material, fixture, patented process, form, method, or type of construction or any specific name, make, trade name, or catalog number, with or without the words "or equal," such specification shall be deemed to be used for the purpose of facilitating

description of the material, process, or article desired and shall be deemed to be followed by the words "or equal." Subject to the requirements of properly submitting a Substitution Request for as Addressed in Article 3.10.4, the Contractor may, unless otherwise stated, offer any material, process, article, etc., which shall be materially equal or better in every respect to that so indicated or specified ("Specified Item") and will completely accomplish the purpose of the Contract Documents.

3.10.3 Products Specified Which Are Commercially Unavailable

If the Contractor fails to make a request for substitutions for products, prior to the submission of its bid, and such products subsequently become commercially unavailable, the Contractor may request a substitution for such commercially unavailable item. The decision to grant this request is solely at the District's discretion. The written approval of the District, consistent with the procedure for Change Orders, shall be required for the use of a proposed substitute material. The District may condition its approval of the substitution upon the delivery to District of an extended warranty or other assurances of adequate performance of the substitution as well as an equitable deduction in the Contract Price should the substituted item cost less than the Specified Item. All risks of delay due the approval of a requested substitution by the DSA, or any other governmental agency having jurisdiction, shall be on the requesting party. All additional costs, DSA review costs, all procurement and construction delays, and all costs for review by the Architect or its consultants shall be the responsibility of the Contractor and will be deducted from Contractor's pay request.

3.10.4 Substitution Request Form

Requests for substitutions of products, materials, or processes in place of a Specified Item must be in writing on the District's Substitution Request Form ("Request Form") at the time of submitting bids to the District, except as provided for in Article 3.10.3.

The Request Form must be accompanied by evidence as to whether the proposed substitution:

a. Is equal in quality/service/ability to the Specified Item;

b. Will entail no changes in detail, construction, and scheduling of related work;

c. Will be acceptable in consideration of the required design and artistic effect;

d. Will provide no cost disadvantage to the District;

e. Will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; and

f. Will required no change of the construction schedule.

In completing the Request Form, the bidder must state, with respect to each requested substitution, whether the bidder will agree to provide the Specified Item in the event that the District denies the bidder's request for such requested substitution. In the event that the bidder has agreed in the Request Form to provide the Specified Item and the District denies the bidder's requested substitution for a Specified Item, the bidder shall provide the Specified Item without any additional cost or charge to the District.

After bids are opened, the apparent lowest bidder shall provide, within five (5) days of opening such bids, any and all Drawing, Specifications, samples, performance data, calculations, and other information, as may be required to assist the Architect, CM and the District in determining whether the proposed substitution is acceptable. The burden of establishing these facts shall be upon the bidder.

After the District's receipt of such evidence by the bidder, the District will make its final decision as to whether the bidder's request for substitution for any Specified Items will be granted. The decision as to whether a proposed request for substitution is equal to a Specified Item shall be at the sole discretion of the District. Any request for substitution that is granted by the District shall be documented and processed though a Change Order. Contractor must submit a complete Submittal of the requested substitution and a Shop Drawing showing configuration, dimensions, and other critical information associated with the substitution that meets the requirements of Article 3.9. The District may condition its approval of any substitution upon delivery to the District of an extended warranty or other assurances of adequate performance of the substitution. Any and all risks of delay due to approval by the DSA or any other governmental agency having jurisdiction shall be on the bidder.

If the Architect and District accept a proposed substitution, the Contractor agrees to pay for all DSA review costs, engineering and design services, including, without limitation, compensation to the Architect and affected engineers for their required time to process such substitution through the Division of the State Architect, if required, and to make all changes and adjustments in materials or the work of all trades directly or indirectly affected by the substituted item or items at no cost to the District.

3.10.5 Substitution Requests After Bid

The District, in its sole discretion, may accept a request for substitution by the Contractor or may request Contractor substitute a specified item. Any substitutions requested after bids are opened shall be subject to the same conditions and requirements set forth in Article 3.10.4 above. If any substitutions, that in the District or Architect's determination, results in a credit to the District, the credit amount shall be agreed upon in writing, otherwise, the request for substitution shall be deemed denied.

3.11 INTEGRATION OF WORK

3.11.1 Scope

The Contractor shall be responsible for cutting, fitting, or patching to complete the Work and to make all parts fit together properly. Contractor shall be responsible for ensuring that all trades are coordinated and scheduled so as to ensure the timely and proper execution of the work. 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 at no additional cost to District. All cost caused by defective or ill-timed work shall be borne by Contractor. 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.

3.11.2 Structural Members

New or existing structural members and elements, including reinforcing bars and seismic bracing, shall not be cut, bored, or drilled except by written authority of the Architect. Work done contrary to such authority is at the Contractor's risk and subject to replacement at its own expense without

reimbursement under the Contract. Schedule delays resulting from Agency approvals for unauthorized work shall be the Contractor's responsibility.

3.11.3 Subsequent Removal

Permission to patch any areas or items of the Work shall not constitute a waiver of the District's or the Architect's right to require complete removal and replacement of the areas of items of the Work if, in the opinion of the Architect or the District, the patching does not satisfactorily restore quality and appearance of the Work or does not otherwise conform to the Contract Documents.

3.12 CLEANING UP

3.12.1 Contractor's Responsibility to Clean Up

Contractor at all times shall keep premises free from debris such as waste, dust, excess water, storm water runoffs, rubbish, and excess materials and equipment. Contractor shall not leave debris under, in, or about the premises, but shall promptly remove same from the premises and dispose of it in a lawful manner. Disposal receipts or dump tickets shall be furnished to the Architect within five (5) days of request.

Contractor shall remove rubbish and debris resulting from the Work on a daily basis. Contractor shall maintain the structures and Site in a clean and orderly condition at all times until acceptance of the Project by the District. Contractor shall keep its access driveways and adjacent streets, sidewalks, gutters and drains free of rubbish, debris and excess water by cleaning and removal each day. All concrete, sidewalks, and paths of travel shall be broom cleaned daily.

3.12.2 General Final Clean-Up

Upon completion of Work, Contractor shall employ experience workers or professional cleaners for final cleaning. Contractor shall clean each surface to the condition expected in a normal, commercial, building cleaning and maintenance program including, but not limited to, the performed of the following:

a. Clean interior and exterior of buildings, including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections, and any areas where debris has collected, so surfaces are free from foreign material or discoloration;

b. Clean the Project site. The grounds should be cleared of any Contractor equipment, raked clean of debris and trash removed. Sweep paved areas broom clean;

c. Repair or replace any damaged materials. Replace any chipped or broken glass;

d. Remove any and all stains;

e. Remove labels that aren't permanent labels;

f. Clean and polish all glass, plumbing fixtures, equipment, finish hardware and similar finish surfaces. Remove any glazing compounds;

g. Remove temporary utilities, fencing, barricades, planking, sanitary facilities and similar temporary facilities from Site;

h. Remove temporary film that remains on any hardware, doors or other surfaces; and

i. Seal the bottom and tops of all doors.

3.12.3 Special Clean-Up.

In addition to the general cleaning, the following special cleaning shall be done at the completion of the Work in accordance with the Specifications including, but not limited to:

a. Remove putty stains from glazing, then wash and polish glazing;

b. Remove marks, stains, fingerprints and other soil or dirt from painted, stained or decorated work;

c. Remove temporary protection and clean and polish floors and waxed surfaces;

d. Clean and polish hardware and plumbing trim; remove stains, dust, dirt, plaster and paint;

e. Wipe surfaces of mechanical and electrical equipment;

f. Remove spots, soil, plaster and paint from tile work, and wash tile;

g. Clean all fixtures and equipment, remove excess lubrication, clean light fixtures and lamps, polish metal surfaces;

h. Vacuum-clean carpeted surfaces; and

i. Remove debris from roofs, down spout and drainage system.

3.12.4 Failure to Cleanup

If the Contractor fails to clean up as provided in the Contract Documents, the District may do so, and the cost thereof shall be the responsibility of the Contractor pursuant to Article 2.2 and seek a Deductive Change Order.

3.13 ACCESS TO WORK

The Contractor shall provide the District, the Architect, Engineers and the Inspector of Record, access to the Work in preparation and progress wherever located. Contractor shall provide safe and proper facilities for such access so that District's representatives may perform their functions.

CONTRACTOR IS AWARE THAT THIS CONTRACT MAY BE SPLIT INTO SEVERAL PHASES AS ADDRESSED IN ARTICLE 6.

3.13.1 Special Inspection, Inspections or Tests Out of State, Out of Country or Remote from Project

If Contractor has a Subcontractor or supplier that requires in plant or special inspections or inspections or tests that are out of the country, out of the state, or a distance of more than 200 miles from the Project site, the Special Inspector or Inspector shall be provided access so the special inspection or inspection may occur in the remote location. In some cases, the DSA Inspector may also require access in addition to Special Inspectors and individuals performing tests. Inspections/tests shall occur during normal work hours. (See also Article 4.3.6)

3.14 ROYALTIES AND PATENTS

3.14.1 Payment and Indemnity for Infringement

Contractor shall hold and save the District and its officers, agents, and employees, the Construction Manager, the Architect, and the Architect's consultants 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 the Contract, including its use by the District, unless otherwise specifically provided in the Contract Documents, and unless such liability arises from the sole negligence, or active negligence, or willful misconduct of the District, the Architect, or the Architect's consultants.

3.14.2 Review

The review by the Architect of any method of construction, invention, appliance, process, article, device, or material of any kind shall be for its adequacy for the Work and shall not be an approval for the use by the Contractor in violation of any patent or other rights of any person or entity.

3.15 INDEMNIFICATION

3.15.1 Contractor

See Agreement Form. Contractor shall ensure that its contract with each of its Subcontractors contains provisions requiring the Subcontractors to defend, indemnify and hold harmless the District, Architect, Inspector, the State of California to a minimum level as set forth in this Article and consistent with the indemnity and hold harmless language in the Agreement Form.

3.16 SUBMISSION OF DAILY REPORTS

3.16.1 General

By 10:00 a.m. on the following business day, the Contractor shall submit a Daily Report to the Inspector and copy the Architect for the previous day's Work. If there is a Construction Manager, the original Daily Report is to be provided to the Construction Manager and copies sent to the Architect and the Inspector. Daily Reports shall be prepared on forms approved by the District, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day. The District

reserves the right to note inconsistencies or inaccuracies in the Daily Reports. In such cases, pertinent notes shall be entered by each party to explain points which cannot be resolved that day. Each party shall retain a signed copy of the report. Daily Reports by Subcontractors or others shall be submitted through the Contractor.

3.16.2 Labor

The Daily Report shall show names of workers, classifications, hours worked and hourly rate. The locations where work occurred shall also be identified in the Daily Report. Project superintendent expenses are not allowed.

3.16.3 Materials

The Daily Report required shall describe and list quantities of materials used and unit costs.

3.16.4 Equipment

The Daily Report required shall show type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable, and hourly/daily cost. Move-on and move-off fees shall be noted.

3.16.5 Other Services and Expenditures

Other services and expenditures shall be described in the Daily Report in detail as the District requires.

3.16.6 Failure to Submit Daily Report

If Contractor does not submit its Daily Report by 10 am the next business day, the Inspector of Record shall prepare a Daily Report addressing each of the above items. The cost for the Inspector's services to prepare the Daily Report shall be addressed through a Deductive Change Order under Article 7.7.4.

3.17 AS-BUILT DRAWINGS AND ANNOTATED SPECIFICATIONS

Throughout the duration of the Project, Contractor shall maintain on a current basis an accurate and complete set of As-Built Drawings (and Annotated Specifications) clearly showing all changes, revisions to Specifications and substitutions during construction, including, without limitation, field changes and the final location of all electrical and mechanical equipment, utility lines, ducts, outlets, structural members, walls, partitions, and other significant features. In case a Specification allows Contractor to elect one of several brands, makes, or types of material or equipment, the annotations shall show which of the allowable items the Contractor has furnished. The Contractor will update the As-Built Drawings and Annotated Specifications as often as necessary to keep them current, but no less often than weekly.

Contractor shall update As-Built Drawings with complete information on an area of Work at or near the time when the Work is being performed and prior to any DSA 152 sign off and prior to any Work being covered.

The As-Built Drawings and Annotated Specifications shall be kept at the Site and available for review and inspection by the District and the Architect. Failure to maintain and update the As-Built Drawings is a basis to withhold Progress Payments pursuant to Article 9.6.

3.17.1 Upon Beneficial Occupancy

Contractor shall obtain and pay for reproducible Plans upon Beneficial Occupancy. Contractor shall deliver Plans to District Representative (Construction Manager if one is hired for the Project).

3.17.2 As-Builts at Completion of Work

Upon completion of the Work and prior to and as a condition precedent to Application for Retention Payment, the Contractor will provide one neatly prepared and complete set of As-Built Drawings and Annotated Specifications to the District. Contractor shall certify the As-Builts as a complete and accurate reflection of the actual construction conditions of the Work by affixing a stamp indicating the Drawings are As-Builts and certifying accuracy on the final set of As-Builts. Failure to deliver a complete As-Built set of Drawings may result in significant withholdings to ensure Work is properly documented. (See Article 9.9.2)

3.17.3 Log of Control and Survey Documentation

Contractor shall complete and maintain an accurate log or all control and survey documentation for the Project as the Work progresses. All reference and control points shall be recorded on the As-Built Drawings. The basis of elevations shall be one of the established benchmarks that must be maintained on the As-Builts.

3.17.4 Record Coordinates for Key Items

Contractor shall record, by coordinates, all utilities on-site with top of pipe elevations, major grade and alignment changes, rim, grate or top of curb and flow line elevations of all drainage structures and sewer manholes. Contractor shall update record information at or near the time when work is occurring in an area and prior to DSA 152 sign off on any category of Work and prior to covering the Work.

3.17.5 BIM As-Built Drawings

If BIM is utilized for the Project, then an electronic version of such As-Built Drawings and Annotated Specifications will be delivered to District (in an acceptable format to District).

3.18 EQUIPMENT MANUALS

Contractor shall obtain and furnish three (3) complete sets of manuals containing the manufacturers' instructions for maintenance and operation of each item of equipment and apparatus furnished under the Contract Documents and any additional data specifically requested under the various sections of the Specifications for each division of the Work. The manuals shall be arranged in logical, sequential order, labeled, indexed, and placed in three-ring binders. At the completion of its Work, the Contractor shall certify, by endorsement thereon, that each of the manuals is complete, accurate, and covers all of its Work. Prior to submittal of Contractor's Application for Retention Payment, and as a

further condition to its approval by the Architect, each Subcontractor shall deliver the manuals, arranged in logical, sequential order, labeled, indexed, endorsed, and placed in three-ring binders, to the Contractor, who shall assemble these manuals for all divisions of the Work, review them for completeness, and submit them to the District through the Architect.

3.19 DIR REGISTRATION

Strict compliance with all DIR registration requirements in accordance with Labor Code sections 1725.5 and 1771.1 is a material obligation of the Contractor and all of its subcontractors (of any tier) under the Contract Documents. The foregoing includes, without limitation, compliance with DIR registration requirements at all times during performance of the Work by the Contractor and all of its subcontractors of any tier. The failure of the Contractor and all subcontractors of any tier to be properly registered with DIR at all times during performance of the Work is a material breach of the Contract and subject to termination for cause.

An affirmative and ongoing obligation of the Contractor under the Contract Documents is the verification that all subcontractors of any tier are at all times during performance of the Work are in full and strict compliance with the DIR registration requirements. The Contractor shall not permit or allow any subcontractor of any tier to perform any Work without the Contractor's verification that all subcontractors are in full and strict compliance with the DIR registration requirements. Any subcontractors of any tier not properly registered with DIR shall be substituted in accordance with Labor Code section 1771.1. Contractor or its subcontractors of any tier shall not be entitled to any additional costs or time arising from or in any way related to compliance with the DIR registration requirements.

ARTICLE 4
ADMINISTRATION OF THE CONTRACT AND CLAIMS

4.1 ARCHITECT

4.1.1 Replacement of Architect

In the case of the termination of the Architect, the District may appoint an Architect or another construction professional or may perform such functions with its own licensed professional personnel. The status of the replacement Architect under the Contract Documents shall be the same as that of the former Architect.

4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

4.2.1 Status

Pursuant to Titles 2 of the California Code of Regulations and as required pursuant to the Field Act, Education Code 17280 et seq., the Architect will provide administration of the Contract Documents and the Work, and will be the District's representative during construction, as well as during the one (1) year period following the commencement of any warranties. The Architect will have authority to act on behalf of the District only to the extent provided in the Contract Documents.

4.2.2 Site Visits

The Architect will visit the Site at intervals necessary in the judgment of the Architect to become generally familiar with the progress and quality of the Work and to determine in general if the Work is being performed in accordance with the Contract Documents and as otherwise required by DSA.

4.2.3 Limitations of Construction Responsibility

The Architect, District and CM shall not have control over, charge of, or be responsible for construction means, methods, techniques, schedules, sequences or procedures, fabrication, procurement, shipment, delivery, receipt, installation, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility under the Contract Documents. The Architect, District and CM shall not be responsible for the Contractor's, Subcontractors', material or equipment suppliers', or any other person's schedules or failure to carry out the Work in accordance with the Contract Documents. The Architect, District and CM shall not have control over or charge of acts or omissions of the Contractor, Subcontractors, their agents or employees, or any other persons or entities performing or supplying portions of the Work. The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect, District or CM in the Architect, District or CM's administration of the Contract Documents, or by tests, inspections, or approvals required or performed by persons other than the Contractor.

4.2.4 Communications Facilitating Contract Administration

Except where a CM is on the Project, or as otherwise provided in the Contract Documents or when direct communications are warranted by special circumstances, the District and the

Contractor shall communicate through the Architect. In the cases where a CM is hired for the Project, all communication shall be through the CM (unless otherwise directed) with copies to the District, Architect and Inspector. Where direct communication is necessary between the District and the Contractor, the District's communication shall be through the District's authorized designated person. The Architect and CM shall be promptly informed, and shall receive copies of all written communications. Contractor shall not rely upon any communications from the District that is not from the District's Representative. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material or equipment suppliers shall be through the Contractor. In the case where a CM is hired for the Project, the CM shall be the main point of contact for communication of information. Copies should be sent to the Architect, District Representative and Inspector.

4.2.5 Payment Applications

The Architect will review and make recommendations to the District regarding the amounts due the Contractor on the Certificates for Payment pursuant to Article 9.3.4and subject to the Inspector's review, (CM review, if applicable) and Architect's observation. This review of Payment Applications is sometimes called a "Pencil Draft." Return of a Pencil Draft shall constitute the District's dispute of the Payment Application that has been submitted. Contractor shall promptly respond to Pencil Drafts or Contractor's Payment Applications may be delayed. Contractor's failure to promptly respond to a Pencil Draft shall qualify as a delay in the Prompt Payment of a Request for Payment or Request for Retention.

4.2.6 Rejection of Work

In addition to the rights, duties, and obligations of the Inspector under this Article, the Architect may recommend to the District that the District reject Work which does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable to achieve the intent of the Contract Documents, the Architect (and/or CM) may recommend to the District that the District require additional inspection or testing of the Work in accordance with Article 13.5, whether or not such Work is Fabricated, installed, or completed. District may have Non-conforming Work removed and replaced pursuant to Article 9.7. However, neither this authority of the Architect (or CM) nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect (or CM) to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.

Contractor shall, without charge, replace or correct Work found by the District to not be in conformance to Contract requirements. Contractor shall promptly segregate and remove rejected materials from the Project site.

This section is does not address a Notice of Non-Compliance and the remedies associated with a Notice of Non-Compliance which are addressed at Article 7.1.2

4.2.7 Warranties upon Completion

The Architect (and where applicable CM), in conjunction with the Inspector will conduct field reviews of the Work to determine the date of Substantial Completion and of Final Completion, shall receive and forward to the District for the District's review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment when the Architect believes the Work has been completed in compliance with the requirements of the

Contract Documents (See Article 9.11 for Close-Out). The handling by the Architect (or where applicable CM) of such warranties, maintenance manuals, or similar documents shall not diminish or transfer to the Architect any responsibilities or liabilities required by the Contract Documents of the Contractor or other entities, parties, or persons performing or supplying the Work.

On some Projects, the District will take a phased occupancy of the Project. In those cases, the District may commence the running of warranties on the buildings, or phases that are accepted after Punch List is completed and the District has accepted Completion of the separate phase. A separate Notice of Completion may be filed for the separate building or phase of work and warranties shall commence for the separate phase only to the extent that warranties do not require coordination or connection to other buildings or other parts of the site and only if the warranted item is completed to its entirety in the segregated building or phased area.

If written warranties are not provided at the time the Punch List is nearing completion, Architect (with recommendations from the CM and Inspector) shall determine the dollar value of the warranties and shall make recommendation for withholdings necessary to effectuate the transfer of such warranties to the District for future use as part of the Punch List for the Project pursuant to Article 9.6.

Warranties are not commenced through utilizing of equipment for testing and operation as necessary to acclimate buildings or where necessary to test systems.

4.2.8 Interpretation

The Architect will interpret and decide matters concerning performance and requirements of the Contract Documents. Architect shall make clarifications as necessary to interpret the Contract Documents.

4.3 PROJECT INSPECTOR

4.3.1 General

One or more Project Inspectors employed by the District and approved by the Division of the State Architect will be assigned to the Work in accordance with the requirements of Title 24 of the California Code of Regulations. The Inspector(s) duties are as specifically defined in Title 24 Section 4-333 and 4-342 and in DSA IR A-8.

4.3.2 Inspector's Duties and DSA Noted Timelines for Inspection

All Work shall be under the observation of the Inspector. Contractor shall establish a protocol for requesting inspection with Inspector so as to not delay the Work and provide adequate time for the Inspector to perform inspection. If such a protocol is not established ahead of time, Inspector may utilize the time criteria set by Title 24 of 48 hours in advance of submitting form DSA 156 for each new area. The Inspector shall have free access to any or all parts of the Work at any time. The Contractor shall furnish the Inspector such information as may be necessary to keep the Inspector fully informed regarding progress and manner of Work and character of materials. Such observations shall not, in any way, relieve the Contractor from responsibility for full compliance with all terms and conditions of the Contract, or be construed to lessen to any degree the Contractor's responsibility for providing efficient and capable superintendence. The Inspector is not authorized to make changes in the Drawings or Specifications nor shall the Inspector's approval of the Work and methods relieve the Contractor of

responsibility for the correction of subsequently discovered defects, or from its obligation to comply with the Contract Documents.

Inspector shall electronically post DSA required documents on the DSA electronic posting website. It is the Contractor's responsibility to determine the status of posting and determine if all the criteria for sign off of a category of Work on the Project Inspection Card (Form DSA 152) as defined more thoroughly in the most current version of the DSA 152 manual posted on the DSA website.

Inspector may collaborate with Contractor about approval of areas that may be constructed and approved incrementally under the DSA 152 card pursuant to the guidelines of PR-13 at Article 1.17. Inspector shall work with Contractor to present incremental approval proposals to DSA.

4.3.3 Inspector's Authority to Reject or Stop Work

The Inspector shall have the authority to reject Work whenever provisions of the Contract Documents are not being complied with, and Contractor shall instruct its Subcontractors and employees accordingly. In addition, the Inspector may stop any Work that poses a probable risk of harm to persons or property. The Contractor shall instruct its employees, Subcontractors, material and equipment suppliers, etc., accordingly. The absence of any Stop Work Order or rejection of any portion of the Work shall not relieve the Contractor from any of its obligations pursuant to the Contract Documents.

4.3.4 Inspector's Facilities

Within seven (7) days after the notice to proceed, the Contractor shall provide the Inspector with the temporary facilities as required. More specific requirements for the Inspector facilities may be further described under Division 1 of the Specifications.

4.3.5 Testing Times

The District will provide inspection and testing at its cost during the normal eight (8) hour day Monday through Friday (except holidays). Work by the Contractor outside of the normal eight (8) hour day shall constitute an authorization from the Contractor to the District to provide inspection and testing as required outside of the normal eight (8) hour day. Contractor shall provide adequate time for inspections so as to not delay the Work. An advanced timing protocol may be established pursuant to Article 4.3.2. If the Contractor is behind Schedule then it is incumbent on the Contractor to provide advance forecast through look ahead of the anticipated date for inspection so the Inspector may plan their activities so as to not delay the Project. Contractor shall reimburse District for any additional costs associated with inspection and testing (including re-inspection and re-testing) outside the normal eight-hour day and for any retests caused by the Contractor.

It is the Contractor's responsibility to request special inspections with sufficient time so all testing may be timely completed and posted so work may proceed and the Inspector's signature is attached to the Project Inspection Card (Form 152). Specifically, timely request for special inspection under the DSA Verified Report Forms 291 (laboratory), DSA Verified Report Form 292 (Special Inspection), and DSA Verified Report 293 (geotechnical) since DSA requirements under PR 13-01 specifically gives the Special Inspections 14 days to post to the DSA website. Failure to plan and pay (if applicable) for quicker delivery of Special Inspections may be counted as Float, but is not considered Governmental Delay Float under Article 8.1.4.

4.3.6 Special Inspections, Inspections or Tests Out of State, Out of Country or Remote from Project

If Contractor has a Subcontractor or supplier that requires in plant or special inspections, inspections or tests that are out of the country, out of the state or a distance of more than 200 miles from the Project Site, the District shall provide the Special Inspector or individual performing tests time for inspection and testing during normal work hours. Contractor, however, is responsible for the cost of travel, housing, food, out of area premiums that may be in the Inspector/Testing Agreement with District, or other expenses necessary to ensure proper inspection, special inspection or testing is provided by a DSA Certified Inspector, Special Inspector, or individual performing tests. In some cases all three (DSA Inspector, Special Inspector, and Tester) may be required. In addition, if the DSA Certified Inspector, Special Inspector, or individual performing test has contractual travel clauses or special rates for out of town inspection, Contractor is responsible for all costs associated with the contractual travel costs in addition to all other costs. Arrangements for inspection and/or testing shall be made far enough in advance so as to not delay the Work.

4.4 STOP WORK ORDER

DSA may issue a Stop Work Order, or an Order to Comply, when either (1) the Work proceeds without DSA approval; (2) the Work proceeds without a DSA Inspector of Record, or (3) where DSA determines that the Work is not being performed in accordance with applicable rules and regulations, and would compromise the structural integrity of the Project or would endanger lives. If a Stop Work Order is issued, the Work in the affected area shall cease until DSA withdraws the Stop Work Order. Pursuant to Education Code section 17307.5(b), the District shall not be held liable in any action filed against the District for any delays caused by compliance with the Stop Work Order, except to the extent that an error or omission by the District is the basis for the issuance of the Stop Work Order.

Examples of Stop Work Orders that may be issued by DSA include DSA Bulletin 07-04 and Policy 10-01, the installation of automatic fire sprinkler systems without approved Plans, covering Work that has not been approved by Inspector on DSA Project Inspection Card (Form 152).

4.5 RESPONSIBILITY FOR ADDITIONAL CHARGES INCURRED BY THE DISTRICT FOR PROFESSIONAL SERVICES

If at any time prior to the completion of the requirements under the Contract Documents, the District is required to provide or secure additional professional services (including CM, Inspection, Architect, Engineering and Special Consultant Services) for any reason by any act of the Contractor, the District may seek a Deductive Change Order for any costs incurred for any such additional services, which costs shall be deducted from the next progress payment. A Deductive Change Order shall be independent from any other District remedies and shall not be considered a waiver of any District rights or remedies. If payments then or thereafter due to the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the District. Additional services shall include, but shall not be limited to, the following:

a. Services made necessary by the default of the Contractor (Article 14 or Article 2.2).

b. Services made necessary due to the defects or deficiencies in the Work of the Contractor (Article 2.2 and Article 9.6).

c. Spurious or frivolous RFI's issued that do not conform to the requirements of Article 7.4. Issuance of the same RFI after receiving an answer from the Architect or Engineer

d. Review of Schedules that are provided by Contractor that do not Conform with the Requirements of Article 8.

e. Preparation of a CCD or ICD to correct a Contractor Deficiency, or Contractor Caused Notice of Non-Compliance (See Article 7.3).

f. Review of Incomplete Shop Drawings or Submittals, including the submission of Piecemeal Shop Drawings or Submittals unless piecemeal Submittals are specifically agreed upon by District (See Article 3.9)

g. Services required by failure of the Contractor to perform according to any provision of the Contract Documents.

h. Services in connection with evaluating substitutions of products, materials, equipment, Subcontractors' proposed by the Contractor, and making subsequent revisions to Drawings, Specifications, obtaining DSA approvals, DSA costs for review of CCD's, other governmental agency review costs, and providing other documentation required (except for the situation where the specified item is no longer manufactured or available). (See Article 3.10)

i. Services for evaluating and processing Claims or Disputes submitted by the Contractor in connection with the Work outside the established Change Order process.

j. Services required by the failure of the Contractor to prosecute the Work in a timely manner in compliance within the specified time of completion.

k. Services in conjunction with the testing, adjusting, balancing and start-up of equipment other than the normal amount customarily associated for the type of Work involved.

l. Services in conjunction with more than one (1) re-review of Submittals of Shop Drawings, Product Data, samples, RFI's etc.

4.6 DISPUTES AND CLAIMS

4.6.1 Decision of Architect

"Disputes" or "Claims" as defined in Article 4.6.9.1 between District and Contractor involving money or time, including those alleging an error or omission by the Architect shall be referred initially to the Architect for action as provided in Article 4.6.2 within ten (10) days after Contractor's Article 7 request for Change is denied. If there is a CM, the CM shall receive the Dispute and may review and also assemble opinions and documents to assist the Architect. A decision by the Architect, as provided in Article 4.6.5, shall be required as a condition precedent to proceeding with remedies set forth in Article 4.6.9 as to all such matters arising prior to the date Retention Payment Application is due, regardless of whether such matters relate to execution and progress of the Work, or the extent to which the Work has reached Final Completion.

The condition precedent of an Architect decision shall be waived if: (1) the position of Architect is vacant; (2) the Architect has failed to take action required under Article 4.6.5 within the time periods required therein; or (3) the Dispute or Claim relates to a stop notice claim not arising from any extra Change Order or Immediate Change Directive for which approval has not been provided.

4.6.2 Architect's Review

The Architect (and CM) will review the Dispute and take one or more of the following preliminary actions upon receipt of a Dispute: (1) request additional supporting data from the claimant; (2) submit a schedule to the parties indicating when the Architect expects to take action; (3) reject the Dispute in whole or in part, stating reasons for rejection; (4) recommend approval of the Dispute; or (5) suggest a compromise. The Architect may also, but is not obligated to, notify the Surety, if any, of the nature and amount of the Dispute.

4.6.2.1 *Architectural Immunity*. Architect review of Disputes and Claims shall be impartial and meant to resolve Disputes and Claims. Pursuant to the case, Huber, Hunt & Nichols, Inc. v. Moore (1977) 67 Cal.App.3d 278, the Architect is provided a quasi-judicial immunity for interpreting and deciding Disputes and Claims between the District and Contractor.

4.6.3 Documentation if Resolved

If a Dispute has been resolved, the Architect (and/or CM) will prepare a Change Order or obtain appropriate documentation to document the terms for Board approval.

4.6.4 Actions if Not Resolved

If a Dispute has not been resolved and all documentation requested pursuant to Article 4.6.2 has been provided, the Contractor shall, within ten (10) days after the Architect's initial response, assemble all the documents involved in the Dispute including copies of all back-up documentation of costs and the basis for the Dispute and take one or more of the following actions: (1) modify the initial Dispute; (2) notify the Architect that the initial Dispute stands; or (3) supplement with additional supporting data and re-submit to the Architect under Article 4.6.2.

4.6.5 Architect's Written Decision

If a Dispute has not been resolved after consideration of the foregoing and of other evidence presented by the parties or requested by the Architect, the Architect (or Architect through CM) shall provide a written decision twenty (20) days after compliance with Article 4.6.4. Upon expiration of such time period, the Architect (or Architect through CM) will render to the parties its written decision relative to the Dispute, including any change in the Contract Sum or Contract Time or both. The Architect may also request reasonable additional time to complete Architect's written decision.

If the resolution of the Dispute by the Architect is not satisfactory to the Contractor and copies of all back-up documentation of costs and the basis for the Dispute is fully articulated in a package of material that is complete, the Contractor may then submit a Claim to the District under Article 4.6.9.

4.6.6 Continuing Contract Performance

Pending final resolution of a Dispute or Claim, including, negotiation, mediation, arbitration, or litigation, the Contractor shall proceed diligently with performance of the Contract, and the District shall continue to make any undisputed payments in accordance with the Contract (less any withholdings or offsets). If the Claim is not resolved, Contractor agrees it will neither rescind the Contract nor stop the progress of the work, but Contractor's sole remedy shall be to submit such controversy to determination by a court of competent jurisdiction in the county where the Project is located, after the Project has been completed, and not before.

4.6.6.1 *District's Option to Submit Individual Disputes to Arbitration during Claims and Disputes Process*. At the District's sole option, in order to more efficiently resolve Claims during the Project and prior to the completion of the Claims Process, pursuant to Government Code section 9201, the District may submit individual Disputes or Claims for binding arbitration and Contractor agrees to the resolution of for each individual Dispute or Claim by an Arbitrator, including resolution of time and delays. If binding arbitration is utilized for individual Disputes or Claims, such resolution is full and final as to that particular Dispute or Claim. THIS INDIVIDUAL DISPUTE ARBITRATION PROCESS IS NOT AN ARBITRATION CLAUSE AND SHALL NOT BE CONSTRUED AS AN AGREEMENT TO ARBITRATE. THIS INDIVIDUAL DISPUTES ARBITRATION PROCESS IS FOR THE SOLE PURPOSE OF STREAMLINING AND RESOLVING DISPUTES OR CLAIMS DURING CONSTRUCTION AND SHALL BE REQUESTED ON SPECIFIC INDIVIDUAL ITEMS BY THE DISTRICT PRIOR TO RETENTION PAYMENT (EVEN IF THERE ARE DEDUCTIONS MADE FROM RETENTION PAYMENT) WHICH REPRESENTS THE FINAL COMPLETION OF THE PROJECT.

a. If there is no Retention remaining on the Project, individual Disputes initiated prior to Project Final Completion shall continue until a final disposition of the Arbitration or resolution of the individual Claim or Dispute.

b. No Tolling. The Arbitration process shall not toll the Disputes or Claims process under Article 4.6 or the requirement to submit Claims to Court under Article 4.6.9.5.

4.6.7 Claims for Concealed Trenches or Excavations Greater Than Four Feet Below the Surface

When any excavation or trenching extends greater than four feet below the surface or if any condition involving hazardous substances are encountered:

a. Immediately upon discovery, The Contractor shall promptly, and before the following conditions are disturbed, notify the District, by telephone and in writing, of the condition except:

1. If such condition is a hazardous waste condition, Contractor's bid includes removal or disposal of hazardous substances. Material that the Contractor believes may be a material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, is required to be removed to a Class I, Class II, or Class III disposal site in accordance with the provisions of existing law. In such case, the notice bulletin procedures of Article 7 apply.

2. Subsurface or latent physical conditions at the Site differing from those indicated in the Drawings, Specifications, Soils Report, and from Contractor's own investigation under Article 2.1.

3. 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.

b. The District shall investigate the conditions, and if District finds that the conditions do materially so differ, 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 or Construction Change Document under the procedures described in the Contract.

c. In the event that a dispute arises between the public entity or District and the Contractor whether the conditions materially differ, 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 Contract, but shall proceed with all Work to be performed under the Contract. 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.

4.6.8 Dispute Concerning Extension of Time.

If Contractor and District cannot agree upon an extension of time, whether compensable or not, then Contractor must have first completed the procedures set forth in Article 8.4. Upon completion of the procedures set forth under Article 8.4, Contractor must then comply with the requirements in this Article including those set forth under Article 4.6.9.

4.6.9 Claims Procedures

Pursuant to the remedies under Public Contract Code section 9201 and Government Code section 930.2, Contractor, through execution of this Agreement, also agrees to comply with the Claims requirements of Article 4.6 to quickly and efficiently resolve Disputes and Claims. Further, to provide a level of accuracy to the records submitted, the District shall have the right to audit books and records pursuant to Article 13.11 based on the actual costs incurred and to reduce the uncertainty in resolving Disputes and Claims with limited information.

4.6.9.1 *Procedure Applicable to All Claims*

a. Definition of Claim: A "Claim" is where a Dispute between the parties rises to the level where backup documentation is assembled and provided to the District as a separate demand by the Contractor for: (1) a time extension, including, without limitation, for relief from damages or penalties for delay assessed by the District under the Contract; (2) payment by the District of money or damages arising from Work done by, or on behalf of, the Contractor pursuant to the Contract and payment for which is not otherwise expressly provided for or to which the

Contractor is not otherwise entitled to; or (3) an amount of payment disputed by the District. If the Claim is for damages associated with a DSA Stop Work Order, the Contractor shall not be entitled to a request for Compensation, but shall be entitled to utilize Governmental Delay Float (See Article 8.1.4.1.)

b. Filing Claim Is Not Basis to Discontinue Work: The Contractor shall promptly comply with Work under the Contract or Work requested by the District even though a written Claim has been filed. The Contractor and the District shall make good faith efforts to resolve any and all Claims that may arise during the performance of the Work covered by this Contract.

c. Claim Notification: The Contractor shall within seven (7) calendar days after the written decision of the Architect, or if the time period for Architect's decision has passed under Article 4.6.5, submit a notification in writing sent by registered mail or certified mail with return receipt requested, with the District (and the District's CM) stating clearly the basis for the Claim and including all relevant and required documents. If the notification is not submitted within seven (7) days after the written decision of the Architect or the passage of time under Article 4.6.5, the Contractor shall be deemed to have waived all right to assert the Claim, and the Claim shall be denied. Claims submitted after the Retention Payment date shall also be considered null and void by the District. All Claims shall be reviewed pursuant to Articles 4.6.1 through 4.6.5.

The Formal Notification of Claim must be presented as follows:

(1) The term "Claim" must be at the top of the page in no smaller than 20 point writing.

(2) All documentation submitted pursuant to Article 4.6 to the Architect shall be submitted with the "Claim."

(3) A stack of documents, copy of all Project documents, or the submission of random documents shall not constitute an adequate reference to supporting documentation.

(4) Any additional or supporting documentation that Contractor believes is relevant should be submitted at this time.

d. Reasonable Documents to Support Claim: The Contractor shall furnish reasonable documentation to support the Claim. The Contractor shall provide all written detailed documentation which supports the Claim, including but not limited to: arguments, justifications, cost, estimates, Schedule analysis and detailed documentation. The format of the required reasonable documentation to support the Claim shall include, without limitation:

1. Cover letter.

2. Summary of factual basis of Claim and amount of Claim.

3. Summary of the basis of the Claim, including the specific clause and section under the Contract under which the Claim is made.

4. Documents relating to the Claim, including:

   a. Specifications sections in question.
   b. Relevant portions of the Drawings
   c. Applicable Clarifications (RFI's)
   d. Other relevant information, including responses that were received.
   e. Contractor Analysis of Claim merit.
      (a) Contractor's analysis of any Subcontractor vendor Claims that are being passed through.
      (b) Any analysis performed by outside consultants
      (c) Any legal analysis that Contractor deems relevant
   f. Break down of all costs associated with the Claim.
   g. For Claims relating to time extensions, an analysis and supporting documentation evidencing any effect upon the critical path in conformance with the requirements of Article 8.4 chronology of events and related correspondence.
   h. Applicable Daily Reports and logs.
      (a) If the Daily Reports or Logs are not available, lost or destroyed, there shall be a presumption that the lost documentation was unfavorable to the Contractor. See California Civil Jury Instruction 204.
   i. For Claims involving overhead, cost escalation, acceleration, disruption or increased costs, a full version of job costs reports organized by category of work or Schedule of Values with budget information tracked against actual costs. Any and all supporting back-up data, including the original bid (and associated original unaltered metadata).
      (a) The metadata and bid information shall be provided confidentially and subject to a protective order to prevent dissemination to other contractors or to the public. However, the bid documentation should remain intact and available for review and inspection in case of this type of increased cost Claim.
      (b) This data on the bid shall be made available to any District attorneys or experts and shall also

be utilized as evidence for any legal proceedings.

(c) If the bid documentation is not available, lost or destroyed, there shall be a presumption that the lost bid documentation was unfavorable to the Contractor. See California Civil Jury Instruction 204.

e. Certification: The Contractor (and Subcontractors, if applicable) shall submit with the Claim a certification under penalty of perjury:

1. That the Contractor has reviewed the Claim and that such Claim is made in good faith;

2. Supporting data are accurate and complete to the best of the Contractor's knowledge and belief;

3. The amount requested accurately reflects the amount of compensation for which the Contractor believes the District is liable.

4. That the Contractor is familiar with Government Code sections 12650 et seq. and Penal Code section 72 and that false claims can lead to substantial fines and/or imprisonment.

f. Signature of Certification: If the Contractor is not an individual, the certification shall be executed by an officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.

g. Upon receipt of a Claim and all supporting documents as required above, the District shall conduct a reasonable review of the Claim and, within a period not to exceed 45 days, shall provide the Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed. Upon receipt of a Claim, the District and Contractor may, by mutual agreement, extend the time period provided in this paragraph.

h. If the District needs approval from its governing Board to provide the Contractor a written statement identifying the disputed portion and the undisputed portion of the Claim, and the governing Board does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a Claim sent by registered mail or certified mail, return receipt requested, the District shall have up to three days following the next duly publicly noticed meeting of the governing Board after the 45-day period, or extension, expires to provide the Contractor a written statement identifying the disputed portion and the undisputed portion.

i. Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the District issues its written statement. If the District fails to issue a written statement, paragraph o below shall apply.

j. If the Contractor disputes the District's written response, or if the District fails to respond to a Claim issued pursuant to this Article 4.6.9 within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the District shall schedule a meet and confer conference within 30 days for settlement of the Claim.

k. Within 10 business days following the conclusion of the meet and confer conference, if the Claim or any portion of the Claim remains in dispute, the District shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the District issues its written statement. Any disputed portion of the Claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the District and the Contractor sharing the associated costs equally. The District and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the Claim remaining in dispute shall be subject to applicable procedures in Article 4.6.9.5.

l. For purposes of this Article 4.6.9, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

m. Unless otherwise agreed to by the District and the Contractor in writing, the mediation conducted pursuant to this Article 4.6.9 shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

n. This Claims process does not preclude the District from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this Article 4.6.9 does not resolve the parties' Claim. This Claims process does not preclude

the District from submitting individual Disputes or Claims to binding arbitration pursuant to Article 4.6.9.4 below.

o. Failure by the District to respond to a Claim from the Contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this Article 4.6.9 shall result in the Claim being deemed rejected in its entirety. A Claim that is denied by reason of the District's failure to have responded to a Claim, or its failure to otherwise meet the time requirements of this Article 4.6.9, shall not constitute an adverse finding with regard to the merits of the Claim or the responsibility or qualifications of the Contractor.

p. If a subcontractor or a lower tier subcontractor lacks legal standing to assert a Claim against a District because privity of contract does not exist, the Contractor may present to the District a Claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the Contractor present a Claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the Claim be presented to the District shall furnish reasonable documentation to support the Claim. Within 45 days of receipt of this written request, the Contractor shall notify the subcontractor in writing as to whether the Contractor presented the Claim to the District and, if the Contractor did not present the Claim, provide the subcontractor with a statement of the reasons for not having done so.

q. Upon receipt of a Claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable.

r. The Contractor's Claim shall be denied if it fails to follow the requirements of this Article.

4.6.9.2 *District (through CM or District's Agent or Attorney) May Request Additional Information*. Within thirty (30) days of receipt of the Claim and the information under this Article, the District may request in writing any additional documentation supporting the Claim or documentation relating to defenses to the Claim which the District may assert. If additional documents are required, the time in which the Claim is evaluated may be extended by a reasonable time so the Claim and additional documents may be reviewed.

4.6.9.3 *Claims Procedures in Addition to Government Code Claim.* Nothing in the Claims procedures set forth in this Article 4 of the General Conditions shall act to waive or relieve the Contractor from meeting the requirements set forth in Government Code section 900 et seq.

4.6.9.4 *Binding Arbitration of Individual Claim Issues.* To expedite resolution of Claims pursuant to Public Contract Code section 9201, at the District's sole option, the District may submit individual Claims to Arbitration prior to Retention Payment consistent with the requirements of Article 4.6.6.1.

4.6.9.5 *Resolution of Claims in Court of Competent Jurisdiction.* If Claims are not resolved under the procedure set forth and pursuant to Article 4.6.9, such Claim or controversy shall be submitted to a court in the County of the location of the Project after the Project has been completed, and not before.

4.6.9.6 *Warranties, Guarantees and Obligations.* The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon Contractor by the General Conditions and amendments thereto; and all of the rights and remedies available to District and Architect thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by laws or regulations by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this Article will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply.

ARTICLE 5
SUBCONTRACTORS

5.1 DEFINITIONS

5.1.1 Subcontractual Relations Bound to Same Contract Terms at General Contractor

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the same obligations and responsibilities, assumed by Contractor pursuant to the Contract Documents. Each subcontract agreement shall preserve and protect the rights of the District and the Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound. Upon written request of the Subcontractor, the Contractor shall identify to the Subcontractor the terms and conditions of the proposed subcontract agreement, which may be at variance with the Contract Documents. Subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

5.1.2 Subcontractor Licenses and DIR Registration

All Subcontractors shall be properly licensed by the California State Licensing Board. All Subcontractors (of any tier) performing any portion of the Work must comply with the Labor Code sections 1725.5 and 1771.1 and must be properly and currently registered with the California Department of Industrial Relations and qualified to perform public works pursuant to Labor Code section 1725.5 throughout the duration of the Project. No portion of the Work is permitted to be performed by a Subcontractor of any tier unless the subcontractor is properly registered with DIR. Any Subcontractors of any tier not properly registered with DIR shall be substituted in accordance with Labor Code section 1771.1.

5.1.3 Substitution of Subcontractor

Substitution of Subcontractors shall be permitted only as authorized under Public Contract Code §§ 4107 et seq. Any substitutions of Subcontractors shall not result in any increase in the Contract Price or result in the granting of any extension of time for the completion of the Project.

5.1.4 Contingent Assignment of Subcontracts and Other Contracts

Each subcontract, purchase order, vendor contract or agreement for any portion of the Work is hereby assigned by the Contractor to the District provided that:

a. Such assignment is effective only after Termination of this Contract with the Contractor by the District as provided under Article 14 and only for those subcontracts and other contracts and agreements that the District accepts by

notifying the Subcontractor or Materialman (as may be applicable) in writing; and

b. Such assignment is subject to the prior rights of the Surety(ies) obligated under the Payment Bond and Performance Bond.

c. The Contractor shall include adequate provisions for this contingent assignment of subcontracts and other contracts and agreements in each such document.

ARTICLE 6
CONSTRUCTION BY DISTRICT OR BY SEPARATE CONTRACTORS

6.1 DISTRICT'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 Separate Contracts.

6.1.1.1 District reserves the right to let other contracts in connection with this Work. Contractor shall afford other contractors reasonable opportunity for (1) introduction and storage of their materials; (2) access to the Work; and (3) execution of their work. Contractor shall properly connect and coordinate its work with that of other Contractors.

6.1.1.2 If any part of Contractor's Work depends on proper execution or results of any other contractor, the Contractor shall inspect and within seven (7) days or less, report to Architect, in writing, any defects in such work that render it unsuitable for proper execution of Contractor's Work. 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 contractors' 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.

6.1.1.3 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 as built and the Contract Documents.

6.1.1.4 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 and the potential impact of such Work on the Baseline Schedule or Schedule updates.

6.1.1.5 Nothing herein contained shall be interpreted as granting to Contractor the exclusive occupancy at the site of Project. Contractor shall not cause any unnecessary hindrance or delay to any other contractor working on the Project Site. If execution of any contract by the District is likely to cause interference with Contractor's performance of this Contract, once Contractor provides District timely written notice and identifies the Schedule Conflict, 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.

6.1.1.6 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 at the Project necessary for the performance of the Project (examples include Electrical Utility Contractor, separate offsite contractor, a separate grading contractor, furniture installation etc.)

CONTRACTOR IS AWARE THAT THIS CONTRACT MAY BE SPLIT INTO SEVERAL PHASES BASED ON DOCUMENTATION PROVIDED WITH THIS BID OR DISCUSSED AT THE JOB WALK. CONTRACTOR HAS MADE ALLOWANCE FOR ANY DELAYS OR DAMAGES WHICH MAY ARISE FROM COORDINATION WITH CONTRACTORS REQUIRED FOR OTHER

PHASES. IF ANY DELAYS SHOULD ARISE FROM ANOTHER 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 OTHER CONTRACTORS FOR OTHER PHASES AS NECESSARY TO PREVENT DELAYS AND DAMAGES TO OTHER CONTRACTORS WORKING ON OTHER PHASES OF CONSTRUCTION.

6.1.2 District's Right to Carry Out the Work

(See Article 2.2)

6.1.3 Designation as Contractor

When separate contracts are awarded to contractors on the Project Site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate District/Contractor Agreement.

6.1.4 District Notice to the Contractor of Other Contractors

The Contractor shall have overall responsibility to reasonably coordinate and schedule Contractor's activities with the activities of the District's forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the District in reviewing their construction schedules when:

a. Notice is provided in the Contract Documents of other scope of Work,

b. In the case where there is known Work to be performed by other Contractors

c. For outside contractors hired by utilities

d. Where the Contract Document provides "Work by Others" or "By Others"

e. Where specifically noted during the Pre-Bid Conference

f. Where specifically noted in the Mandatory Job Walk

g. By CO or ICD,

h. With respect to the installation of :
   1. Furniture,
   2. Electronics and networking equipment,
   3. Cabling,
   4. Low voltage,
   5. Off-site work,
   6. Grading (when by a separate contractor),

7. Environmental remediation when excluded by the Contract Documents (i.e. asbestos, lead or other hazardous waste removal)
8. Deep cleaning crews,
9. Commissioning and testing,
10. Keying and re-keying,
11. Programming

6.1.4.1 Exception where no Coordination is Required on the Part of the Contractor for Turn Key Operations. If the Contractor has specifically outlined a "Turn Key" or "Complete Delivery" of a final completed operational school in writing as part of the Baseline Schedule..

6.1.4.2 The Contractor shall make any revisions to the Baseline Schedule (or Schedule Update) and Contract Sum deemed necessary after a joint review and mutual agreement. The Baseline Schedule (or Schedule Update) shall then constitute the Schedules to be used by the Contractor, separate contractors, and the District until subsequently revised. Additionally, Contractor shall coordinate with Architect, District, and Inspector to ensure timely and proper progress of Work.

6.2 CONSTRUCTIVE OWNERSHIP OF PROJECT SITE AND MATERIAL

Upon commencement of Work, the Contractor becomes the constructive owner of the entire site, improvements, material and equipment on Project site. Contractor must ensure proper safety and storage of all materials and assumes responsibility as if Contractor was the owner of the Project site. All risk of loss or damage shall be borne by Contractor during the Work until the date of Completion. As constructive owner of the Project site, Contractor must carry adequate insurance in case of calamity and is not entitled to rely on the insurance requirements as set forth in this Agreement as being adequate coverage in case of calamity.

6.3 DISTRICT'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors, and the District as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in Article 3.12, the District may clean up and allocate the cost among those it deems responsible.

ARTICLE 7
CHANGES IN THE WORK

7.1 CHANGES

7.1.1 No Changes Without Authorization

There shall be no change whatsoever in the Drawings, Specifications, or in the Work without an executed Change Order, Change Order Request, Immediate Change Directive, or order by the Architect for a minor change in the Work as herein provided. District shall not be liable for the cost of any extra work or any substitutions, changes, additions, omissions, or deviations from the Drawings and Specifications unless the District's Governing Board or designated representative with delegated authority (subject to Board ratification) has authorized the same and the cost thereof approved in writing by Change Order or executed Construction Change Document. No extension of time for performance of the Work shall be allowed hereunder unless claim for such extension is made at the time changes in the Work are ordered, and such time duly adjusted in writing in the Change Order. The provisions of the Contract Documents shall apply to all such changes, additions, and omissions with the same effect as if originally embodied in the Drawings and Specifications. Notwithstanding anything to the contrary in this Article 7, all Change Orders shall be prepared and issued by the Architect and shall become effective when executed by the District's Governing Board, the Architect, and the Contractor.

Should any Change Order result in an increase in the Contract Price, the cost of such Change Order shall be agreed to, in writing, in advance by Contractor and District and be subject to the monetary limitations set forth in Public Contract Code section 20118.4 (Please check with the District since there are different interpretations of the limitations of Public Contract Code section 20118.4 depending on the County the Project is located). In the event that Contractor proceeds with any change in Work without first notifying District and obtaining the Architect's and District's consent to a Change Order, Contractor waives any Claim of additional compensation for such additional work and Contractor takes the risk that a Notice of Non-Compliance may issue, a critical path Project delay may occur, and the Contractor will also be responsible for the cost of preparation and DSA CCD review fees for a corrective DSA approved Construction Change Document.

CONTRACTOR UNDERSTANDS, ACKNOWLEDGES, AND AGREES THAT THE REASON FOR THIS NOTICE REQUIREMENT IS SO THAT DISTRICT MAY HAVE AN OPPORTUNITY TO ANALYZE THE WORK AND DECIDE WHETHER THE DISTRICT SHALL PROCEED WITH THE CHANGE ORDER OR ALTER THE PROJECT SO THAT SUCH CHANGE IN WORK BECOMES UNNECESSARY AND TO AVOID THE POSSIBLE DELAYS ASSOCIATED WITH THE ISSUANCE OF A NOTICE OF NON-COMPLIANCE.

7.1.2 Notices of Non-Compliance

Contractor deviation or changes from approved Plans and Specifications may result in the issuance of a Notice of Non-Compliance (See DSA Form 154). Contractor is specifically notified that deviations from the Plans and Specifications, whether major or minor, may result in the requirement to obtain a DSA Construction Change Document to correct the Notice of Non-Compliance. (See Article 7.3.1 for Definition of CCD). In some cases, the lack of a DSA approved CCD and verification from the Inspector that a Notice of Non-Compliance has been corrected may result in a critical path delay to the

next stage of Work on the Project. Specifically, a deviation from approved Plans and Specifications may prevent approval of the category of Work listed in the DSA 152 Project Inspection Card. Any delays that are caused by the Contractor's deviation from approved Plans and Specifications shall be the Contractor's responsibility.

7.1.3 Architect Authority

The Architect will have authority to order minor changes in the Work that do not involve DSA Approval not involving any adjustment in the Contract Sum, or an extension of the Contract Time.

7.2 CHANGE ORDERS ("CO")

A CO is a written instrument prepared by the Architect and signed by the District (as authorized by the District's Governing Board), the Contractor, and the Architect stating their agreement upon all of the following:

a. A description of a change in the Work;

b. The amount of the adjustment in the Contract Sum, if any; and

c. The extent of the adjustment in the Contract Time, if any.

A CO may be comprised of ICD's, Response to RFP's and COR's.

7.3 CONSTRUCTION CHANGE DOCUMENT (CCD Category A, and CCD Category B) and IMMEDIATE CHANGE DIRECTIVE (ICD)

7.3.1 Definitions

7.3.1.1 *Construction Change Document (CCD)*. A Construction Change Document is a DSA term that is utilized to address changes to the DSA approved Plans and Specifications. There are two types of Construction Change Documents. (1) DSA approved CCD Category A for Work affecting structural, access compliance or fire/ life safety of the Project which will require a DSA approval; and, (2) CCD Category B for work NOT affecting structural safety, access compliance or fire/ life safety that will not require a DSA approval (except to confirm that no approval is required). Both CCD Category A and Category B shall be set forth in DSA Form 140 and submitted to DSA as required.

7.3.1.2 *Immediate Change Directive (ICD)*. An Immediate Change Directive is a written order to the Contractor prepared by the Architect and signed by the District (and CM if there is a CM on the Project) and the Architect, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The District may by ICD, without invalidating the Contract, direct immediate changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions within. If applicable, the Contract Sum and Contract Time will be adjusted accordingly.

In the case of an Immediate Change Directive being issued, Contractor must commence Work immediately or delays from failure to perform the ICD shall be the responsibility of Contractor and the failure to move forward with Work immediately shall also be grounds for Termination under Article 14.

An ICD does not automatically trigger an Article 7.6 Dispute or Claim. Contractor must timely follow the procedures outlined at Article 7.6 and 4.6 where applicable.

Refer to Division 1 and Supplementary General Conditions for a copy of the proposed Immediate Change Directive form.

7.3.2 Use to Direct Change

An ICD shall be used to move work forward immediately and to avoid delay. In some cases, an ICD shall be issued in the absence of agreement on the terms of a CO, COR, or RFP. A copy of an ICD form is provided in the Supplementary General Conditions and Division 1. The anticipated not to exceed price for the Work will be inserted into the ICD. In the case of an ICD issued to correct Contractor Deficiencies or to correct a Contractor caused Notice of Non-Compliance, the ICD may be issued with $0 and no additional time. Contract may prepare a COR associated with the ICD pursuant to Article 7. However, Contractor shall proceed with all Work required under an Approved ICD immediately upon issuance. Failure to proceed with the Work under an ICD shall be grounds for Termination for Cause under Article 14 or take over the Work under Article 2.2.

If adequate time exists, an ICD may be subject of an RFP for pricing and determination if any time that may be required. However, if an RFP is not completed, Contractor shall immediately commence Work when an ICD is issued. If the RFP is incomplete, it may still be completed to be submitted for pricing purposes as long as the RFP is submitted within the timeline provided by the RFP, or within 10 days following issuance of the ICD.

7.3.3 ICD Issued Over a Notice of Non-Compliance or to Cover Work Subject to a DSA 152 Sign Off

In some cases, an ICD shall be for the purpose of proceeding with Work to keep the Project on Schedule and as an acknowledgement by the District that Contractor is proceeding with Work contrary to a Notice of Non-Compliance, prior to issuance of a DSA approved CCD Category A, or to direct the covering of Work which has not yet received a DSA 152 Inspection Approval to move forward.

7.3.3.1 *Contractor Compliance with all Aspects of an IC*D. Contractor is to undertake the ICD and comply with all aspects of the Work outlined in the ICD. Inspector is to inspect the Work pursuant to the ICD. Failure to follow the ICD may result in deduction of the ICD Work under Article 2.2 or Termination of the Contractor pursuant to Article 14.

7.3.3.2 *Exception in the Case of DSA Issued Stop Work Order*. Contractor must proceed with an ICD even if a CCD has not been approved by DSA except in the case of a DSA issued Stop Work Order. If a DSA Stop Work Order is issued, Contractor must stop work and wait further direction from the District.

7.3.3.3 *ICD Due to Contractor Deficiency or Contractor Caused Notice of Non-Compliance.* If an ICD is issued to correct a Contractor Deficiency or a Contractor caused notice of Non-Compliance, Contractor specifically acknowledges responsibility for all consequential damages associated with the Contractor Deficiency or Contractor caused Notice of Non-Compliance and all consequential damages and costs incurred to correct the deficiency under Article 4.5

7.4 REQUEST FOR INFORMATION ("RFI")

7.4.1 Definition

A RFI is a written request prepared by the Contractor requesting the Architect to provide additional information necessary to clarify or amplify an item which the Contractor believes is not clearly shown or called for in the Drawings or Specifications, or to address problems which have arisen under field conditions.

7.4.1.1 A RFI shall not be used as a vehicle to generate time extensions.

7.4.1.2 Resubmission of the same or similar RFI is not acceptable. RFI's that are similar should be addressed in Project meetings where the requestor (Contractor, Subcontractor or vendor) is able to address the particular issue with the Architect or Engineer and a resolution addressed in the minutes.

7.4.1.3 A RFI response applicable to a specific area cannot be extended to other situations unless specifically addressed in writing within the RFI or in a separate RFI.

7.4.1.4 RFI's should provide a proposed solution and should adequately describe the problem that has arisen.

7.4.2 Scope

The RFI shall reference all the applicable Contract Documents including Specification section, detail, page numbers, Drawing numbers, and sheet numbers, etc. The Contractor shall make suggestions and interpretations of the issue raised by the RFI. An RFI cannot modify the Contract Cost, Contract Time, or the Contract Documents.

7.4.3 Response Time

The Architect must respond to a RFI within a reasonable time after receiving such request. If the Architect's response results in a change in the Work, then such change shall be effected by a written CO, COR RFP or ICD, if appropriate. If the Architect cannot respond to the RFI within a reasonable time, the Architect shall notify the Contractor, with a copy to the Inspector and the District, of the amount of time that will be required to respond.

7.4.4 Costs Incurred

The Contractor shall be responsible for any costs incurred for professional services as more fully set forth in Article 4.5, which shall be subject to a Deductive Change Order, if an RFI requests an interpretation or decision of a matter where the information sought is equally available to the party making such request. District, at its sole discretion, shall issue a Deductive Change Order to Contractor for all such professional services arising from this Article.

7.5 REQUEST FOR PROPOSAL ("RFP")

7.5.1 Definition

A RFP is a written request prepared by the Architect (and/or CM) requesting the Contractor to submit to the District and the Architect an estimate of the effect of a proposed change on the Contract Price and (if applicable) the Contract Time. If Architect issues a Bulletin, the Changed items in the Bulletin shall be addressed as an RFP and all responses shall be prepared to a Bulletin as addressed in this Article 7.5. A form RFP is included in the Division 1 documents.

7.5.2 Scope

A RFP shall contain adequate information, including any necessary Drawings and Specifications, to enable Contractor to provide the cost breakdowns required by Article 7.7. The Contractor shall not be entitled to any Additional Compensation for preparing a response to an RFP, whether ultimately accepted or not.

7.5.3 Response Time

Contractor shall respond to an RFP within ten (10) days or the time period otherwise set forth in the RFP.

7.6 CHANGE ORDER REQUEST ("COR")

7.6.1 Definition

A COR is a written request prepared by the Contractor supported by backup documentation requesting that the District and the Architect issue a CO based upon a proposed change, cost, time, or cost and time that may be incurred on the Project or arising from an RFP, ICD, or CCD.

7.6.2 Changes in Price

A COR shall include breakdowns per Article 7.7 to validate any change in Contract Price due to proposed change or Claim.

7.6.3 Changes in Time

A COR shall also include any additional time required to complete the Project only if the delay is a critical path delay. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Project Schedule as defined in Article 8. A schedule fragnet showing the time delay must be submitted with the COR. Any changes in time will be granted only if there is an impact to the critical path. If Contractor fails to request a time extension in a COR, then the Contractor is thereafter precluded from requesting or claiming a delay.

7.7 COST OF CHANGE ORDERS

7.7.1 Scope

Within ten (10) days after a request is made for a change that impacts the Contract Sum as defined in Article 9.1, the critical path, or the Contract Time as defined in Article 8.1.1, the Contractor shall provide the District and the Architect, with a written estimate of the effect of the proposed CO upon the Contract Sum and the actual cost of construction, which shall include a complete itemized cost breakdown of all labor and material showing actual quantities, hours, unit prices, and wage rates required for the change, and the effect upon the Contract Time of such CO. Changes may be made by District by

an appropriate written CO, or, at the District's option, such changes shall be implemented immediately upon the Contractor's receipt of an appropriate written Construction Change Document.

District may, as provided by law and without affecting the validity of this Agreement, order changes, modification, deletions and extra work by issuance of written CO or CCD 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.

7.7.1.1 *Time and Material Charges.* If the District orders Work on a "time and material" basis, timesheets shall be signed daily by the Inspector or District Representative at or near the time the Work is actually undertaken and shall show the hours worked, and the Work actually completed. No time sheets shall be signed the next day. A copy shall be provided to the Person signing the document at the time the document is signed, but not before 10 am the following day.

7.7.2 Determination of Cost

The amount of the increase or decrease in the Contract Price from a CO or COR, if any, shall be determined in one or more of the following ways as applicable to a specific situation:

a. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation. If an agreement cannot be reached within fifteen (15) days after submission and negotiation of Contractor's proposal, Contractor may submit pursuant to Article 7.7.3. Submission of sums which have no basis in fact are at the sole risk of Contractor and may be a violation of the False Claims Act set forth under Government Code section 12650 et seq.);

   1. If the District objects to 7.7.2(a) as a method for submission due to inaccuracies in the submitted amount, overstatement of manpower or time required to perform the CO, or unreliability of the data provided, the District may either have the Architect or a professional estimator determine the cost for the CO, and the applicable time extension, or the Contractor shall utilize Article 7.7.2(d) or 7.7.3.

   2. Once the District provides a written objection to use of Article 7.7.2(a) due to unreliability of the estimated price, the Contractor shall no longer utilize mutual acceptance of a lump sum as a method for submission of CO's and shall provide a breakdown of estimated or actual costs pursuant to Article 7.7.2(d) or 7.7.3

b. By unit prices contained in Contractor's original bid and incorporated in the Project documents or fixed by subsequent agreement between District and Contractor;

c. Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee. However, in the case of disagreement, Contractor must utilize the procedure under Article 7.7.3; or

d. By cost of material and labor and percentage of overhead and profit. If the value is determined by this method the following requirements shall apply:

1. *Basis for Establishing Costs*

(1) Labor will be the cost for wages prevailing locally for each craft or type of workers at the time the extra Work is done, plus employer payments of payroll taxes and workers compensation insurance (exclude insurance costs as part of the overhead and profit mark-up), 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. In no case shall the total labor costs exceed the applicable prevailing wage rate for that particular classification. The use of a 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.

(2) Materials shall be at invoice or lowest current price at which such materials are locally available and delivered to the 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.

(3) Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of $250 or less.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental agencies or distributors at the time the Work is performed. Rates applied shall be appropriate based on actual equipment need and usage. Monthly, weekly or other extended use rates that results in the lowest cost shall be applied if equipment is used on site for extended periods.

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 Inspector, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and modifications shall be used to classify equipment, and equipment shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

If tool and equipment charges are part of a Dispute or Claim, the District reserves the right to utilize actual costs for tools and equipment or a depreciation rate for equipment based on audit finding under Article 13.11 and deduct any rental charges that exceed actual or depreciated costs.

e. 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.

f. Invoices. Vendors' invoices for material, equipment rental, and other expenditures shall be submitted with the COR. 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 Daily Report.

g. Overhead. Overhead, including direct and indirect costs, shall be submitted with the COR and include: field overhead, home office overhead, off-site supervision, CO preparation/negotiation/research, time delays, Project interference and disruption, additional guaranty and warranty durations, on-site supervision, additional temporary protection, additional temporary utilities, additional material handling costs, liability and property damage insurance, and additional safety equipment costs.

7.7.3 Format for COR or CO's

The following format shall be used as applicable by the District and the Contractor to communicate proposed additions to the Contract. All costs submitted shall be actual costs and labor sh

all be unburdened labor. Refer to Division 1 for a copy of the Construction Change Order form.

		EXTRA	CREDIT
(a)	Material (attach itemized quantity and unit cost plus sales tax)		
(b)	Labor Not to Exceed Applicable Prevailing Wage Rates (attach itemized hours and rates)		
(c)	Equipment (attach invoices)		
(d)	Subtotal		
(e)	If Subcontractor performed work, add Subcontractor's overhead and profit to portions performed by Subcontractor, not to exceed 10% of item (d).		
(f)	Subtotal		
(g)	Contractor's Overhead and Profit: Not to exceed 10% of Item (d) if Contractor performed the work. No more than 5% of Item (d) if Subcontractor performed the work. If work was performed by Contractor and Subcontractors, portions performed by Contractor shall not exceed 10% of Item (d), and portions performed by Subcontractor shall not exceed 10% of Item (d).		
(h)	Subtotal		
(i)	Bond not to exceed one percent (1%) of Item (h)		
(k)	TOTAL		
(l)	Time/ Days		

The undersigned Contractor approves the foregoing Change Order or Immediate Change Directive as to the changes, if any, and the Contract price specified for each item and as to the extension of time allowed, if any, for completion of the entire Work on account of said Change Order or Immediate Change Directive, and agrees to furnish all labor, materials and service and perform all Work necessary to complete any additional Work specified therein, for the consideration stated herein. It is understood that said Change Order or Immediate Change Directive shall be effective when approved by the Governing Board of the District.

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 delay to the Project. Any costs, expenses, damages or time extensions not included are deemed waived.

The Contractor expressly acknowledges and agrees that any change in the Work performed shall not be deemed to constitute a delay or other basis for claiming additional compensation based on theories including, but not limited to, acceleration, suspension or disruption to the Project.

7.7.3.1 *Adjustment for Time and Compensable Delay*. A CO shall also include any additional time required to complete the Project. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Project Schedule as defined in Article 8 of the General Contract. A schedule fragnet showing the time delay must be submitted with the CO. Any changes in time will be granted only if there is an impact to the critical path. If Contractor fails to request a time extension in a CO, then the Contractor is thereafter precluded from requesting or claiming a delay.

7.7.4 Deductive Change Orders

All Deductive Change Order(s) must be prepared utilizing the form under Article 7.7.3 (a) – (d) only, setting forth the actual costs incurred. Except in the case of an Article 2.2 or 9.6 Deductive Change Order where no mark-up shall be allowed, Contractor will be allowed a maximum of 5% total profit and overhead.

For unilateral Deductive Change Orders, or where credits are due from Contractor for Allowances, Deductive Items, Inspection, Damage, DSA CCD review costs, Architect or Inspector costs for after hours or corrective services, Work removed from the Agreement under Article 2.2 or Article 9.6, there shall be no mark-up.

District may, any time after a Deductive Change Order is presented to Contractor by District for items under Article 2.2 or Article 9.6 or if there is disagreement as to the Deductive Change Order, issue a unilateral Deductive Change Order on the Project and deduct the Deductive Change Order from a Progress Payment, Final Payment, or Retention.

7.7.5 Discounts, Rebates, and Refunds

For purposes of determining the cost, if any, of any change, addition, or omission to the Work hereunder, all trade discounts, rebates, refunds, and all returns from the sale of surplus materials and equipment shall accrue and be credited to the Contractor, and the Contractor shall make provisions so that such discounts, rebates, refunds, and returns may be secured, and the amount thereof shall be allowed as a reduction of the Contractor's cost in determining the actual cost of construction for purposes of any change, addition, or omissions in the Work as provided herein. All CO's are subject to Audit under Article 13.11 for discounts, rebates and refunds.

7.7.6 Accounting Records

With respect to portions of the Work performed by CO's and CCD's on a time-and-materials, unit-cost, or similar basis, the Contractor shall keep and maintain cost-accounting records in a format consistent with accepted accounting standards and satisfactory to the District, which shall be

available to the District on the same terms as any other books and records the Contractor is required to maintain under the Contract Documents.

Any time and material charges shall require Inspector's signature on time and material cards showing the hours worked and the Work actually completed. (See Article 7.7.1.1)

7.7.7 Notice Required

If the Contractor desires to initiate a Dispute or Claim for an increase in the Contract Price, or any extension in the Contract Time for completion, Contractor shall notify the applicable party responsible for addressing the Dispute or Claim pursuant to Article 4.6. No Claim or Dispute shall be considered unless made in accordance with this subparagraph. Contractor shall proceed to execute the Work even though the adjustment may not have been agreed upon. Any change in the Contract Price or extension of the Contract Time resulting from such Claim shall be authorized by a CO.

7.7.8 Applicability to Subcontractors

Any requirements under this Article 7 shall be equally applicable to CO's, COR's or ICD's issued to Subcontractors by the Contractor to the same extent required by the Contractor.

7.7.9 Alteration to Change Order Language

Contractor shall not alter or reserve time in COR's, CO's or ICD's. Contractor shall execute finalized CO's and proceed under Article 7.7.7 and Article 4.6 with proper notice. If Contractor intends to reserve time without an approved CPM schedule prepared pursuant to Article 8 or without submitting a fragnet showing delay to critical path, then Contractor may be prosecuted pursuant to the False Claim Act.

ARTICLE 8
TIME AND SCHEDULE

8.1 DEFINITIONS

8.1.1 Contract Time

Contractor shall perform and reach Substantial Completion (See Article 1.1.46) within the time specified in the Agreement Form. Moreover, Contractor shall perform its Work in strict accordance with the Project Milestones in the Contract Documents and shall proceed on a properly developed and approved Baseline Schedule, which represents the Contractor's view of the practical way in which the Work will be accomplished. Note that Contract Time includes and incorporates all Float and other Baseline inclusions as noted in Article 8.3.2.1 and as otherwise specifically noted in Article 8.

8.1.2 Notice to Proceed

District may give a Notice to Proceed within ninety (90) days of the award of the bid by District. Once Contractor has received the notice to proceed, Contractor shall complete the Work in the period of time referenced in the Contract Documents.

In the event that District desires to postpone the giving of the Notice to Proceed beyond this three-month period, it is expressly understood that with reasonable notice to the Contractor, the giving of the date to proceed may be postponed by District. It is further expressly understood by Contractor, that Contractor shall not be entitled to any claim of additional compensation as a result of the postponement of the giving of the notice to proceed

If the Contractor believes that a postponement will cause a hardship to Contractor, Contractor may terminate the Contract with written notice to District within 10 days after receipt by Contractor of District's notice of postponement. It is further understood by Contractor that in the event that Contractor terminates the Contract as a result of postponement by the District, the District shall only be obligated to pay Contractor for the Work that Contractor had performed at the time of notification of postponement and the grounds for notification and hardship shall be subject to Audit pursuant to Article 13.11. Should Contractor terminate the Contract as a result of a notice of postponement, District may award the Contract to the next lowest responsible bidder.

8.1.3 Computation of Time

The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

8.1.4 Float

Float is time the total number of days an activity may be extended or delayed without delaying the Completion Date shown in the schedule. Float will fall into three categories: (1) Rain Days; (2) Governmental Delays; and, (3) Project Float. Project Float and Rain Days are owned by the Project and may be utilized as necessary for critical path delays once the days become available for consumption (i.e. the Rain Day arrives and is not utilized since rain did not occur or Work was performed on the interior of a building). However, Governmental Delay float shall not be utilized for purposes other than

to address critical path delays that arise due to approvals, Inspector approvals or verifications on governmental forms.

8.1.4.1 *Governmental Delay Float*. It is anticipated that there will be governmental generated delays. Specific to DSA approvals, it is anticipated that no less than twelve (12) days per calendar year shall be set aside as Governmental Float to be utilized on critical path delays. A pro-rated number of days shall be calculated based on length of Contract Time. (For example, a two (2) year Contract Time shall require twenty-four (24) days of Governmental Float. If the Contract Time is 182 days, then the Contract Time shall require six (6) days of Governmental Float) This Governmental Delay float must be incorporated into the schedule and should be incorporated in each critical activity as Contractor deems fit. Specifically, major categories of Work under the DSA 152 (Project Inspection Card) should be allocated Governmental Delay Float at the Contractor's discretion. Governmental Delay Float on the Project may exceed 12 days per one (1) year period, but Contractor is required to include not be less than 12 days of Governmental Delay Float during each one (1) year period.

Contractor's failure to establish a protocol for requesting inspections is not grounds to utilize Governmental Delay Float. As noted in Article 3.1.4, 48 hours advance notice of commencing Work on a new area is required after submitting form DSA 156 and under PR 13-01 Special Inspection reports are not required to be posted until at least 14 days after the Work was inspected. Failure to plan, and pay (if applicable) for quicker delivery of Special Inspections is not Governmental Delay Float under Article 8.1.4.1. If Governmental Delay Float is not utilized, this float is carried through to other DSA 152 categories of inspection and consumed over the course of the Project

Governmental Delay Float may be utilized for a DSA Stop Work Order regardless of fault as defined under Education Code section 17307.5(b).

8.1.4.2 *Inclement Weather (Rain Days)*. The Contractor will only be allowed a time extension for unusually severe weather if it results in precipitation or other conditions which in the amount, frequency, or duration is in excess of the norm at the location and time of year in question as established by NOAA weather data. No less than 22 calendar days for each calendar year for Southern California will be allotted for in the Contractor's schedule for each winter weather period or carried at the end of the schedule as Rain Float. Float for weather days in other geographical regions shall be adjusted based on NOAA weather data for the geographical location. Contractor has anticipated all the days it takes to dry out and re-prepare areas that may be affected by weather delays which extend beyond the actual weather days. The weather days shall be shown on the schedule and if not used will become float for the Project's use. The Contractor will not be allowed a day-for-day weather delay for periods noted as float in the Schedule. The Contractor is expected to work seven (7) days per week (if necessary, irrespective of inclement weather), to maintain access, and to protect the Work under construction from the effects of inclement weather. Additional days beyond the NOAA shall be considered under the same criteria that weather days are granted below.

A Rain Day shall be granted by Architect or CM if the weather prevents the Contractor from beginning Work at the usual daily starting time, or prevents the Contractor from proceeding with seventy-five (75%) of the normal labor and equipment force towards completion of the day's current controlling item on the accepted schedule for a period of at least five hours, and the crew is dismissed as a result thereof, the Architect will designate such time as unavoidable delay and grant one (1) critical path activity calendar-day extension if there is no available float for the calendar year.

8.1.4.3 *Project Float*. The Contractor may determine some activities require a lesser duration than allocated and may set aside float in the Project Schedule. There shall be no early completion. Instead, to the extent float is either addressed at the end of the Project or throughout each category of critical path work, Project float may be used as necessary during the course of the Project and allocated on a first, come first serve basis. However, the use of float does not extend to Governmental Delay Float, which shall only be used for Governmental Delays.

8.2 HOURS OF WORK

8.2.1 Sufficient Forces

Contractors and Subcontractors shall continuously furnish sufficient forces to ensure the prosecution of the Work in accordance with the Construction Schedule.

8.2.2 Performance During Working Hours

Work shall be performed during regular working hours as permitted by the appropriate governmental agency except that in the event of an emergency, or when required to complete the Work in accordance with job progress, Work may be performed outside of regular working hours with the advance written consent of the District and approval of any required governmental agencies.

8.2.3 Costs for After Hours Inspections

If the Work done after hours is required by the Contract Documents, a Recovery Schedule, or as a result of the Contractor's failure to plan, and inspection must be conducted outside the Inspector's regular working hours, the costs of any after hour inspections, shall be borne by the Contractor.

If the District allows the Contractor to do Work outside regular working hours for the Contractor's convenience, the costs of any inspections required outside regular working hours shall be invoiced to the Contractor by the District and a Deductive Change Order shall be issued from the next Progress Payment.

If the Contractor elects to perform Work outside the Inspector's regular working hours, costs of any inspections required outside regular working hours shall be invoiced to the Contractor by the District and a Deductive Change Order from the next Progress Payment as a Deductive Change Order.

8.3 PROGRESS AND COMPLETION

8.3.1 Time of the Essence

Time limits stated in the Contract Documents are of the essence to the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.3.2 Baseline Schedule Requirements

8.3.2.1 *Timing*: Within ten (10) calendar days after Notice to Proceed, Contractor shall submit a practical schedule showing the order in which the Contractor proposes to perform the Work, and the dates on which the Contractor contemplates starting and completing the salient categories

of the Work. This first schedule which outlines the Contractor's view of the practical way in which the Work will be accomplished is the Baseline Schedule. If the Contractor Fails to submit the Baseline Schedule within the ten (10) days noted, then District may withhold processing and approval of progress payments pursuant to Article 9.4 and 9.6.

8.3.2.2 *District Review and Approval:* District, Architect and CM will review both a paper and electronic copy of Baseline Schedule and may provide comments as noted in this Article and either approve or disapprove the Baseline Schedule. All Schedules shall be prepared using an electronic scheduling program acceptable to District. All Schedules shall be delivered in an electronic format usable by the District. All logic ties and electronic information shall be included in the electronic copy of the Baseline Schedule that is delivered to the District.

8.3.2.3 *Schedule Must Be Within the Given Contract Time.* The Baseline Schedule shall not exceed time limits set forth in the Contract Documents and shall comply with all of the scheduling requirements as set forth in the Specifications and Contract Documents.

8.3.2.4 *Submittals Must Be Incorporated (See Articles 3.7 and 3.9)*: Contractor shall include Submittals as line items in the Baseline Schedule as required under Article 3.7.2 and 3.9.6. Submittals shall not delay the Work, Milestones, or the Completion Date. Failure to include Submittals in the Baseline Schedule shall be deemed a material breach by the Contractor.

8.3.2.5 *Float Must Be Incorporated*. The Baseline Schedule must indicate the beginning and completion of all phases of construction and shall use the "critical path method" (commonly called CPM) for the value reporting, planning and scheduling, of all Work required under the Contract Documents. The Baseline Schedule must incorporate all Milestones in the Project and apply Governmental Float at each Milestone in the Contractor's discretion. The Baseline Schedule shall incorporate any Schedule provided by the District as part of the bid and shall note durations that will not be adequate or should be shortened based on Contractor's review. These changes shall be identified and incorporated into Contractor's Baseline Schedule as long as requested changes are made within 10 days after the District chooses to move forward with the Project. 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 this Article 8. The Architect may disapprove of any Schedule or require modification to it if, in the opinion of the Architect or District, adherence to the any Schedule prepared by the Contractor will not cause the Work to be completed in accordance with the Agreement.

8.3.2.6 *No Early Completion.* Contractor shall not submit any Schedule showing early completion without indicating float time through the date set for Project completion by District. Contractor's Baseline Schedule shall account for all days past early completion as float which belongs to the Project. Usage of float shall not entitle Contractor to any delay Claim or damages due to delay.

8.3.2.7 *Use of Schedule Provided in Bid Documents.* In some cases, the bid will include a preliminary schedule indicating Milestones and construction sequences for the Project along with general timing for the Project. The preliminary schedule is not intended to serve as the Baseline Schedule utilized for construction. It is up to the Contractor to study and develop a Baseline Schedule to address the actual durations and sequences of Work that is anticipated while maintaining the Milestones provided by the District. Contractor shall obtain information from Contractor's Subcontractors and vendors on the planning, progress, delivery of equipment, coordination, and timing of availability of Subcontractors so a practical plan of Work is fully developed and represented in the Baseline Schedule.

8.3.2.8 *Incorrect Logic, Durations, Sequences, or Critical Path.* The District may reject or indicate durations, sequences, critical path or logic are not acceptable and request changes. The electronic copy of the Baseline Schedule shall have adequate information so logic ties, duration, sequences and critical path may be reviewed electronically. Contractor is to diligently rebuild and resubmit the Baseline Schedule to represent the Contractor's plan to complete the Work and maintain Milestones at the next progress meeting, or before the next progress meeting. If Contractor is not able to build a Baseline Schedule that is acceptable to the District or Architect, the District reserves the right to utilize the unapproved originally submitted Baseline Schedule (See Article 8.3.2.12) and the comments submitted to hold Contractor accountable for timely delivery of Work and maintenance of Milestones. Furthermore, Contractor's representations in the Baseline Schedule, if unacceptable, may also be used as a basis for termination of the Contract under Article 14 if Contractor fails to adequately maintain the Schedule and falls significantly behind without undertaking the efforts to either submit and follow a Recovery Schedule or fail to submit a Recovery Schedule and make no effort toward recovery on the Project.

8.3.2.9 *Contractor Responsibility Even if Schedule Issues Are Not Discovered.* Failure on the Part of the District to discover errors or omissions in any Schedules submitted shall not be construed to be an approval of the error or omission and any flawed Schedule is not grounds for a time extension.

8.3.2.9 Inclusions in Baseline Schedule. In addition to scheduling requirements set forth at Article 8.3.2, Contractor is specifically directed to include (broken out separately) in Contractor's Baseline Schedule and all Schedule updates, the following items required pursuant to these General Conditions, including but not limited to:

1. Rain Day Float (excluding inclement weather) as required under Article 8.1.4.2. For example, if the NOAA provides 22 days of Rain Days, all 22 days must be incorporated and noted in the Baseline Schedule. Further, any days required to clean-up or dry out shall be included for operations that are likely to require a clean-up or dry out period. Days that are not utilized shall be considered float owned by the Project.

2. Governmental Delay Float under Article 8.1.4.1. This Governmental Delay Float shall only be utilized for Governmental Delays and shall not be considered available float owned by the Project. This float shall only be distributed to the Project upon the completion of the Project and shall be used to offset Liquidated Damages and shall not generate compensable delays.

3. Submittal and Shop Drawing schedule under Article 3.9.

4. Deferred Approvals under Article 3.9.

5. Time for separate contractors, including furniture installation and start up activities, under Article 6.1.

6. Coordination and timing of any Drawings, approvals, notifications, permitting, connection, and testing for all utilities for the Project. (See Article 2.1.4).

7. Testing, special events, or school activities

8.3.2.10 *Failure to include Mandatory Schedule Items*. District may withhold payment pursuant to Articles 9.3, 9.4 and 9.6. In lieu of withholding payment for failure to include Mandatory Schedule Items, after the District or Architect has notified the Contractor of failure to meet the Baseline Schedule or Updated Schedule requirements and provided a written notification of this failure and provided a written notice of Schedule preparation errors, and the Contractor fails to correct the noted deficiencies or the Contractor does not provide an updated Baseline Schedule correcting the deficiencies, then Contractor shall not be granted an extension of time for failure to obtain necessary items and approvals under Article 8.3.2 and for the time required for failure to comply with laws, building codes, and other regulations (including Title 24 of the California Code of Regulations). Contractor shall maintain all required Article 8.3.2 Schedule items in the Baseline Schedule and indicate any days that have been used as allowed in Article 8. If Contractor fails to include all Article 8.3.2items in its Baseline Schedule or Schedule Updates and the District either utilizes an Unapproved Schedule under Article 8.3.2.12 or does not object to the inclusion of required scheduling items, then all mandatory Schedule inclusions, including float, shall be utilized in the District's discretion. If the Contract Time is exceeded, then Contractor shall be subject to the assessment of Liquidated Damages pursuant to Article 8.4.

8.3.2.11 *Failure to Meet Requirements*. Failure of the Contractor to provide proper Schedules as required by this Article and Article 9 is a material breach of the Contract and grounds for Termination pursuant to Article 14. The District, at its sole discretion, may choose, instead, to withhold, in whole or in part, any Progress Payments or Retention amounts otherwise payable to the Contractor.

8.3.2.12 *Use of an Unapproved Baseline Schedule*. If the Baseline Schedule submitted by the Contractor is unacceptable to the District (i.e. failing to meet the requirements of Article 8.3.2) and Contractor does not incorporate or address the written comments to the Baseline Schedule and a Baseline Schedule is not approved, but due to extreme necessity, the District moves forward without an approved Baseline Schedule, Contractor shall diligently revise and meet Schedule update requirements of Article 8 and incorporate all Article 8.3.2 comments in all updates). However, for purposes of Termination pursuant to Article 14, the unapproved Baseline Schedule initially submitted shall be treated as the Baseline Schedule with durations shortened or revised to accommodate all float, all mandatory Schedule requirements under Article 8.3.2, any requirements in the Contract Documents, and all revisions by the District or Architect.

8.3.3 Update Schedules

8.3.3.1 *Updates Shall Be Based on Approved Baseline Schedule*. Except in the case where there has not been agreement as to a Baseline Schedule, the approved Baseline Schedule shall be used to build future Schedule updates. Schedule updates shall be a CPM based Schedule consistent with the Baseline Schedule requirements of 8.3.2

In the case that no Baseline has been approved, Schedule updates shall be provided monthly and each update shall incorporate all comments and revisions noted as not complying with the requirements of Article 8.3.2. Contractor shall be held to the Article 8.3.2.12 unapproved Baseline Schedule, inclusive of all Milestones, float, comments and revisions by the District and

Architect, all required Baseline Schedule Inclusions under Article 8.3.2, and any requirements in the Contract Documents.

8.3.3.2 *Schedule Updates*. Contractor shall update the approved Schedule each month to address actual start dates and durations, the percent complete on activities, actual completion dates, estimated remaining duration for the Work in progress, estimated start dates for Work scheduled to start at future times and changes in duration of Work items

8.3.3.3 *Listing of Items Causing Delays*. Schedule updates shall provide a listing of activities which are causing delay in the progress of Work and a narrative shall be provided showing a description of problem areas, anticipated delays, and impacts on the Construction Schedule. Simply stating "District Delay" or "Architect Delay" shall be an inadequate listing. Delays shall only be listed if they meet the requirements of Article 8.4.

8.3.3.4 *Recovery Schedule*. In addition to providing a schedule update every thirty (30) days, the Contractor, if requested by the Architect or District, shall take the steps necessary to improve Contractor's progress and demonstrate to the District and Architect that the Contractor has seriously considered how the lost time, the Completion Date, or the Milestones that are required to be met within the terms of the Contract. Contractor shall immediately provide a Recovery Schedule showing how Milestones and the Completion Date will be met. In no case, shall a Recovery Schedule be provided later than ten (10) days following the request for a Recovery Schedule from the Architect or District.

a. Failure to Provide a Recovery Schedule. Shall subject Contractor to the assessment of Liquidated Damages for failure to meet the Contract Time. Refusal or failure to provide a Recovery Schedule shall be considered a substantial failure of performance and a material breach of Contract and may result in Termination of the Contract pursuant to Article 14.

b. Recovery Schedule Acceleration without Additional Cost. The District may require Contractor prepare a Recovery Schedule showing how the Project shall be accelerated, without any additional cost to the District. The District may order, without additional cost, the following:

   1. Increase the number of shifts;

   2. Utilize overtime to recover the approved Schedule; and/or

   3. Increase the days when Work occurs, including weekends, at the Project and at any manufacturer's plant.

c. Recovery Schedule Acceleration without Additional Cost. If Contractor disputes that the Recovery Schedule acceleration shall be issued without additional costs, the Contractor shall submit concurrent with Recovery Schedule acceleration notice pursuant to Articles 8.4.3 and 8.4.4.

8.4 EXTENSIONS OF TIME - LIQUIDATED DAMAGES

8.4.1 Liquidated Damages

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. IF THE WORK IS NOT SUBSTANTIALLY COMPLETED IN THE TIME SET FORTH IN THE AGREEMENT, IT IS UNDERSTOOD THAT THE DISTRICT WILL SUFFER DAMAGES. IT BEING IMPRACTICAL AND UNFEASIBLE TO DETERMINE THE AMOUNT OF ACTUAL DAMAGE, IT IS AGREED THE CONTRACTOR SHALL PAY TO THE DISTRICT THE AMOUNT LIQUIDATED DAMAGES SET FORTH IN THE AGREEMENT, FOR EACH CALENDAR DAY OF DELAY IN REACHING SUBSTANTIAL COMPLETION (SEE ARTICLE 1.1.46). CONTRACTOR AND ITS SURETY SHALL BE LIABLE FOR THE AMOUNT THEREOF PURSUANT TO GOVERNMENT CODE SECTION 53069.85.

8.4.2 Delay

Except and only to the extent provided under Article 7 and Article 8, by signing the Agreement, Contractor agrees to bear the risk of delays to Completion of the Work and that Contractor's bid for the Project was made with full knowledge of this risk.

In agreeing to bear the risk of delays to complete the Work, Contractor understands that, except and only to the extent provided otherwise in Article 7 and 8, the occurrence of events that delay the Work shall not excuse Contractor from its obligation to achieve Completion of the Project within the Contract Time, and shall not entitle the Contractor to an adjustment to the Contract time.

8.4.3 Excusable Delay

Contractor shall not be charged for Liquidated Damages because of any delays in completion of Work which are not the fault or negligence of Contractor or its Subcontractors, arising from Rain Float or Project Float, including acts of God, as defined in Public Contract Code section 7105, acts of enemy, epidemics and quarantine restrictions. Contractor shall within five (5) calendar days of beginning of any such delay notify District in writing of causes of delay; thereupon 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. Extensions of time shall apply only to that portion of Work affected by delay, and shall not apply to other portions of Work not so affected. An extension of time may only be granted after proper compliance with Article 8.3 requiring preparation and submission of a properly prepared CPM schedule.

8.4.3.1 *Excusable Delay Is Not Compensable*. No extended overhead, general conditions costs, impact costs, out-of-sequence costs or any other type of compensation, by any name or characterization, shall be paid to the Contractor for any delay to any activity not designated as a critical path item on the latest approved Project schedule.

8.4.3.2 *Notification*. The Contractor shall notify the Architect in writing of any anticipated delay and its cause, in order that the Architect may take immediate steps to prevent, if possible, the occurrence or continuance of delay, and may determine whether the delay is to be considered avoidable or unavoidable, how long it continues, and to what extent the prosecution and completion of the Work might be delayed thereby.

8.4.3.3 *Extension Request*. In the event the Contractor requests an extension of Contract time for unavoidable delay, such request shall be submitted in accordance with the provisions in

the Contract Documents governing changes in Work (See Article 7). When requesting time, i.e., extensions, for proposed Change Orders, they must be submitted with the proposed Change Order with full justification and documentation. If the Contractor fails to submit justification with the proposed Change Order it waives its right to a time extension at a later date. Such justification must be based on the official Contract schedule as updated at the time of occurrence of the delay or execution of Work related to any changes to the scope of Work. Blanket or general claims for extra days without specific detailed information as required herein or a blanket or general reservation of rights do not fufill the requirements of this Article and shall be denied. The justification must include, but is not limited to, the following information:

a. The duration of the activity relating to the changes in the Work and the resources (manpower, equipment, material, etc.) required to perform these activities within the stated duration.

b. Logical ties to the official Baseline Schedule or Approved Updated Schedule for the proposed changes and/or delay showing the activity/activities in the schedule whose start or completion dates are affected by the change and/or delay. (A fragnet of any delay of over ten (10) days must be provided.)

The Contractor and District understand and expressly agree that insofar as Public Contract Code section 7102 may apply to changes in the Work or delays under this Contract, the actual delays and damages, if any, and time extensions are intended to, and shall provide, the exclusive and full method of compensation for changes in the Work and construction delays.

8.4.4 Notice by Contractor Required

The Contractor shall within five (5) calendar days of beginning of any such delay notify the District in writing of causes of delay with justification and supporting documentation. In the case of a Recovery Schedule pursuant to Article 8.3.3.4, Contractor shall submit written notice concurrent with the Recovery Schedule. District will then ascertain the facts and extent of the delay and grant an extension of time for completing the Work when, in its judgment, the findings of fact justify such an extension. Extensions of time shall apply only to that portion of the Work affected by the delay and shall not apply to other portions of the Work not so affected.

Claims relating to time extensions shall be made in accordance with applicable provisions of Article 7.

8.4.4.1 *Adjustment for Compensable Delays*. The Schedule may be adjusted for a delay if, and only if, Contractor undertakes the following:

a. Contractor submits a timely COR or CO pursuant to the requirements of Article 7;

b. Contractor submits a fragnet showing the critical path delay caused by the COR, CO, Changed Condition, CCD, or ICD;

c. Contractor has addressed all required float days in the Fragnet; and

d. Contractor submits a complete breakdown of all costs incurred utilizing the format of Article 7.3.3.

8.4.5 No Additional Compensation for Coordinating Governmental Submittals and the Resulting Work

CONTRACTOR HAS PLANNED ITS WORK AHEAD OF TIME AND IS AWARE THAT GOVERNMENTAL AGENCIES, SUCH AS THE GAS COMPANIES, ELECTRICAL UTILITY COMPANIES, WATER DISTRICTS AND OTHER AGENCIES MAY HAVE TO APPROVE CONTRACTOR PREPARED DRAWINGS OR APPROVE A PROPOSED INSTALLATION. CONTRACTOR HAS INCLUDED DELAYS AND DAMAGES WHICH MAY BE CAUSED BY SUCH AGENCIES IN CONTRACTOR'S BID AND HAS INCLUDED ADEQUATE TIME IN THE CONTRACTOR'S BASELINE SCHEDULE. FAILURE TO ADEQUATELY PLAN AND SCHEDULE IS NOT A BASIS TO USE GOVERNMENTAL DELAY FLOAT.

8.4.6 District Right to Accelerate the Work

The District may direct the Contractor to meet schedule requirements when the Work has been delayed. The District shall compensate the Contractor for the additional costs incurred by acceleration to the extent that such costs are directly attributable to the acceleration and are incurred through no fault or negligence of the Contractor.

8.4.6.1 *Management of Acceleration*. Contractor acceleration shall not include Work that is part of the scope of Work detailed in the Plans and Specifications. Instead, the acceleration costs shall be premium or overtime and quantifiable additional work added to the Project meant to accelerate the Project. Contractor is directed to keep consistent crews on the Project so time can be tracked. If crews are circulated off the Project or crews brought in only for overtime, the District may be charged for Contract Work and not accelerated time. In such case, the District may object to the costs submitted.

8.4.6.2 *Costs for Acceleration*. Cost for Acceleration shall be supported by backup documentation, and time sheets signed by the Inspector for each day work has been performed, at or near the time when the Work was performed. A listing on the time sheet shall document all labor, materials and services utilized that day and provide areas of work, and amount of work performed. Contractor shall comply with submission requirements of Article 7.7.

ARTICLE 9
PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

The Contract Sum or Contract Price is stated in the Agreement and, including authorized adjustments, is the total amount payable by the District to the Contractor for performance of the Work under the Contract Documents.

9.2 COST BREAKDOWN

9.2.1 Required Information

Contractor shall furnish the following:

a. Within ten (10) days after Notice to Proceed, a detailed breakdown of the Contract Price (hereinafter "Schedule of Values") for each Project, Site, building, Milestone or other meaningful method to measure the level of Project Completion as determined by the District shall be submitted as a Submittal for the Project.;

b. Within ten (10) days after the date of the Notice to Proceed, a schedule of estimated monthly payment requests due the Contractor showing the values and construction time of the various portions of the Work to be performed by it and by its Subcontractors or material and equipment suppliers containing such supporting evidence as to its correctness as the District may require;

c. Within ten (10) days after the date of the Notice to Proceed, address, telephone number, telecopier number, California State Contractors License number, classification and monetary value of all subcontracts for parties furnishing labor, material, or equipment for completion of the Project.

9.2.2 Information and Preparation of Schedule of Values

9.2.2.1 *Break Down of Schedule of Values*. Schedule of Values shall be broken down by Project, site, building, Milestone, or other meaningful method to measure the level of Project Completion as determined by the District.

9.2.2.2 *Based on Contractor Bid Costs.* The Schedule of Values shall be based on the costs from Contractor's bid to the District. However, the submission of the Schedule of Values shall not be front loaded so the Contractor is paid a greater value than the value of the Work actually performed and shall not shift funds from parts of the Project that are later to Work that is performed earlier.

9.2.2.3 Largest Dollar Value for Each Line Item. Identify Subcontractors and materials suppliers proposed to provide portions of Work equal to or greater than ten thousand dollars ($10,000) or one-half of one percent (0.5%) of their Contract Price, whichever is less.

9.2.2.4 *Allowances*. Any Allowances provided for in the Contract shall be a line item in the Schedule of Values.

9.2.2.5 *Labor and Materials Shall Be Separate*. Labor and Materials shall be broken into two separate line items unless specifically agreed in writing by the District.

9.2.3 District Approval Required

The District shall review all submissions received pursuant to Article 9.2 in a timely manner. All submissions must be approved by the District before becoming the basis of any payment.

9.3 PROGRESS PAYMENTS

9.3.1 Payments to Contractor

Unless there is a resolution indicating that the Work for the Project is substantially complex, within thirty-five (35) days after approval of the Request for Payment, Contractor shall be paid a sum equal to ninety-five percent (95%) of the value of the Work performed (as certified by Architect and Inspector and verified by Contractor) up to the last day of the previous month, less the aggregate of previous payments. In the case of a Project designated substantially complex, the sum paid to the Contractor shall be equal to ninety percent (90%) of the value of the Work performed (as certified by the Architect and Inspector and verified by Contractor). The value of the Work completed shall be the Contractor's best estimate. Work completed as estimated shall be an approximation or estimate only and no mistake, inaccuracy, error or falsification in said any approved estimate shall operate to release the Contractor, or any Surety upon any bond, from damages arising from such Work, or from the District's enforcement of each and every provision of this Contract including but not limited to the Performance Bond and Payment Bond. The District shall have the right to subsequently to correct any mistake, inaccuracy, error or falsification made or otherwise set forth in any approved Request for Payment and such correction may occur in any future Payment Application or in the Retention Payment to the Contractor. No Surety upon any bond shall be relieved, released or exonerated of its obligations under this Contract or any applicable bond when the District is unable to correct an overpayment to the Contractor due to any abandonment by the Contractor or termination by the District.

The Contractor shall not be entitled to have any payment requests processed, or be entitled to have any payment made for Work performed, so long as any lawful or proper direction given by the District concerning the Work, or any portion thereof, remains incomplete.

Notwithstanding anything to the contrary stated above, the Contractor may include in its Request for Payment the value of any structural steel, glue laminated beams, trusses, bleachers and other such custom-made materials prepared specifically for the Project and unique to the Project so long as all of the following requirements are satisfied:

a. The aggregate cost of materials stored off-site shall not exceed Twenty Five Thousand Dollars ($25,000) at any time or as otherwise agreed to be District in writing;

b. Title to such materials shall be vested in the District as evidenced by documentation satisfactory in form and substance to the District, including, without limitation, recorded financing statements, UCC filings and UCC searches;

c. With each Contractor Request for Payment, the Contractor shall submit to the District a written list identifying each location where materials are stored off-site (which must be a bonded warehouse) and the value of the materials at each location. The Contractor shall procure insurance satisfactory to the District (in its reasonable discretion) for materials stored off-site in an amount not less than the total value thereof;

d. The consent of any Surety shall be obtained to the extent required prior to payment for any materials stored off-site;

e. Representatives of the District shall have the right to make inspections of the storage areas at any time; and

f. Such materials shall be: (1) protected from diversion, destruction, theft and damage to the reasonable satisfaction of the District; (2) specifically marked for use on the Project; and (3) segregated from other materials at the storage facility.

9.3.2 Purchase of Materials and Equipment and Cost Fluctuations

The Contractor is required to order, obtain, and store materials and equipment sufficiently in advance of its Work at no additional cost or advance payment from District to assure that there will be no delays. Contractor understands that materials fluctuate in value and shall have adequately addressed market fluctuations through agreements with Contractor vendors or by other means. Contractor further understands and incorporates into Contractor's bid cost any wage rate increases during the Project for the Contractor's labor force as well as all other Subcontractor and vendor labor forces. District shall not be responsible for market fluctuations in costs or labor rate increases during the Project. Contractor further has incorporated any and all cost increases in areas of Work where there may be schedule variations so that cost increases are not passed through to the District.

9.3.3 No Waiver

No payment by District hereunder shall be interpreted so as to imply that District has inspected, approved, or accepted any part of the Work. Contractor specifically understands that Title 24 Section 4-343 which states:

> "It is the duty of the contractor to complete the work covered by his or her contract in accordance with the approved Plans and Specifications therefore. The contractor in no way is relieved of any responsibility by the activities of the Architect, Engineer, Inspector or DSA in the performance of such duties... In no case, however, shall the instruction of the Architect or registered Engineer be construed to cause work to be done with is not in conformity with the approved Plans, Specifications, and change orders..."

Notwithstanding any payment, the District may enforce each and every provision of this Contract which includes, but is not limited to, the Performance Bond and Payment Bond. The District may correct any error subsequent to any payment. In no event shall the Contractor or the Surety be released or exonerated from performance under this Contract when the District overpays the Contractor based upon any mistake, inaccuracy, error or falsification in any estimate that is included in any Request for Payment.

9.3.4 Issuance of Certificate of Payment

The Architect shall, within seven (7) days after receipt of the Contractor's Application for Payment, either approve such payment or notify the Contractor in writing of the Architect's reasons for withholding approval in whole or in part as provided in Article 9.6. The review of the Contractor's Application for Payment by the Architect is based on the Architect's observations at the Project and the data comprising the Application for Payment that the Work has progressed to the point indicated and that, to the best of the Architect's knowledge, information, and belief, the quality of the Work is in accordance with the Contract Documents. In some cases, the Architect may act upon or rely on the evaluation of the Work by the Inspector. This review of Payment Applications is sometimes called a "Pencil Draft." District's return of a Pencil Draft shall constitute the District's dispute of the Payment Application that has been submitted. Contractor shall promptly respond to Pencil Drafts or Contractor's Payment Applications may be delayed. Contractor's failure to promptly respond to a Pencil Draft shall qualify as a delay in the prompt payment of a Request for Payment or Request for Retention. The foregoing representations are subject to: (1) an evaluation of the Work for conformance with the Contract Documents, (2) results of subsequent tests and inspections, (3) minor deviations from the Contract Documents correctable prior to completion, and (4) specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute the Contractor's verified representation that the Contractor is entitled to payment in the amount certified.

9.3.5 Payment of Undisputed Contract Payments

In accordance with Public Contract Code section 7100, payments by the District to the Contractor for any and all undisputed amounts (including all Progress Payments, Final Payments or Retention Payment) is contingent upon submission of a proper and accurate Payment Application and the Contractor furnishing the District with a release of all Claims against the District related to such undisputed amounts. Disputed Contract Claims in stated amounts may be specifically excluded by the Contractor from the operation of the release. If, however, the Contractor specifically excludes any Claims, the Contractor shall provide details such as a specific number of disputed days or costs of any such exclusion in accordance with Articles 4.6 and 7.7.

9.4 APPLICATIONS FOR PROGRESS PAYMENTS

9.4.1 Procedure

9.4.1.1 *Application for Progress.* On or before the fifth (5th) day of each calendar month during the progress of the Work, Contractor shall submit to the Architect an itemized Application for Progress Payment for operations completed. Such application shall be notarized, if required, and supported by the following or such portion thereof as Architect requires:

1. The amount paid to the date of the Payment Application to the Contractor, to all its Subcontractors, and all others furnishing labor, material, or equipment for its Contract;

2. The amount being requested under the Payment Application by the Contractor on its own behalf and separately stating the amount requested on behalf of each of the Subcontractors and all others furnishing labor, material, and equipment under the Contract;

3. The balance that will be due to each of such entities after said payment is made;

4. A certification that the As-Built Drawings and Annotated Specifications are current;

5. Itemized breakdown of Work done for the purpose of requesting partial payment;

6. An updated or approved Baseline Schedule or other Schedule updates in conformance with Article 8;

7. Failure to submit an updated Schedule for the month or any previous month;

8. The additions to and subtractions from the Contract Price and Contract Time;

9. A summary of the Retention held;

10. Material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the District may require from time to time;

11. The percentage of completion of the Contractor's Work by line item;

12. An updated Schedule of Values from the preceding Application for Payment;

13. Prerequisites for Progress Payments; and

14. Any other information or documents reasonably requested by the District, Architect, Inspector or CM (if applicable).

9.4.1.2 *First Payment Request.* The following items, if applicable, must be completed before the first payment request will be accepted for processing:

1. Installation of the Project sign;

2. Receipt by Architect of Submittals;

3. Installation of field office;

4. Installation of temporary facilities and fencing;

5. Submission of documents listed in the Article 9.2 relating to Contract Price breakdown;

6. Preliminary schedule analysis, due within 10 days after Notice to Proceed;

7. Contractor's Baseline Schedule (to be CPM based in conformance with Article 8);

8. Schedule of unit prices, if applicable;

9. Submittal Schedule;

10. Copies of necessary permits;

11. Copies of authorizations and licenses from governing authorities;

12. Initial progress report;

13. Surveyor qualifications;

14. Written acceptance of District's survey of rough grading, if applicable;

15. List of all Subcontractors, with names, license numbers, telephone numbers, and scope of work;

16. All bonds and insurance endorsements; and

17. Resumes of General Contractor's Project Manager, and if applicable, job site secretary, record documents recorder, and job site Superintendent.

9.4.1.3 *Second Payment Request.* The second payment request will not be processed until all Submittals and Shop Drawings have been accepted for review by the Architect.

9.4.1.4 *All Payment Requests.* No payment requests will be processed unless Contractor has submitted copies of the certified payroll records for the Work which correlates to the payment request and a proper CPM schedule pursuant to Article 8 is submitted.

9.4.1.5 *Final Payment Application (90% or 95%).* See Article 9.11.1

9.4.1.6 *Final Payment Application (100%).* See Article 9.11.3

9.5 STOP NOTICE CLAIMS AND WARRANTY OF TITLE

The Contractor warrants title to all Work. The Contractor further warrants that all Work is free and clear of liens, claims, security interests, stop notices, or encumbrances in favor of the Contractor, Subcontractors, material and equipment suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work. Failure to keep work free of liens, stop notices, claims, security interests, or encumbrances is grounds to make a claim against Contractor's Payment and Performance Bond to immediately remedy and defend.

If a lien or stop notice of any nature should at any time be filed against the Work or any District property, by any entity which has supplied material or services at the request of the Contractor, Contractor and Contractor's Surety shall promptly, on demand by District and at Contractor's and Surety's own expense, take any and all action necessary to cause any such lien or stop notice to be released or discharged immediately therefrom.

If the Contractor fails to furnish to the District within ten (10) calendar days after written demand by the District, satisfactory evidence that a lien or stop notice has been so released, discharged, or secured, then District may discharge such indebtedness and deduct the amount required therefor, together with any and all losses, costs, damages, and attorney's fees and expense incurred or suffered by District from any sum payable to Contractor under the Contract. In addition, any liens, stop notices, claims, security interests or encumbrances shall trigger the indemnification requirements under Article 3.15 and the Agreement Form, and shall act as a trigger under Civil Code section 2778 and 2779 requiring reimbursement for any and all costs following the District's written demand has been made. Any withholdings by the District for stop notices in accordance with Civil Code section 9358 shall not be a basis by the Contractor to make a Claim for interest penalties under Public Contract Code sections 7107 or 20104.50.

9.6 DECISIONS TO WITHHOLD PAYMENT

9.6.1 Reasons to Withhold Payment

The District may withhold payment in whole, or in part, to the extent reasonably necessary to protect the District if, in the District's opinion, the representations to the District required by Article 9.4 cannot be made. The District may withhold payment, in whole, or in part, to such extent as may be necessary to protect the District from loss because of, but not limited to:

a. Defective Work not remedied;

b. Stop notices served upon the District;

c. Liquidated Damages assessed against the Contractor;

d. The cost of Completion of the Contract if there exists reasonable doubt that the Work can be Completed for the unpaid balance of any Contract Price or by the completion date;

e. Damage to the District or other contractor;

f. Unsatisfactory prosecution of the Work by the Contractor;

g. Failure to store and properly secure materials;

h. Failure of the Contractor to submit on a timely basis, proper and sufficient documentation required by the Contract Documents, including, without limitation, acceptable monthly progress schedules, Shop Drawings, Submittal schedules, Schedule of Values, Product Data and samples, proposed product lists, executed Change Order, Construction Change Documents, and verified reports;

i. Failure of the Contractor to maintain As-Built Drawings;

j. Erroneous estimates by the Contractor of the value of the Work performed, or other false statements in an Payment Application;

k. Unauthorized deviations from the Contract Documents (including but not limited to Unresolved Notices of Deviations (DSA Form 154));

l. Failure of the Contractor to prosecute the Work in a timely manner in compliance with established progress schedules and completion dates.

m. Failure to properly pay prevailing wages as defined in Labor Code section 1720, et seq.;

n. Failure to properly maintain or clean up the Site;

o. Payments to indemnify, defend, or hold harmless the District;

p. Any payments due to the District including but not limited to payments for failed tests, or utilities changes or permits;

q. Failure to submit an acceptable Baseline Schedule or any Schedule or Schedule update in accordance with Article 8;

r. Failure to pay Subcontractor or suppliers as required by Article 9.8.1

s. Failure to secure warranties, including the cost to pay for warranties;

t. Failure to provide releases from material suppliers or Subcontractors when requested to do so;

u. Items deducted pursuant to Article 2.2;

v. Incomplete Punch List items under Article 9.9.1.1 which have gone through the Article 2.2 process; or

w. Allowances that have not been used.

9.6.2 Reallocation of Withheld Amounts

District may, in its discretion, apply any withheld amount to payment of outstanding claims or obligations as defined in Article 9.6.1 and 9.5. 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 obligation. District will render Contractor an accounting of such funds disbursed on behalf of Contractor.

If Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents or fails to perform any provision thereof, District may, after ten (10) calendar days written notice to the Contractor and without prejudice to any other remedy make good such deficiencies. 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 which is damaged, defective, or not done in accordance with Contract provisions, an equitable reduction in the Contract Price (of at least 150% of the estimated reasonable value of the nonconforming Work) shall be made therefor.

9.6.3 Payment After Cure

When the grounds for declining approval are removed, payment shall be made for amounts withheld because of them. No interest shall be paid on any retainage or amounts withheld due to the failure of the Contractor to perform in accordance with the terms and conditions of the Contract Documents.

9.7 NONCONFORMING WORK

Contractor shall promptly remove from premises all Work identified by District as failing to conform to the Contract whether incorporated or not. Contractor shall promptly replace and re-execute its own Work to comply with the Contract 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.

If Contractor does not remove such Work which has been identified by District as failing to conform to the Contract Documents 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) calendar days' time thereafter, District may, upon ten (10) calendar 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.

9.8 SUBCONTRACTOR PAYMENTS

9.8.1 Payments to Subcontractors

No later than ten (10) days after receipt, or pursuant to Business and Professions Code section 7108.5, the Contractor shall pay to each Subcontractor, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

9.8.2 No Obligation of District for Subcontractor Payment

The District shall have no obligation to pay, or to see to the payment of, money to a Subcontractor except as may otherwise be required by law.

9.8.3 Payment Not Constituting Approval or Acceptance

An approved Request for Payment, a progress payment, a Certificate of Substantial Completion, or partial or entire use or occupancy of the Project by the District shall not constitute acceptance of Work that is not in accordance with the Contract Documents.

9.8.4 Joint Checks

District shall have the right, if necessary for the protection of the District, to issue joint checks made payable to the Contractor and Subcontractors and material or equipment suppliers. The joint check payees shall be responsible for the allocation and disbursement of funds included as part of any such joint payment. In no event shall any joint check payment be construed to create any contract between the District and a Subcontractor of any tier, any obligation from the District to such Subcontractor, or rights in such Subcontractor against the District. The District may choose to issue joint checks at District's sole discretion and only after all the requirements of that particular school district and

county are specifically met. Some school districts cannot issue joint checks, so the ability to issue joint checks depends on the school district and the specific circumstances.

9.9 COMPLETION OF THE WORK

9.9.1 Close-Out Procedures

9.9.1.1 *Incomplete Punch Items.* When the Contractor considers the Work Substantially Complete (See Article 1.1.46 for definition of Substantially Complete), the Contractor shall prepare and submit to the District a comprehensive list of minor items to be completed or corrected (hereinafter "Incomplete Punch Items" or "Punch List"). The Contractor and/or its Subcontractors shall proceed promptly to complete and correct the Incomplete Punch Items listed. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Contractor is aware that Title 24 Section 4-343(a) provides:

> "RESPONSIBILITIES. IT IS THE DUTY OF THE CONTRACTOR TO COMPLETE THE WORK COVERED BY HIS OR HER CONTRACT IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS THEREFOR. THE CONTRACTOR IN NO WAY IS RELIEVED OF ANY RESPONSIBILITY BY THE ACTIVITIES OF THE ARCHITECT, ENGINEER, INSPECTOR OR DSA IN THE PERFORMANCE OF SUCH DUTIES.

9.9.1.2 *Punch List Is Prepared Only After the Project Is Substantially Complete.* If any of the conditions noted in Article 1.1.46 as defining Substantial Completion are not met, the Inspector, Architect or District may reject Contractor's Incomplete Punch Items as premature. If the Architect and Inspector commence review of Incomplete Punch Items, all rights are reserved until the Project actually meets the definition of Substantially Complete. Liquidated Damages, warranties, and other contractual rights are not affected by Incomplete Punch Items unless otherwise addressed in these General Conditions.

Once the Inspector and the Architect determine the Project is Substantially Complete, a Certificate of Substantial Completion shall be issued. The Inspector and Architect shall prepare a Punch List of items which is an inspection report of the Work, if any, required in order to complete the Contract Documents and ensure compliance with the DSA Approved Plans so the Project may be Completed by the Contractor and a final DSA Close-Out is approved. When all Work for the Project is Complete, including Punch Lists and all Work complies with the approved Contract Documents and Change Orders, the Project has reached Final Completion.

9.9.1.3 *Time for Completion of Punch List.* Contractor shall only be given a period of no more than thirty (30) days to complete the Punch List for the Project. During the Punch List period, the Contractor's Superintendent and Project Manager shall remain engaged in the Project and shall not be removed or replaced. If the Punch List is not completed at the end of the Punch List time then Contractor shall issue a valued Punch List within 5 days after the date the Punch List time ends. If Contractor does not issue such a list, the District or Architect may issue a valued Punch List to the Contractor and withhold up to 150% of the value of the Punch List Work pursuant to Article 2.2 of this Agreement.

Failure to issue a timely written request for additional time to complete Punch List shall result in the deletion of the remaining Punch List Work pursuant to Article 2.2 and the issuance of a Deductive Change Order.

a. Extension of Time to Complete Punch List. If Contractor cannot finish the Punch List Work during the time period allotted under Article 9.9.1.3, the Contractor may make a written request for a Non-Compensable Punch List time extension accompanied by an estimate of the number of additional days it will take to complete the Punch List Work for a written consent from the District to allow continued Punch List Work. Punch List time extensions are a maximum of thirty (30) days for each request and must be accompanied by an itemized valued Punch List.

b. If there is no valued Punch List accompanying any request or if Contractor intends to undertake Punch List without the continued support and supervision of its Superintendent and Project Manager (as required under Article 3.2), the District, Construction Manager or Architect may issue a valued Punch List, reject the Punch List Time Extension and deduct 150% of the valued Punch List pursuant to Article 2.2 and proceed to Close-Out the Project. Contractor shall cease work on the Project and proceed to complete Contractor's Retention Payment Application and complete the Work for the Project required pursuant to Article 9.11.3.

9.9.1.4 *District Rejection of Written Request for Punch List Time Extensions*. Following sixty (60) Days of Punch List under Article 9.9.1.3, the District has the option of rejecting Punch List Time Extension requests. The District may proceed under Article 2.2 and deduct the value of remaining Punch List Work pursuant to Article 2.2. If the District rejects the Punch List Time Extension request then Contractor shall cease Work on the Project and proceed to Final Inspection pursuant to Article 9.11.2.

9.9.1.5 *Punch List Liquidated Damages to Compensate for Added District Project Costs.* If the total time utilized for Punch List exceeds sixty (60) days [the thirty (30) day period under Article 9.9.1.3 plus an additional thirty (30) day period that has been requested in writing], and the District grants an additional written Punch List Time Extension that exceeds sixty (60) days of Punch List, then Contactor shall be charged Liquidated Damages of at least $750 per day for continued Punch List Work to partially compensate the Inspector, Architect, and Construction Manager's extended time on the Project. This Punch List Liquidated Damage number is based on anticipated cost for an Inspector on site and additional costs for the Architect and Construction Manager to reinspect Punch List items and perform the administration of the Close-out.

Contractor received thirty (30) days without any charges for Punch List Liquidated Damages and is placed on notice pursuant to this Article 9.9.1.5 that $750 is due for each day of Punch List that exceeds sixty (60) days at $750, a cost much lower than typical (and actual) costs for Inspection, Architect and Construction Manager time required during Punch List. Starting at ninety (90) days of Punch List (an excessive number of days to complete Punch List), the District shall be entitled to adjust Punch List Liquidated Damages to an estimate of the actual costs incurred to oversee, monitor and inspect the Punch List. If costs exceed $750 per day, the anticipated extended contract charges for Inspection, Architect, Construction Manager, and any other costs that will be incurred due to the extended Punch List shall be itemized and a daily rate of Punch List Liquidated Damages shall be presented in writing to the Contractor within five (5) days following the receipt of a written request for Punch List Time Extension by the Contractor that extends the Punch List time beyond ninety (90) days. This written

notice of actual Punch List Liquidated Damages may be provided to the Contractor at any time following the first written request for Punch List Time extension requested under Article 9.9.1.3. The adjusted actual Punch List Liquidated Damage amount shall be applicable as Punch List Liquidated Damages commencing on the ninetieth (90^{th}) day of Punch List.

9.9.2 Close-Out Requirements for Final Completion of the Project

a. Utility Connections. Buildings shall be connected to water, gas, sewer, and electric services, complete and ready for use. Service connections shall be made and existing services reconnected

b. As-Builts Up to Date and Complete. The intent of this procedure is to obtain an exact "As-Built" record of the Work upon completion of the project. The following information shall be carefully and correctly drawn on the prints and all items shall be accurately located and dimensioned from finished surfaces of building walls on all As-Built Drawings

1. The exact location and elevations of all covered utilities, including valves, cleanouts, etc. must be shown on As-Built Drawings

2. Contractor is liable and responsible for inaccuracies in As-Built Drawings, even though they become evident at some future date.

3. Upon completion of the Work and as a condition precedent to approval of Retention Payment, Contractor shall obtain the Inspector's approval of the "As-Built" information. When completed, Contractor shall deliver corrected sepias and/or a Diskette with an electronic file in a format acceptable to the District.

4. District may withhold the cost to hire a draftsman and potholing and testing service to complete Record As-Built Drawings at substantial cost if the Contractor does not deliver a complete set of Record As-Built Drawings. This shall result in withholding of between $10,000 to $20,000 per building that does not have a corresponding Record As Built Drawing.

c. Any Work not installed as originally indicated on Drawings

d. All DSA Close-Out requirements (See DSA Certification Guide) Contractor is also specifically directed to Item 3.2 in the DSA Certification Guide and the applicable certificates for the DSA-311 form.

e. Submission of Form 6-C. Contractor shall be required to execute a Form 6-C as required under Title 24 Sections 4-343. The Contractor understands that the filing with DSA of a Form 6-C is a requirement to obtain final DSA Approval of the construction by Contractor and utilized to verify under penalty of perjury that the Work performed by Contractor complies with the DSA approved Contract Documents. The failure to file a DSA Form 6C has two consequences. First, the Construction of the Project will not comply with the design immunity provisions

of Government Code section 830.6 and exposes the District and the individual Board members to personal liability for injuries that occur on the Project.

Secondly , under DSA IR A-20, since the Project cannot be Certified by DSA, no future or further Projects will be authorized so Contractor will have essentially condemned the campus from any future modernization or addition of new classrooms through their failure to file the DSA Form 6C.

1. *Execution of the DSA Form 6-C is Mandatory*. Refusal to execute the Form 6-C, which is a Final DSA Verified Report that all Work performed complies with the DSA approved Contract Documents is a violation of Education Code section 17312 and shall be referred to the Attorney General for Prosecution.

2. *Referral to the District Attorney for Extortion*. If the Contractor's refusal to execute the DSA Form 6C is to leverage a Dispute, Claim or litigation, then the matter shall also be referred to the District Attorney for prosecution for extortion.

3. *Contractor shall be Responsible for All Costs to Certify the Project*. The District may certify the Project complies with Approved Plans and Specifications by utilizing the procedures under the Project Certification Guide (located at the DSA website). All costs for professionals, inspection, and testing required for an alternate Project Certification shall be the Contractor's responsibility and the District reserves its right to institute legal action against the Contractor and Contractor's Surety for all costs to certify the Project and all costs to correct Non-Compliant Work that is discovered during the Alternate Certification Process.

f. ADA Work that must be corrected to receive DSA certification. See Article 12.2.

g. Maintenance Manuals. At least thirty (30) days prior to final inspection, three (3) copies of complete operations and maintenance manuals, repair parts lists, service instructions for all electrical and mechanical equipment, and equipment warranties shall be submitted. All installation, operating, and maintenance information and Drawings shall be bound in 8½" x 11" binders. Provide a table of contents in front and all items shall be indexed with tabs. Each manual shall also contain a list of Subcontractors, with their addresses and the names of persons to contact in cases of emergency. Identifying labels shall provide names of manufactures, their addresses, ratings, and capacities of equipment and machinery.

1. Maintenance manuals shall also be delivered in electronic media for the Project. Any demonstration videos shall also be provided on electronic media.

h. Inspection Requirements. Before calling for final inspection, Contractor shall determine that the following Work has been performed:

1. The Work has been completed;

2. All fire/ life safety items are completed and in working order;

3. Mechanical and electrical Work complete, fixtures in place, connected and tested;

4. Electrical circuits scheduled in panels and disconnect switches labeled;

5. Painting and special finishes complete;

6. Doors complete with hardware, cleaned of protective film relieved of sticking or binding and in working order;

7. Tops and bottoms of doors sealed;

8. Floors waxed and polished as specified;

9. Broken glass replaced and glass cleaned;

10. Grounds cleared of Contractor's equipment, raked clean of debris, and trash removed from Site;

11. Work cleaned, free of stains, scratches, and other foreign matter, replacement of damaged and broken material;

12. Finished and decorative work shall have marks, dirt and superfluous labels removed;

13. Final cleanup, as in Article 3.12;

14. All Work pursuant to Article 9.11.2; and

15. Furnish a letter to District stating that the District's Representative or other designated person or persons have been instructed in working characteristics of mechanical and electrical equipment.

9.9.3 Costs of Multiple Inspections

More than two (2) requests of the District to make inspections required under Article 9.9.1 shall be considered an additional service of Architect, Inspector, Engineer or other consultants shall be the Contractor's responsibility pursuant to Article 4.5 and all subsequent costs will be prepared as a Deductive Change Order.

9.10 PARTIAL OCCUPANCY OR USE

9.10.1 District's Rights

The District may occupy or use any completed or partially completed portion of the Work at any stage. The District and the Contractor shall agree in writing to the responsibilities assigned to each

of them for payments, security, maintenance, heat, utilities, damage to the Work, insurance, the period for correction of the Work, and the commencement of warranties required by the Contract Documents. If District and Contractor cannot agree as to responsibilities such disagreement shall be resolved pursuant to Article 4.6. When the Contractor considers a portion complete, the Contractor shall prepare and submit a Punch List to the District as provided under Article 9.9.1.

9.10.2 Inspection Prior to Occupancy or Use

Immediately prior to such partial occupancy or use, the District, the Contractor, and the Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.10.3 No Waiver

Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

9.11 COMPLETION AND FINAL PAYMENT

9.11.1 Final Payment (90% Billing if Substantially Complex Finding and 95% Billing If No Finding Is Made)

The following items must be completed before the Final Payment Application will be accepted for processing at Substantial Completion of the Project:

a. Inspector sign-off of each item in the DSA 152 Project Inspection Card;

b. The Project has reached the Punch List items under Article 9.9.1.2 and the Project has been determined to be Substantially Complete under Article 1.1.46;

c. Removal of temporary facilities and services;

d. Testing, adjusting and balance records are complete;

e. Removal of surplus materials, rubbish, and similar elements;

f. Changeover of door locks;

g. Deductive items pursuant to Article 9.6 and Article 2.2; and

h. Completion and submission of all final Change Orders for the Project.

9.11.2 Final Inspection (Punch List Completion)

Contractor shall comply with Punch List procedures under Article 9.9.1.1, and maintain the presence of Project Superintendent and Project Manager (not replacement project superintendent or project manager) until the Punch List is complete to ensure proper and timely completion of the Punch List. Under no circumstances shall Contractor demobilize its forces prior to completion of the Punch List.

Upon completion of the Work under Article 9.9.1, the Contractor shall notify the District and Architect, who shall again inspect such Work. If the Architect and the District find the Work contained in the Punch List acceptable under the Contract Documents, the Work shall have reached Final Completion. Architect shall notify Contractor, who shall then submit to the Architect its Application for Retention Payment. This Application for Retention Payment shall contain any deductions under Article 9.6, including but not limited to incomplete Punch List items under Article 9.9.1.

Upon receipt and approval of Application for Retention Payment, the Architect shall issue a Form 6 stating that to the best of its knowledge, information, and belief, and on the basis of its observations, inspections, and all other data accumulated or received by the Architect in connection with the Work, such Work has been completed in accordance with the Contract Documents. The District shall thereupon inspect such Work and either accept the Work as complete or notify the Architect and the Contractor in writing of reasons why the Work is not complete. Upon acceptance of the Work of the Contractor as fully complete (which, absent unusual circumstances, will occur when the Punch List items have been satisfactorily completed), the District shall record a Notice of Completion with the County Recorder, and the Contractor shall, upon receipt of payment from the District, pay the amounts due Subcontractors.

If the Architect and the District find that the Work contained in the Punch List is unacceptable, then Contractor shall issue a valued Punch List within 5 days after the date the Punch List time ends. If Contractor does not issue such a list, the District or Architect may issue a valued Punch List to the Contractor and withhold up to 150% of the value of the Punch List Work pursuant to Article 2.2 of this Agreement.

9.11.3 Retainage (100% Billing for the Entire Project)

The retainage, less any amounts disputed by the District or which the District has the right to withhold pursuant to the Contract Documents (including but not limited to incomplete Punch List items under Article 9.9.1), shall be paid after approval by the District of the Application for Retention Payment, after the satisfaction of the conditions set forth in Article 9, the Final Inspection under Article 9.11.2 is completed, and after thirty-five (35) days after the acceptance of the Work and recording of the Notice of Completion by District. No interest shall be paid on any retainage, or on any amounts withheld due to a failure of the Contractor to perform, in accordance with the terms and conditions of the Contract Documents, except as provided to the contrary in any escrow agreement between the District and the Contractor.

a. Procedures for Application for Retention Payment. The following conditions must be fulfilled prior to release of Retention Payment:

1. A full and final waiver or release of all stop notices in connection with the Work shall be submitted by Contractor, including a release of stop notice in recordable form, together with (to the extent permitted by law) a copy of the full and final release of all Stop Notice rights.

2. The Contractor shall have made all corrections, including all Punch List Items, to the Work which are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and

ordinances, or to fulfill any of the orders or directions of District required under the Contract Documents.

3. Each Subcontractor shall have delivered to the Contractor all written guarantees, warranties, applications, releases from the Surety and warranty bonds (if applicable) required by the Contract Documents for its portion of the Work.

4. Contractor must have completed all requirements set forth in Article 9.9

5. Contractor must have issued a Form 6C for the Project.

6. The Contractor shall have delivered to the District all manuals and materials required by the Contract Documents.

7. The Contractor shall have completed final clean up as required by Article 3.12

8. Contractor shall have all deductive items under Article 9.6 and Article 2.2 submitted as part of the Retention Payment.

9.11.4 Recording of a Notice of Completion After Punch List Period and Final Inspection.

When the Work, or designated portion thereof, is complete or the District has completed the Article 9.6and/or the Article 2.2 process, whichever occurs first, the District will file either a Notice of Completion or a Notice of Completion noting valued Punch List items. Valued Punch List items will be deducted from the Retention Payment.

During the time when Work is being performed on the Punch List, the Project does not meet the definition of "Complete" under Public Contract Code section 7107(c)(1) even if there is "beneficial occupancy" of the Project since that has been no "cessation of labor" on the Project. Completion of Punch List under this Article is not "testing, startup, or commissioning by the public entity or its agent." In other words, the continuing Punch List Work is Contractor labor on the Project until each and every item of Punch List Work is complete or the time periods under Article 9.9.1 have expired.

9.11.5 Warranties

Warranties required by the Contract Documents shall commence on the date of Completion of the entire Work. Warranty periods DO NOT commence at Substantial Completion or when a particular Subcontractor work is complete. No additional charges, extras, Change Orders, or Claims may be sought for warranties commencing from the Notice of Completion.

District shall have the right to utilize equipment, test, and operate as necessary for acclimation, or testing without voiding or starting warranties. Taking beneficial occupancy shall not start warranties except in the case where the District agrees, in writing, that warranties shall commence running or where the District is taking phased occupancy of specific buildings or areas and completes separate Punch Lists as further addressed in Article 4.2.7.

9.11.6 Time for Submission of Application for Final Payment and Retention Payment (Unilateral Processing of Final and Retention Payment Application).

If Contractor submits a Final Payment Application which fails to include deductive items under Article 9.6, the District or Architect shall note this defective request for Final Payment Application. The Contractor shall be notified that specific deductive items shall be included in the Final Payment Application. If Contractor either continues to submit the Final Payment Application without deductive items under Article 9.6, or a period of 14 calendar days passes after Contractor is provided written notice of deductive items for inclusion in Final Payment Application, then District may either alter the Final Payment Application and recalculate the math on the Final Payment Application to address the Article 9.6 deductive items or process a unilateral Final Payment Application.

9.11.7 Unilateral Release of Retention

After the recordation of the Notice of Completion, or within sixty (60) days following the completion of the Punch List or the expiration of the time for completion of Punch List under Article 9.9.1, if Contractor does not make an Application for Release of Retention, the District may unilaterally release retention less any deducts under Article 9.6 and/or Article 2.2, withholds due to stop notices, or withholdings due to other defective Work on the Project. District may also choose to unilaterally release Retention after deduction of 150% of any disputed items, which may also include items under Article 9.6 and 2.2. If a deduction pursuant to Article 9.6 is made from Retention, a letter deducting specific valued items shall be considered a notice of Default under the terms of the Escrow Agreement.

9.12 SUBSTITUTION OF SECURITIES

The District will permit the substitution of securities in accordance with the provisions of Public Contract Code section 22300 as set forth in the form contained in the Bid Documents.

ARTICLE 10
PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 Contractor Responsibility

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 Contract 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. 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)(2).

Contractor shall take, and require Subcontractor to take, all necessary precautions for safety of workers on the Work 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 premises where Work is being performed and to provide a safe and healthful place of employment. In addition to meeting all requirements of OSHA, Cal-OSHA, state, and local codes, 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 member of its organization on the Work, 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. The name and position of person so designated shall be reported to District by Contractor. Contractor shall correct any violations of safety laws, rules, orders, standards, 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 promptly.

10.1.2 Subcontractor Responsibility

Contractor shall require that Subcontractors participate in, and enforce, the safety and loss prevention programs established by the Contractor for the Project, which will cover all Work performed by the Contractor and its Subcontractors. Each Subcontractor shall designate a responsible member of its organization whose duties shall include loss and accident prevention, and who shall have the responsibility and full authority to enforce the program. This person shall attend meetings with the representatives of the various Subcontractors employed to ensure that all employees understand and comply with the programs.

10.1.3 Cooperation

All Subcontractors and material or equipment suppliers shall cooperate fully with Contractor, the District, and all insurance carriers and loss prevention engineers.

10.1.4 Accident Reports

Subcontractors shall immediately, within two (2) days, report in writing to the Contractor all accidents whatsoever arising out of, or in connection with, the performance of the Work, whether on or off the Site, which caused death, personal injury, or property damage, giving full details and statements of witnesses. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported within four (4) days by telephone or messenger. Contractor shall thereafter immediately, within two (2) days, report the facts in writing to the District and the Architect giving full details of the accident.

10.1.5 First-Aid Supplies at Site

The Contractor will provide and maintain at the Site first-aid supplies which complies with the current Occupational Safety and Health Regulations.

10.1.6 Material Safety Data Sheets and Compliance with Proposition 65

Contractor is required to have material safety data sheets available in a readily accessible place at the job site for any material requiring a material safety data sheet per the Federal "hazard communication" standard, or employees' "right-to-know law." The Contractor is also required to properly label any substance brought into the job site, and require that any person working with the material, or within the general area of the material, is informed of the hazards of the substance and follows proper handling and protection procedures.

Contractor is required to comply with the provisions of California Health and Safety Code section 25249, et seq., which requires the posting and giving of notice to persons who may be exposed to any chemical known to the State of California to cause cancer. The Contractor agrees to familiarize itself with the provisions of this Section, and to comply fully with its requirements.

10.1.7 Non-Utilization of Asbestos Material

NO ASBESTOS OR ASBESTOS-CONTAINING PRODUCTS SHALL BE USED IN THIS CONSTRUCTION OR IN ANY TOOLS, DEVICES, CLOTHING, OR EQUIPMENT USED TO EFFECT THIS CONSTRUCTION.

Asbestos and/or asbestos-containing products shall be defined as all items containing, but not limited to, chrysotile, amosite, anthophyllite, tremolite, and antinolite.

Any or all material containing greater than one-tenth of one percent (>.1%) asbestos shall be defined as asbestos-containing material.

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.

Decontamination and removal of Work found to contain asbestos or Work installed with asbestos-containing equipment shall be done only under supervision of a qualified consultant, knowledgeable in the field of asbestos abatement and accredited by the Environmental Protection Agency.

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.

The asbestos consultant shall be chosen and approved by the District, who shall have sole discretion and final determination in this matter.

The Work will not be accepted until asbestos contamination is reduced to levels deemed acceptable by the asbestos consultant.

Interface of Work under this Contract with Work containing asbestos shall be executed by the Contractor at his risk and at his discretion, with full knowledge of the currently accepted standards, hazards, risks, and liabilities associated with asbestos work and asbestos-containing products. By execution of this Contract, the Contractor acknowledges the above and agrees to hold harmless District and its assigns for all asbestos liability which may be associated with this work and agrees to instruct his employees with respect to the above-mentioned standards, hazards, risks, and liabilities.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor

The Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury, or loss to:

a. Employees on the Work and other persons who may be affected thereby;

b. The Work, material, and equipment to be incorporated therein, whether in storage on or off the Site, under the care, custody, or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and

c. Other property at the Site or adjacent thereto such as trees, shrubs, lawns, walks, pavement, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

Contractor is constructive owner of Project site as more fully discussed in Article 6.2.

10.2.2 Contractor Notices

The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on the safety of persons or property or their protection from damage, injury, or loss.

10.2.3 Safety Barriers and Safeguards

The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities.

10.2.4 Use or Storage of Hazardous Material

When use or storage of explosives, other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel. The Contractor shall notify the District

any time that explosives or hazardous materials are expected to be stored on Site. Location of storage shall be coordinated with the District and local fire authorities.

10.2.5 Protection of Work

The Contractor and Subcontractors shall continuously protect the Work, the District's property, and the property of others, from damage, injury, or loss arising in connection with operations under the Contract Documents. The Contractor and Subcontractors, at their own expense, shall make good any such damage, injury, or loss, except such as may be solely due to, or caused by, agents or employees of the District.

The Contractor, at Contractor's expense, will remove all mud, water, or other elements as may be required for the proper protection and prosecution of its Work.

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. All permits, licenses, or inspection fees required for such repair Work shall be obtained and paid for by Contractor.

10.2.6 Requirements for Existing Sites

Contractor shall (unless waived by the District in writing):

a. When performing construction on existing sites, become informed and take into specific account the maturity of the students on the Site; and perform Work which may interfere with school routine before or after school hours, enclose working area with a substantial barricade, and arrange Work to cause a minimum amount of inconvenience and danger to students and faculty in their regular school activities. The Contractor shall comply with Specifications and directives of the District regarding the timing of certain construction activities in order to avoid unnecessary interference with school functioning.

b. Avoid performing any Work that will disturb students during testing.

c. Provide substantial barricades around any shrubs or trees indicated to be preserved.

d. Deliver materials to building area over route designated by Architect.

e. Take preventive measures to eliminate objectionable dust, noise, or other disturbances.

f. Confine apparatus, the storage of materials, and the operations of workers to limits indicated by law, ordinances, permits or directions of Architect; and not interfere with the Work or unreasonably encumber premises or overload any structure with materials; and enforce all instructions of District and Architect regarding signs, advertising, fires, and smoking and require that all workers comply with all regulations while on the Project site.

g. 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 land surveyor or civil engineer and all maps and records required therefrom shall be filed with county and local authorities, at no cost to the District. All filing and plan check fees shall be paid by Contractor.

h. Provide District on request with Contractor's written safety program and safety plan for each site.

10.2.7 Shoring and Structural Loading

The Contractor shall not impose structural loading upon any part of the Work under construction or upon existing construction on or adjacent to the Site in excess of safe limits, or loading such as to result in damage to the structural, architectural, mechanical, electrical, or other components of the Work. The design of all temporary construction equipment and appliances used in construction of the Work and not a permanent part thereof, including, without limitation, hoisting equipment, cribbing, shoring, and temporary bracing of structural steel, is the sole responsibility of the Contractor. All such items shall conform with the requirements of governing codes and all laws, ordinances, rules, regulations, and orders of all authorities having jurisdiction. The Contractor shall take special precautions, such as shoring of masonry walls and temporary tie bracing of structural steel Work, to prevent possible wind damage during construction of the Work. The installation of such bracing or shoring shall not damage the Work in place or the Work installed by others. Any damage which does occur shall be promptly repaired by the Contractor at no cost to the District.

10.2.8 Conformance within Established Limits

The Contractor and Subcontractors shall confine their construction equipment, the storage of materials, and the operations of workers to the limits indicated by laws, ordinances, permits, and the limits established by the District or the Contractor, and shall not unreasonably encumber the premises with construction equipment or materials.

10.2.9 Subcontractor Enforcement of Rules

Subcontractors shall enforce the District's and the Contractor's instructions, laws, and regulations regarding signs, advertisements, fires, smoking, the presence of liquor, and the presence of firearms by any person at the Site.

10.2.10 Site Access

The Contractor and the Subcontractors shall use only those ingress and egress routes designated by the District, observe the boundaries of the Site designated by the District, park only in those areas designated by the District, which areas may be on or off the Site, and comply with any parking control program established by the District, such as furnishing license plate information and placing identifying stickers on vehicles.

10.2.11 Security Services.

The Contractor shall be responsible for providing security services for the Site as needed for the protection of the Site and as determined in the District's sole discretion.

10.3 EMERGENCIES

10.3.1 Emergency Action

In an emergency affecting the safety of persons or property, the Contractor shall take any action necessary, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 7.

10.3.2 Accident Reports

The Contractor shall promptly report in writing to the District all accidents arising out of or in connection with the Work, which caused death, personal injury, or property damage, giving full details and statements of any witnesses in conformance with Article 10.1.4. In addition, if death, serious personal injuries, or serious property damages are caused, the accident shall be reported in accordance with Article 10.1.4, immediately by telephone or messenger to the District.

10.4 HAZARDOUS MATERIALS

10.4.1 Discovery of Hazardous Materials

In the event the Contractor encounters or suspects the presence on the job site of material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), or any other material defined as being hazardous by § 25249.5 of the California Health and Safety Code, which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the District and the Architect in writing, whether or not such material was generated by the Contractor or the District. The Work in the affected area shall not thereafter be resumed, except by written agreement of the District and the Contractor, if in fact the material is asbestos, polychlorinated biphenyl (PCB), or other hazardous material, and has not been rendered harmless. The Work in the affected area shall be resumed only in the absence of asbestos, polychlorinated biphenyl (PCB), or other hazardous material, or when it has been rendered harmless by written agreement of the District and the Contractor.

10.4.2 Hazardous Material Work Limitations

In the event that the presence of hazardous materials is suspected or discovered on the Site (except in cases where asbestos and other hazardous material Work in the Contractor's responsibility), the District shall retain an independent testing laboratory to determine the nature of the material encountered and whether corrective measures or remedial action is required. The Contractor shall not be required pursuant to Article 7 to perform without consent any Work in the affected area of the Site relating to asbestos, polychlorinated biphenyl (PCB), or other hazardous material, until any known or suspected hazardous material has been removed, or rendered harmless, or determined to be harmless by District, as certified by an independent testing laboratory and approved by the appropriate government agency.

10.4.3 Indemnification by Contractor for Hazardous Material Caused by Contractor

In the event the hazardous materials on the Project Site is caused by the Contractor, the Contractor shall pay for all costs of testing and remediation, if any, and shall compensate the District for any additional costs incurred as a result of Contractor's generation of hazardous material on the Project Site. In addition, the Contractor shall defend, indemnify and hold harmless District and its agents, officers, and employees from and against any and all claims, damages, losses, costs and expenses incurred in connection with, arising out of, or relating to, the presence of hazardous material on the Project Site.

10.4.4 Terms of Hazardous Material Provision

The terms of this Hazardous Material provision shall survive the completion of the Work and/or any termination of this Contract.

ARTICLE 11
INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.1 Insurance Requirements

Before the commencement of the Work, the Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in California with a financial rating of at least an A-VIII status as rated in the most recent edition of Best's Insurance Reports or as amended by the Supplementary General Conditions, such insurance as will protect the District from claims set forth below, which may arise out of or result from the Contractor's Work under the Contract and for which the Contractor may be legally liable, whether such Work are by the Contractor, by a Subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Any required insurance shall not contain any exclusion that applies to the type of work performed by the Contractor under the Contract Documents.

a. Claims for damages because of bodily injury, sickness, disease, or death of any person District would require indemnification and coverage for employee claim;

b. Claims for damages insured by usual personal injury liability coverage, which are sustained by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor or by another person;

c. Claims for damages because of injury or destruction of tangible property, including loss of use resulting therefrom, arising from operations under the Contract Documents;

d. Claims for damages because of bodily injury, death of a person, or property damage arising out of the ownership, maintenance, or use of a motor vehicle, all mobile equipment, and vehicles moving under their own power and engaged in the Work;

e. Claims involving contractual liability applicable to the Contractor's obligations under the Contract Documents, including liability assumed by and the indemnity and defense obligations of the Contractor and the Subcontractors;

f. Claims involving Completed Operations, Independent Contractors' coverage, and Broad Form property damage, without any exclusions for collapse, explosion, demolition, underground coverage, and excavating. (XCU); and

g. Claims involving sudden or accidental discharge of contaminants or pollutants.

11.1.2 Specific Insurance Requirements

Contractor shall take out and maintain and shall require all Subcontractors, if any, whether primary or secondary, to take out and maintain:

Commercial General Liability Insurance with a combined single limit per occurrence of not less than $2,000,000.00 or Commercial General Liability Insurance which provides limits of not less than:

(a)	Per occurrence (combined single limit)	$2,000,000.00
(b)	Project Specific Aggregate (for this Project only)	$5,000,000.00
(c)	Products and Completed Operations (aggregate).....	$2,000,000.00
(d)	Personal and Advertising Injury Limit	$1,000,000.00

Insurance Covering Special Hazards

The following Special hazards shall be covered by separate policies or endorsements/riders to the above mentioned commercial general liability insurance or property damage insurance policy or policies of insurance, in amounts as follows:

(a)	Automotive and truck where operated in amounts	$1,000,000.00
(b)	Material Hoist where used in amounts.....	$1,000,000.00
(c)	Explosion, Collapse and Underground (XCU coverage).....	$1,000,000.00
(d)	Pollution Legal Liability	$1,000,000.00

In addition, provide Excess Liability Insurance coverage in the amount of Four Million Dollars ($4,000,000.00). Excess Insurance policies shall be "following form" of the underlying policy coverage, terms, conditions, and provisions and shall meet all of the insurance requirements stated in this Article 11.1, including, but not limited to, the additional insured, contractual liability & "insured contract" definition for indemnity, per occurrence, no limitation of prior work coverage, and primary & non-contributory insurance requirements. Contractor shall provide the District with Excess Liability Insurance endorsements that comply with the above including, but not limited to, endorsements that indicate that no insurance policies maintained by the District, whether primary or excess, and which also apply to a loss covered hereunder, shall be called upon to contribute to a loss until the Contractor's primary and excess liability policies are exhausted and an endorsement that shall waive all rights of subrogation.

If the Contractor maintains broader coverage and/or higher limits than the minimums shown above, the District requires and shall be entitled to the broader coverage and/or the higher limits maintained by the Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage above shall be available to the District.

11.1.3 Subcontractor Insurance Requirements

The Contractor shall require its Subcontractors to take out and maintain commercial general liability insurance and property damage insurance required under Article 11.1 in like amounts. A

"claims made" or modified "occurrence" policy shall not satisfy the requirements of Article 11.1 without prior written approval of the District.

11.1.4 Additional Insured Endorsement Requirements

The Contractor shall name, on any policy of insurance required under Article 11.1, the District, CM, Architect, Inspector, the State of California, their officers, employees, agents, volunteers and independent contractors as additional insureds. Subcontractors shall name the Contractor, the District, Architect, Inspector, the State of California, their officers, employees, agents, volunteers and independent contractors as additional insureds. The Additional Insured Endorsement included on all such insurance policies shall be ISO CG 20 10 (04/13) and ISO CG 20 37 (04/13), or their equivalent as determined by the District in its sole discretion, and must state that coverage is afforded the additional insured with respect to claims arising out of operations performed by or on behalf of the insured. If the additional insureds have other insurance which is applicable to the loss, such other insurance shall be on an excess or contingent basis. The insurance provided by the Contractor pursuant to 11.1 must be designated in the policy as primary to any insurance obtained by the District. The amount of the insurer's liability shall not be reduced by the existence of such other insurance. Contractor shall provide an endorsement indicating a primary coverage, non-contributing on all general liability policies by ISO CG 20 01 (04/13) or an equivalent endorsement as determined by the District in its sole discretion. Each policy of insurance required by this Article 11.1 shall state that not less than thirty (30) days' written notice shall be given to the District prior to cancellation.

11.2 WORKERS' COMPENSATION INSURANCE

During the term of this Contract, the Contractor shall provide workers' compensation and employer's liability insurance for all of the Contractor's employees engaged in Work under this Contract on or at the Site of the Project and, in case any of the Contractor's Work is subcontracted, the Contractor shall require the Subcontractor to provide workers' compensation insurance for all the Subcontractor's employees engaged in Work under the subcontract. 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 Contract on or at the Site of the Project is not protected under the Workers' Compensation laws, the Contractor shall provide or cause a Subcontractor to provide insurance coverage for the protection of those employees not otherwise protected. The Contractor shall file with the District certificates of insurance as required under Article 11.6 and in compliance with Labor Code § 3700.

Workers' compensation limits shall be in accordance with and as required by the California Labor Code (in no event less than $1,000,000) and employers' liability limits shall be $1,000,000 per accident for bodily injury or disease.

11.3 BUILDER'S RISK/ "ALL RISK" INSURANCE

11.3.1 Course-of-Construction Insurance Requirements

The Contractor, during the progress of the Work and until final acceptance of the Work by District upon completion of the entire Contract, shall maintain Builder's Risk, Course of Construction or similar first party property coverage issued on a replacement cost value basis consistent with the total replacement cost of all insurable Work and the Project included within the Contract Documents. Coverage is to insure against all risks of accidental direct physical loss, and must include, by the basic

grant of coverage or by endorsement, the perils of vandalism, malicious mischief (both without any limitation regarding vacancy or occupancy), fire, sprinkler leakage, civil authority, sonic boom, earthquake, flood, collapse, wind, lightning, smoke and riot. The coverage must include debris removal, demolition, increased costs due to enforcement of building ordinance and law in the repair and replacement of damage and undamaged portions of the property, and reasonable costs for the Architect's and engineering services and expenses required as a result of any insured loss upon the Work and Project which is the subject of the Contract Documents, including completed Work and Work in progress, to the full insurable value thereof. Such insurance shall include the District and the Architect as additional named insureds, and any other person with an insurable interest as designated by the District.

The Contractor shall submit to the District for its approval all items deemed to be uninsurable. The risk of the damage to the Work due to the perils covered by the "Builder's Risk/All Risk" Insurance, as well as any other hazard which might result in damage to the Work, is that of the Contractor and the Surety, and no Claims for such loss or damage shall be recognized by the District nor will such loss or damage excuse the complete and satisfactory performance of the Contract by the Contractor.

11.4 FIRE INSURANCE

Before the commencement of the Work, the Contractor shall procure, maintain, and cause to be maintained at the Contractor's expense, fire insurance on all Work subject to loss or damage by fire. The amount of fire insurance shall be sufficient to protect the Project against loss or damage in full until the Work is accepted by the District. This requirement may be waived upon confirmation by the District that such coverage is provided under the Builder's Risk Insurance being provided.

11.5 AUTOMOBILE LIABILITY

11.5.1 The District, Architect and Construction Manager, Inspectors, their directors, officers, employees, agents and volunteers shall be covered as additional insureds with respect to the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by the Contractor or for which the Contractor is responsible. Such insurance coverage shall be primary and non-contributory insurance as respects the District, Architect, Construction Manager, Project Inspector, their directors, officers, employees, agents and volunteers, or if excess, shall stand in an unbroken chain of coverage excess of the Contractor's scheduled underlying coverage. Any insurance or self-insurance maintained by the District, Architect, Construction Manager, Project Inspector, their directors, officers, employees, agents and volunteers shall be excess of the Contractor's insurance and shall not be called upon to contribute with it. The insurer shall agree to waive all rights of subrogation against the District, Architect, Construction Manager, Project Inspector, their directors, officers, employees, agents and volunteers for losses paid under the terms of the insurance policy that arise from Work performed by the Contractor.

11.5.2 Insurance Services Office Business Auto Coverage Form Number CA 0001, Code 1 (any auto) is required. Comprehensive Automobile Liability insurance to include all autos, owned, non-owned, and hired, with limits of $1,000,000 per accident for bodily injury and property damage.

11.6 OTHER INSURANCE

The Contractor shall provide all other insurance required to be maintained under applicable laws, ordinances, rules, and regulations.

11.7 PROOF OF INSURANCE

The Contractor shall not commence Work nor shall it allow any Subcontractor to commence Work under this Contract until all required insurance and certificates have been obtained and delivered in duplicate to the District for approval subject to the following requirements:

a. Certificates and insurance policies shall include the following clause:

> "This policy and any coverage shall not be suspended, voided, non-renewed, canceled, or reduced in required limits of liability or amounts of insurance or coverage until notice has been mailed via certified mail to the District. Date of cancellation or reduction may not be less than thirty (30) days after the date of mailing notice."

b. Certificates of insurance shall state in particular those insured, the extent of insurance, location and operation to which the insurance applies, the expiration date, and cancellation and reduction notices.

c. Certificates of insurance shall clearly state that the District and the Architect are named as additional insureds under the policy described and that such insurance policy shall be primary to any insurance or self-insurance maintained by District.

d. The Contractor and its Subcontractors shall produce a certified copy of any insurance policy required under this Section upon written request of the District.

e. Certificates of insurance will not be considered valid unless accompanied by all corresponding and necessary endorsement(s) as required by this Article 11.

11.8 COMPLIANCE

In the event of the failure of Contractor to furnish and maintain any insurance required by this Article 11, the Contractor shall be in default under the Contract. Compliance by Contractor with the requirement to carry insurance and furnish certificates or policies evidencing the same shall not relieve the Contractor from liability assumed under any provision of the Contract Documents, including, without limitation, the obligation to defend and indemnify the District and the Architect.

11.9 WAIVER OF SUBROGATION

Contractor waives (to the extent permitted by law) any right to recover against the District for damages to the Work, any part thereof, or any and all claims arising by reason of any of the foregoing, but only to the extent that such damages and/or claims are covered by property insurance and only to the extent of such coverage (which shall exclude deductible amounts) by insurance actually carried by the District.

Contractor shall provide an endorsement indicating a waiver of subrogation on all general liability policies by ISO CG 24 04 (05/09) or an equivalent endorsement as determined by the District in its sole discretion. Contractor shall provide an endorsement indicating a waiver of subrogation on all workers' compensation policies by form WC 00 03 13 (04/84).

The provisions of this Article are intended to restrict each party to recovery against insurance carriers only to the extent of such coverage and waive fully and for the benefit of each, any rights and/or claims which might give rise to a right of subrogation in any insurance carrier. The District and the Contractor shall each obtain in all policies of insurance carried by either of them, a waiver by the insurance companies thereunder of all rights of recovery by way of subrogation for any damages or claims covered by the insurance.

11.10 PERFORMANCE AND PAYMENT BONDS

11.10.1 Bond Requirements

Unless otherwise specified in the Supplemental Conditions, prior to commencing any portion of the Work, the Contractor shall furnish separate Payment and Performance Bonds for its portion of the Work which shall cover 100% faithful performance of and payment of all obligations arising under the Contract Documents and/or guaranteeing the payment in full of all claims for labor performed and materials supplied for the Work. All bonds shall be provided by a corporate Surety authorized and admitted to transact business in California as sureties.

To the extent, if any, that the Contract Price is increased in accordance with the Contract Documents, the Contractor shall, upon request of the District, cause the amount of the bonds to be increased accordingly and shall promptly deliver satisfactory evidence of such increase to the District. To the extent available, the bonds shall further provide that no change or alteration of the Contract Documents (including, without limitation, an increase in the Contract Price, as referred to above), extensions of time, or modifications of the time, terms, or conditions of payment to the Contractor will release the Surety. If the Contractor fails to furnish the required bonds, the District may terminate the Contract for cause.

11.10.2 Surety Qualification

Only bonds executed by admitted Surety insurers as defined in Code of Civil Procedure § 995.120 shall be accepted. Surety must be a California-admitted Surety and listed by the U.S. Treasury with a bonding capacity in excess of the Project cost.

11.10.3 Alternate Surety Qualifications

If a California-admitted Surety insurer issuing bonds does not meet these requirements, the insurer will be considered qualified if it is in conformance with § 995.660 of the California Code of Civil Procedure and proof of such is provided to the District.

ARTICLE 12
UNCOVERING AND CORRECTION OF WORK

12.1 COMPLIANCE WITH TITLE 24 INSTALLATION REQUIREMENTS

Contractor is aware of the requirements governing Contractor's Work under title 24 Section 4-343 which provides, in pertinent part:

> **4-343. Duties of the Contractor.**
>
> (a) **Responsibilities**. It is the duty of the contractor to complete the Work covered by his or her contract in accordance with the approved Plans and Specifications therefore. The contractor in no way is relieved of any responsibility by the activities of the architect, engineer, Inspector or DSA in the performance of such duties.
>
> (b) **Performance of the Work.** The contractor shall carefully study the approved Plans and Specifications and shall plan a schedule of operations well ahead of time. If at any time it is discovered that Work is being done which is not in accordance with the approved Plans and Specifications, the contractor shall correct the Work immediately. All inconsistencies or items which appear to be in error in the Plans and Specifications shall be promptly called to the attention of the architect or registered engineer, through the Inspector, for interpretation or correction. In no case, however, shall the instruction of the architect or registered engineer be construed to cause Work to be done which is not in conformity with the approved Plans, Specifications, and Change Orders. The contractor must notify the Project Inspector, in advance, of the commencement of construction of each and every aspect of the Work.

12.1.1 Issuance of Notices of Non-Compliance

The Inspector may issue a Notice of Non-Compliance on the Project indicating deviation from Plans and Specifications. It is Contractor's responsibility to correct all deviations from the approved Plans and Specifications unless the District has issued an Immediate Change Directive. In such case, the Contractor shall proceed with the Work with the understandings of the District as set forth in the ICD and as specifically noted in Article 7.3.

12.2 SPECIAL NOTICE OF AMERICAN'S WITH DISABILITIES ACT

Some of the requirements in the Plans and Specifications are meant to comply with the Americans with Disabilities Act ("ADA"). The requirements of the ADA are technical in nature and may appear to be minor in nature (i.e. whether a walkway or ramp has a 2% cross-slope). Contractor is warned that even the slightest deviation from the specific requirements from the ADA is considered a Civil Rights violation and subjects the District to fines of three times actual damages sustained by a handicap individual or up to $4,000 per violation and attorney's fees required to enforce the ADA violation. As a result of the significant liability and exposure associated with ADA aspects of the Contract, Contractor shall take special care to meet all ADA requirements detailed in the Plans and Specifications. Failure to comply with ADA rules that results in a Notice of Non-Compliance shall be repaired to meet ADA requirements promptly. In addition, any ADA violations that are not identified by Inspector or Architect that are later identified shall be repaired and charged back to the Contractor through a Deductive Change Order.

12.2.1 Indemnification of ADA Claims

Contractor shall indemnify, hold harmless and defend the District from ADA claims arising from the failure to comply with the Plans and Specifications. Further, any withholdings for ADA violations under Article 9.6 shall include potential redesign costs and an accelerated repair costs due to the potential for ADA claims arising from DSA posting of ADA violations on the Project.

12.3 UNCOVERING OF WORK

12.3.1 Uncovering Work for Required Inspections

Work shall not be covered without the Inspector's review and the Architect's knowledge that the Work conforms with the requirements of the approved Plans and Specifications (except in the case of an ICD under Article 7.3). Inspector must be timely notified of inspections and of new areas so Work can be inspected at least 48 hours before opening a new area (For example, see DSA Form 156 for Commencement/Completion of Work Notification which requires "at least 48 hour" advance notification of a new area). An Inspector must comply with DSA protocols for signing each category or phase of Work under DSA Form 152 (in compliance with the Form 152 Manual) or a Notice of Deviation (DSA Form 154) will be issued requiring the Work that was not inspected be uncovered for inspection. Thus, if a portion of the Work is covered without inspection or Architect approval, is subject to a Notice of Non-Compliance for being undertaken without inspection, or otherwise not in compliance with the Contract Documents, after issuance of a Written Notice of Non-Compliance (Form 154) or a written notice to uncover Work, Contractor shall promptly uncover all Work (which includes furnishing all necessary facilities, labor, and material) for the Inspector's or the Architect's observation and such Work shall be replaced at the Contractor's expense without change in the Contract Sum or Time.

12.3.2 Costs for Inspections Not Required

If a portion of the Work has been covered is believed to be Non-Conforming to the Plans and Specifications, even if the Form 152 for the category of Work has been signed by the Inspector, the Inspector or the Architect may request to see such Work, and it shall be promptly uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncover and replacement shall, by appropriate Change Order and shall, be charged to the District. If such Work is not in accordance with Contract Documents, the Contractor shall be responsible for all costs to uncover the Work, delays incurred to uncover the Work, and Contractor shall pay all costs to correct the Non-Conforming construction condition unless the condition was caused by the District or a separate contractor, in which event the District shall be responsible for payment of such costs to the Contractor.

12.4 CORRECTION OF WORK

12.4.1 Correction of Rejected Work

The Contractor shall promptly correct the Work rejected by the Inspector or the District upon recommendation of the Architect as failing to conform to the requirements of the Contract Documents, whether observed before or after Completion and whether or not Fabricated, installed, or completed. The Contractor shall bear costs of correcting the rejected Work, including cost for delays that may be incurred by Contractor or Subcontractors, the cost for additional testing, inspections, and compensation for the Inspector's or the Architect's services and expenses made necessary thereby

(including costs for preparing a CCD, DSA CCD review fees, and additional inspection and special inspection costs).

12.4.2 One-Year Warranty Corrections

If, within one (1) year after the date of Completion of the Work or a designated portion thereof, or after the date for commencement of warranties established under Article 9.9.1, or by the terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the District to do so unless the District has previously given the Contractor a written acceptance of such condition. This period of one (1) year shall be extended with respect to portions of the Work first performed after Completion by the period of time between Completion and the actual performance of the Work. This obligation under this Article 12.4.2 shall survive acceptance of the Work under the Contract and termination of the Contract. The District shall give such notice promptly after discovery of the condition.

12.4.3 District's Rights if Contractor Fails to Correct

If the Contractor fails to correct nonconforming Work within a reasonable time, the District may correct the Work and seek a Deductive Change Order, pursuant to Article 9.6 or Article 2.2.

ARTICLE 13
MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located.

13.2 SUCCESSORS AND ASSIGNS

The District and the Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

13.3 WRITTEN NOTICE

In the absence of specific notice requirements in the Contract Documents, written notice shall be deemed to have been duly served if delivered in person to the individual, member of the firm or entity, or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

13.4 RIGHTS AND REMEDIES

13.4.1 Duties and Obligations Cumulative

Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

13.4.2 No Waiver

No action or failure to act by the Inspector, the District, or the Architect shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

13.5 TESTS AND INSPECTIONS

13.5.1 Compliance

Tests, inspections, and approvals of portions of the Work required by the Contract Documents will comply with Division 1, Title 24, and with all other laws, ordinances, rules, regulations, or orders of public authorities having jurisdiction.

13.5.2 Independent Testing Laboratory

The District will select and pay an independent testing laboratory to conduct all tests and inspections. Selection of the materials required to be tested shall be made by the laboratory or the District's representative and not by the Contractor. See Articles 3.13.1 and 4.3.6 regarding costs or expenses of inspection or testing outside of the Project Site.

13.5.3 Advance Notice to Inspector

The Contractor shall notify the Inspector a sufficient time in advance of its readiness for required observation or inspection so that the Inspector may arrange for same. The Contractor shall notify the Inspector a sufficient time in advance of the manufacture of material to be supplied under the Contract Documents which must, by terms of the Contract Documents, be tested in order that the Inspector may arrange for the testing of the material at the source of supply.

13.5.4 Testing Off-Site

Any material shipped by the Contractor from the source of supply, prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said Inspector that such testing and inspection will not be required, shall not be incorporated in the Work.

13.5.5 Additional Testing or Inspection

If the Inspector, the Architect, the District, or public authority having jurisdiction determines that portions of the Work require additional testing, inspection, or approval not included under Article 13.5.1, the Inspector will, upon written authorization from the District, make arrangements for such additional testing, inspection, or approval. The District shall bear such costs except as provided in Articles 13.5.6 and 13.5.7.

13.5.6 Costs for Retesting

If such procedures for testing, inspection, or approval under Articles 13.5.1 and 13.5.2reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs arising from such failure, including those of re-testing, re-inspection, or re-approval, including, but not limited to, compensation for the Architect's services and expenses. Any such costs shall be paid by the District, invoiced to the Contractor, and deducted from the next Progress Payment.

13.5.7 Costs for Premature Test

In the event the Contractor requests any test or inspection for the Project and is not completely ready for the inspection, the Contractor shall be invoiced by the District for all costs and expenses resulting from that testing or inspection, including, but not limited to, the Inspector's and Architect's fees and expenses, and the amount of the invoice shall be deducted from the next Progress Payment.

13.6 TRENCH EXCAVATION

13.6.1 Trenches Greater Than Five Feet

Pursuant to Labor Code section 6705, if the Contract Price exceeds $25,000 and involves the excavation of any trench or trenches five (5) feet or more in depth, the Contractor shall, in advance of

excavation, submit to the District or a registered civil or structural engineer employed by the District or Architect, a detailed plan showing the design of shoring for protection from the hazard of caving ground during the excavation of such trench or trenches.

13.6.2 Excavation Safety

If such plan varies from the Shoring System Standards established by the Construction Safety Orders, the plan shall be prepared by a registered civil or structural engineer, but 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 the District or by the person to whom authority to accept has been delegated by the District.

13.6.3 No Tort Liability of District

Pursuant to Labor Code § 6705, nothing in this Article shall impose tort liability upon the District or any of its employees.

13.6.4 No Excavation without Permits

The Contractor shall not commence any excavation Work until it has secured all necessary permits including the required CAL OSHA excavation/shoring permit. Any permits shall be prominently displayed on the Site prior to the commencement of any excavation.

13.7 WAGE RATES, TRAVEL, AND SUBSISTENCE

13.7.1 Wage Rates

Pursuant to the provisions of Article 2 (commencing at § 1720), Chapter 1, Part 7, Division 2, of the Labor Code, the 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 works project 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 at the administrative office of the District and are also available from the Director of the Department of Industrial Relations. Copies will be made available to any interested party on request. The Contractor shall post a copy of such wage rates at appropriate, conspicuous, weatherproof points at the Site.

Any worker employed to perform Work on the Project, but such Work is not covered by any classification listed in the published general prevailing wage rate determinations or per diem wages determined by the Director of the Department of Industrial Relations, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to the employment of such person in such classification.

13.7.2 Holiday and Overtime Pay

Holiday and overtime work, when permitted by law, shall be paid for at the rate set forth in the prevailing wage rate determinations issued by the Director of the Department of Industrial Relations or at least one and one-half (1½) times the specified basic rate of per diem wages, plus employer payments, unless otherwise specified in the Contract Documents or authorized by law.

13.7.3 Wage Rates Not Affected by Subcontracts

The Contractor shall pay and shall cause to be paid each worker engaged in the execution of the 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.

13.7.4 Per Diem Wages

The Contractor shall pay and shall cause to be paid to each worker needed to execute the Work on the Project per diem wages including, but not limited to, employer payments for health and welfare, pensions, vacation, travel time and subsistence pay as provided for in Labor Code §1773.1.

13.7.5 Forfeiture and Payments

Pursuant to Labor Code §1775, the Contractor shall forfeit to the District, not more than Two Hundred Dollars ($200.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing wages rates as determined by the Director of the Department of Industrial Relations, for the work or craft in which the worker is employed for any Work done under the Agreement by the Contractor or by any Subcontractor under it. The amount of the penalty shall be determined by the Labor Commissioner and shall be based on consideration of: (1) whether the Contractor or Subcontractor's failure to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected upon being brought to the attention of the Contractor or Subcontractor; and (2) whether the Contractor or Subcontractor has a prior record of failing to meet its prevailing wage obligations.

13.7.6 Monitoring and Enforcement by Labor Commissioner

13.7.7 Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE). The Contractor and all subcontractors shall be required to furnish, at least "monthly" as defined by Labor Code section 1771.4(a)(3)(A)(i), certified payroll records directly to the Labor Commissioner in accordance with Labor Code section 1771.4. All payroll records shall be furnished in an electronic format and in the manner required by the Labor Commissioner. The Contractor and all subcontractors must sign up for, and utilize, the Labor Commissioner's electronic certified payroll records submission system. The District will have direct and immediate access to all CPRs for the Project that are submitted through the Labor Commissioner's system. The District can use this information for any appropriate purpose, including monitoring compliance, identifying suspected violations, and responding to Public Records Act requests.

The Labor Commissioner/ DLSE may conduct various compliance monitoring and enforcement activities including, but not limited to, confirming the accuracy of payroll records, conducting worker interviews, conducting audits, requiring submission of itemized statements prepared in accordance with Labor Code section 226, and conducting random in-person inspections of the Project site ("On-Site Visits"). On-Site Visits may include inspections of records, inspections of the Work site and observation of work activities, interviews of workers and others involved with the Project, and any other activities deemed necessary by the Labor Commissioner/DLSE to ensure compliance with prevailing wage requirements. The Labor Commissioner/DLSE shall have free access to any construction site or other place of labor and may obtain any information or statistics pertaining to the lawful duties of the Labor Commissioner/DLSE.

Any lawful activities conducted or any requests made by the Labor Commissioner/DLSE shall not be the basis for any delays, claims, costs, damages or liability of any kind against the District by the Contractor. Contractor and all subcontractors shall cooperate and comply with any lawful requests by the Labor Commissioner/ DLSE. The failure of the Labor Commissioner, DLSE, or any other entity related to the Department of Industrial Relations to comply with any requirement imposed by the California Code of Regulations, Title 8, Chapter 8 shall not of itself constitute a defense to the failure to pay prevailing wages or to comply with any other obligation imposed by Division 2, Part 7, Chapter 1 of the Labor Code.

Prior to commencing any Work on the Project, the Contractor shall post the required notice/poster required under the California Code of Regulations and Labor Code section 1771.4 in both English and Spanish at a conspicuous, weatherproof area at the Project site. The required notice/poster is available on the Labor Commissioner's website.

13.8 RECORDS OF WAGES PAID

13.8.1 Payroll Records

a. Pursuant to §1776 of the Labor Code, the Contractor and each Subcontractor shall keep an accurate payroll record showing the name, address, social security number, work classification and 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 him or her in connection with the Project.

b. All payroll records, as specified in Labor Code §1776, of the Contractor and all Subcontractors shall be certified and furnished directly to the Labor Commissioner in accordance with Labor Code §1771.4(a)(3) once every thirty (30) days while Work is being performed on the Project and within thirty (30) days after the final day of Work performed on the Project (or more frequently if required by the District or the Labor Commissioner). The Contractor and all Subcontractors shall submit their own payroll records to the Labor Commissioner on the internet website of the Department of Industrial Relations and such payroll records shall be in an electronic format prescribed by the Labor Commissioner. Pursuant to Labor Code §1771.4(a)(3)(B), the Contractor and any Subcontractor who fails to furnish payroll records in accordance with Labor Code §1771.4(a)(3), relating to their own employees, shall be subject to a penalty by the Labor Commissioner. The amount of the penalty shall be One Hundred Dollars ($100.00) for each calendar day in which such party is in violation of Labor Code §1771.4(a)(3), not to exceed a total penalty of Five Thousand Dollars ($5,000.00) per project. Payroll records as specified in Labor Code §1776 shall also be certified and submitted to the District with each application for payment.

All payroll records 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 shall be made available for inspection or furnished upon request to a representative of District, the Division of Labor Standards Enforcement or the Division of Apprenticeship Standards of the Department of Industrial Relations.

3. A certified copy of all payroll records shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through 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) above, the requesting party shall, prior to being provided the records, reimburse the costs, according to law for the preparation by the Contractor, Subcontractor(s), and the entity through which the request was made. The public shall not be given access to such records at the principal office of the Contractor.

c. The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the Division of Labor Standards Enforcement.

d. The Contractor or Subcontractor(s) shall file a certified copy of all payroll records with the entity that requested such records within 10 calendar days after receipt of a written request.

e. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the District, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or obliterated to prevent disclosure of an individual's name, address and social security number. The name and address of the Contractor awarded the Contract or the Subcontractor(s) performing the Contract shall not be marked or obliterated. Any copy of records made available for inspection by, or furnished to, a joint labor-management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (Section 175a of Title 29 of the United States Code) shall be marked or obliterated only to prevent disclosure of an individual's name and social security number. Notwithstanding any other provision of law, agencies that are included in the Joint Enforcement Strike Force on the Underground Economy established pursuant to Section 329 of the Unemployment Insurance Code and other law enforcement agencies investigating violations of law shall, upon request, be provided non-redacted copies of certified payroll records.

f. The Contractor shall inform the District of the location of all payroll records, including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.

g. The Contractor or Subcontractor(s) shall have 10 calendar days in which to comply subsequent to receipt of a written notice requesting payroll records. In the event that the Contractor or Subcontractor(s) fails to comply within the 10-day period, the Contractor or Subcontractor(s) shall, as a penalty to the District, forfeit One Hundred Dollars ($100.00) 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.

Responsibility for compliance with this Article shall rest upon the Contractor.

13.8.2 Withholding of Contract Payments & Penalties

The District may withhold or delay contract payments to the Contractor and/or any Subcontractor if:

a. The required prevailing rate of per diem wages determined by the Director of the Department of Industrial Relations is not paid to all workers employed on the Project; or

b. The Contractor or Subcontractor(s) fail to submit all required certified payroll records to the Labor Commissioner in accordance with Labor Code §1771.4(a)(3); or

c. The Contractor or Subcontractor(s) fail to submit all required certified payroll records with each application for payment, but not less than once per month; or

d. The Contractor or Subcontractor(s) submit incomplete or inadequate payroll records; or

e. The Contractor or Subcontractor(s) fail to comply with the Labor Code requirements concerning apprentices; or

f. The Contractor or Subcontractor(s) fail to comply with any applicable state laws governing workers on public works projects.

13.9 APPRENTICES

13.9.1 Apprentice Wages and Definitions

All apprentices employed by the Contractor to perform services under the Contract shall be paid the standard wage paid to apprentices under the regulations of the craft or trade for which he or she is employed, and as determined by the Director of the Department of Industrial Relations, and shall be employed only at the craft or trade to which he or she is registered. Only apprentices, as defined in §3077 of the Labor Code, who are in training under apprenticeship standards that have been approved by the Chief of the Division of Apprenticeship Standards and who are parties to written apprenticeship agreements under Chapter 4 (commencing with §3070) of Division 3, are eligible to be employed under this Contract. The employment and training of each apprentice shall be in accordance with the apprenticeship standards and apprentice agreements under which he or she is training, or in accordance with the rules and regulations of the California Apprenticeship Council.

13.9.2 Employment of Apprentices

Contractor agrees to comply with the requirements of Labor Code §1777.5. The Contractor awarded the Project, or any Subcontractor under him or her, when performing any of the Work under the Contract or subcontract, employs workers in any apprenticeable craft or trade, the Contractor and Subcontractor shall employ apprentices in the ratio set forth in Labor Code §1777.5. The Contractor or any Subcontractor must apply to any apprenticeship program in the craft or trade that can provide apprentices to the Project site for a certificate approving the contractor or subcontractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected. However, the decision of the apprenticeship program to approve or deny a certificate shall be subject to review by the Administrator of Apprenticeship. The apprenticeship program or programs, upon approving the Contractor or Subcontractor, shall arrange for the dispatch of apprentices to the Contractor or Subcontractor upon the Contractor's or Subcontractor's request. "Apprenticeable craft or trade" as used in this Article means a craft or trade determined as an apprenticeable occupation in accordance with the rules and regulations prescribed by the California Apprenticeship Council. The ratio of work performed by apprentices to journeyman employed in a particular craft or trade on the Project shall be in accordance with Labor Code §1777.5.

13.9.3 Submission of Contract Information

Prior to commencing Work on the Project, the Contractor and Subcontractors shall submit contract award information to the applicable apprenticeship program(s) that can supply apprentices to the Project and make the request for the dispatch of apprentices in accordance with the Labor Code. The information submitted shall include an estimate of journeyman hours to be performed under the Contact, the number of apprentices proposed to be employed, and the approximate dates the apprentices would be employed. A copy of this information shall also be submitted to the District if requested. Within 60 days after concluding Work on the Project, the Contractor and Subcontractors shall submit to the District, if requested, and to the apprenticeship program a verified statement of the journeyman and apprentice hours performed on the Project.

13.9.4 Apprentice Fund

The Contractor or any Subcontractor under him or her, who, in performing any of the Work under the Contract, employs journeymen or apprentices in any apprenticeable craft or trade shall contribute to the California Apprenticeship Council the same amount that the Director determines is the prevailing amount of apprenticeship training contributions in the area of the Project. The Contractor and Subcontractors may take as a credit for payments to the California Apprenticeship Council any amounts paid by the Contractor or Subcontractor to an approved apprenticeship program that can supply apprentices to the Project. The Contractor and Subcontractors may add the amount of the contributions in computing his or her bid for the Contract.

13.9.5 Prime Contractor Compliance

The responsibility of compliance with Article 13 and §1777.5 of the Labor Code for all apprenticeable occupations is with the Prime Contractor. Any Contractor or Subcontractor that knowingly violates the provisions of this Article or Labor Code §1777.5 shall be subject to the penalties set forth in Labor Code §1777.7.

13.10 ASSIGNMENT OF ANTITRUST CLAIMS

13.10.1 Application

Pursuant to Government Code § 4551, 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 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. § 15) or under the Cartwright Act (Chapter 2 [commencing with § 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from the purchase 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 Retention Payment to the Contractor, without further acknowledgment by the parties. If the District receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under Chapter 11 (commencing with § 4550) of Division 5 of Title 1 of the Government Code, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the District any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the District as part of the bid price, less the expenses incurred in obtaining that portion of the recovery.

13.10.2 Assignment of Claim

Upon demand in writing by the assignor, the District shall, within one (1) year from such demand, reassign the cause of action assigned pursuant to this Article if the assignor has been or may have been injured by the violation of law for which the cause of action arose and the District has not been injured thereby or the District declines to file a court action for the cause of action.

13.11 STATE AND DISTRICT CONDUCTED AUDITS

Pursuant to and in accordance with the provisions of Government Code § 10532, or any amendments thereto, all books, records, and files of the District, the Contractor, or any Subcontractor connected with the performance of this Contract involving the expenditure of state funds in excess of Ten Thousand Dollars ($10,000.00), including, but not limited to, the administration thereof, shall be subject to the examination and audit of the Office of the Auditor General of the State of California for a period of five (5) years after Retention Payment is made or a Notice of Completion is Recorded, whichever occurs first. Contractor shall preserve and cause to be preserved such books, records, hard drives, electronic media, and files for the audit period.

Pursuant to the remedies under Public Contract Code section 9201 and Government Code section 930.2, Contractor, through execution of this Agreement, also agrees the District shall have the right to review and audit, upon reasonable notice, the books and records of the Contractor concerning any monies associated with the Project. The purpose of this "Audit" is to quickly and efficiently resolve Disputes or Claims based on the actual costs incurred and to reduce the uncertainty in resolving Disputes or Claims with limited information. The District shall perform any audits at its own cost and any such audit shall be performed by an independent auditor, having no direct or indirect relationship with the functions or activities being audited or with the business conducted by the Contractor or District. In the event the independent auditor determines that Change Orders, response to Request for Proposals, Disputes, Claims, or other requests for payment are in error, or have has any other concerns or questions, the Auditor shall report the results of the Audit findings to the District and provide a copy to the Contractor after giving the District Board the opportunity for at least 10 days review. If the Contractor

disputes the findings of the independent auditor, such dispute shall be handled in the manner set forth under Article 4.6.2.

If Contractor having agreed to the terms of this Contract fails to produce books or records requested by Auditor, such failure to produce books or records that were required to be preserved for audit, it shall be presumed that the information contained in the withheld books or records were unfavorable to the Contractor and the Auditor shall note this refusal in the results of the Audit findings for further evaluation by the District and the District's Board. The refusal to release records that are concerning monies associated with the Project may be used as a grounds to debar the Contractor under Article 15 for failure to preserve records under Article 13.11 and the failure to produce required audit records may also be used as a grounds for a negative finding against the Contractor depending on the significance of the records that are withheld by Contractor. Failure to produce job cost data tied to job cost categories and budgets shall be presumed an intentional failure to produce key audit records. Similarly, failure to produce Daily Reports (prepared at or near the time of the Work actually took place (See Article 3.16) shall be presumed an intentional failure to produce key audited records.

If Contractor is seeking costs for inefficiency, home office overhead, or unanticipated increased costs due to delays or acceleration, Contractor shall also produce copies of the original bid tabulation utilized in submitting Contractor's bid for the Project. This document shall be considered confidential and shall not be subject to disclosure through a Public Records Act and shall not be distributed to anyone other than the District and the District's counsel. This bid tabulation shall only be used in litigation, arbitration, evaluation of Claims or Disputes, Audit, and trial. If the records for the bid tabulation are kept on a computer, the Contractor shall also produce all metadata (in native format) that accompanies the bid tabulation for inspection to prove the authenticity of the underlying bid tabulation. Failure to produce the bid tabulation for review of inefficiency, home office overhead, or unanticipated increased costs due to delays or accelerations shall be considered material evidence that the bid tabulation was not favorable to the Contractor. This evidence shall be entered as a jury instruction for trial that the bid tabulation was not produced and the bid tabulation information was unfavorable to the Contractor. The evidence may also be used in debarment proceedings, and noted as an exception to an Audit findings.

Upon notification of Contractor concerning the results of the audit and a reasonable time has passed for Contractor to respond to the Audit findings and if either there is no Dispute of the Audit findings under Article 4.6 or if the result after utilizing the Disputes Clause confirms the Audit findings, the District may seek reimbursement for overstated Disputes, Claims, or Change Orders and may also undertake debarment proceedings under Article 15 of these General Conditions.

13.12 STORM WATER POLLUTION PREVENTION

13.12.1 Application

This Section addresses the preparation, implementation and monitoring of a Storm Water Pollution Prevention Plan (SWPPP) for the purpose of preventing the discharge of pollutants from the construction site. This includes the elimination of pollution discharges such as improper dumping, spills or leakage from storage tanks or transfer areas. The District will not issue a Notice to Proceed until Contractor has prepared by a qualified individual and obtained approval of the Permit Registration Documents ("PRDs") that include a Notice of Intent, Construction Risk Calculation, Site Map, SWPPP, Annual Fee and any additional required documents from all applicable Local Governing Agencies including the Regional Water Quality Control Board. The Contractor shall also secure a certification that the Project has met all of the conditions of the General Construction Activity Storm Water Permit

(GCASP) and comply with all applicable local, state and federal regulations governing storm water pollution prevention.

13.12.2 References and Materials

- California Stormwater Quality Association New Development and Redevelopment Best Management Practice Handbook

- 2009 California Stormwater Quality Association Construction BMP Handbook .

- State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbing Activities. Available on-line at:

- http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.- Use materials of a class, grade and type needed to meet the performance described in the BMP Handbook.

13.12.3 Preparation and Approval

The Contractor shall prepare by a qualified individual the PRDs that include a Notice of Intent, Construction Risk Calculation, Site Map, SWPPP, Annual Fee and any additional required documents. The Contractor's Qualified SWPPP Developer ("QSD") shall prepare the Storm Water Pollution Prevention Plan (SWPPP) as required to comply with storm water pollution regulations for project sites with storm water discharges associated with construction activity such as clearing or demolition, grading, excavation and other land disturbances. The SWPPP shall apply to all areas that are directly related to construction activity, including but not limited to staging areas, storage yards, material borrow areas, and access roads.

13.12.3.1 The Contractor shall prepare and submit to the Local Governing Agencies and the District the SWPPP for review and approval if the project sites, new or existing, with land disturbance of 1 or more acres (or less than 1 acres if part of a common plan of development); the construction activity that results in land surface disturbances of less than one acre is part of a larger common plan of development or sale of one or more acres of disturbed land surface; or the construction activity associated with Linear Underground/Overhead Projects ("LUPs") including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

13.12.3.2 The Contractor shall also pay annual renewal fee(s) until the contract is completed and make all such checks payable to the State Water Resources Control Board. The Notice of Intent must be submitted at least two weeks prior to the commencement of construction activities.

13.12.3.3 The Contractor shall prepare the SWPPP by following the format in Sections 2, 3, 4 and Appendices A through F of the California Stormwater BMP Handbook - Construction, January

2009 edition, published by the California Stormwater Quality Association. The publication is available from:

California Stormwater
Quality Association
P.O. Box 2105
Menlo Park, CA 94026-2105
Phone: (650) 366-1042
E-mail: info@casqa.org

or

https://www.casqa.org/store/products/tabid/154/p-167-construction-handbookportal-initial-subscription.aspx

13.12.3.4 Where land disturbance is less than 1 acre, any BMPs indicated in the BMP Handbook needed to prevent or minimize storm water pollution shall be implemented at no extra cost to the District.

13.12.3.5 Within two weeks after Award of Contract by the District, the Contractor shall submit to the District's Civil Engineer one copy of the PRDs including the SWPPP for review. After the District's approval, the Contractor shall provide approved copies of the SWPPP as follows: one copy each to the Project Inspector, Construction Manager, Architect, Commissioned Architect and District's Civil Engineer.

13.12.4 Implementation

The Contractor shall implement the Storm Water Pollution Prevention Plan by doing the following:

a. Obtain a Waste Discharger Identification (WDID) number from the SWRCB before beginning construction. This number will be issued once your PRDs are administratively accepted and fee is received.

b. Keep the SWPPP, REAPs, monitoring data on the construction site.

c. Employ a Qualified SWPPP Practitioner (QSP) to implement the SWPPP during construction and develop Rain Event Action Plans ("REAPs").

d. Install, inspect, maintain and monitor BMPs required by the General Permit.

e. Install perimeter controls prior to starting other construction work at the site.

f. Contain on-site storm water at the jobsite. Do not drain on-site water directly into the storm drain.

g. Implement the SWPPP.

h. Provide SWPPP and BMP implementation training for those responsible for implementing the SWPPP.

i. Designate trained personnel for the proper implementation of the SWPPP.

j. Conduct monitoring, as required, and assess compliance with the Numeric Action Levels (NALs) or Numeric Effluent Limitations (NELs) appropriate to your project.

k. Report monitoring data:

1. Maintain a paper or electronic copy of all required records for three years from the date generated or date submitted, whichever is last. These records must be available at the construction site until construction is completed.

2. Have a QSD revise the SWPPP as needed to reflect the phases of construction and to suit changing site conditions and instances when properly installed systems are ineffective.

3. Assist the District with entering any necessary data or information into the Stormwater Multi-Application and Reporting System ("SMARTS") system.

l. At the end of Construction Contract:

1. Submit Notice of Termination (NOT) into the SMARTS when construction is complete and conditions of termination listed in the NOT have been satisfied. A copy of the NOT can be found at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

2. Leave in place storm water pollution prevention controls needed for post-construction storm water management and remove those that are not needed as determined by the District. Thereafter, left-in-place controls will be maintained by the District.

3. Provide Site Monitoring Reports, SWPPP revisions, Compliance Certifications and related documents to the District. Post-construction storm water operation and management plan as mentioned in the compliance certifications are considered to be in place at the end of the Construction Contract.

13.12.5 Monitoring

The Contractor shall conduct examination of storm water pollution prevention controls as required by the State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbing Activities. This includes properly qualified personnel performing all required monitoring, testing, inspections and monitoring. The Contractor shall also conduct examination of storm water pollution prevention controls, as well as before and after each storm event in compliance with the State Water Resources Control Board Order No. 2009-0009-DWQ, National

Pollutant Discharge Elimination System General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities (General Permit) (SWRCB, 2009).and at least once each 24-hour period during extended storm events to identify BMP effectiveness and implement repairs or BMP changes as soon as feasible. All maintenance related to a storm event should be completed within 48 hours of the storm event. The Contactor shall also prepare and maintain, at the jobsite, a log of each inspection using Site Monitoring Report forms.

13.12.6 Liabilities and Penalties

a. Review of the SWPPP and inspection logs by the District shall not relieve the Contractor from liabilities arising from non-compliance with storm water pollution regulations.

b. Payment of penalties for non-compliance by the Contractor shall be the sole responsibility of the Contractor and will not be reimbursed by the District.

c. Compliance with the Clean Water Act pertaining to construction activity is the sole responsibility of the Contractor. For any fine(s) levied against the District due to non-compliance by the Contractor, the District will deduct from the final payment due the Contractor the total amount of the fine(s) levied on the District, plus legal and associated costs.

d. The Contractor shall submit to the District a completed NOI for change of information (Construction Site Information and Material Handling/Management Practices).

ARTICLE 14
TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR FOR CAUSE

14.1.1 Grounds for Termination

The Contractor may terminate the Contract if the Work is stopped for a period of thirty (30) consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons performing portions of the Work for whom the Contractor is contractually responsible, for only the following reasons:

a. Issuance of an order of a court or other public authority having jurisdiction; or

b. An act of the United States or California government, such as a declaration of national emergency.

14.1.2 Notice of Termination

If one of the above reasons exists, the Contractor may, upon written notice of seven (7) additional days to the District, terminate the Contract and recover from the District payment for Work executed and for reasonable costs verified by the Architect with respect to materials, equipment, tools, construction equipment, and machinery, including reasonable overhead, profit, and damages.

14.2 TERMINATION BY THE DISTRICT FOR CAUSE

14.2.1 Grounds for Termination

The District may terminate the Contractor and/or this Contract for the following reasons:

a. Persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;

b. Persistently or repeatedly is absent, without excuse, from the job site;

c. Fails to make payment to Subcontractors, suppliers, materialmen, etc.;

d. Persistently disregards laws, ordinances, rules, regulations, or orders of a public authority having jurisdiction;

e. Fails to provide a schedule or fails or refuses to update schedules required under the Contract;

f. Falls behind on the Project and refuses or fails to undertake a Recovery Schedule;

g. If the Contractor has been debarred from performing Work

h. Becomes bankrupt or insolvent, including the filing of a general assignment for the benefit of creditors; or

i. Otherwise is in substantial breach of a provision of the Contract Documents.

14.2.2 Notification of Termination

When any of the above reasons exist, the District may, without prejudice to any other rights or remedies of the District and after giving the Contractor and the Contractor's Surety written notice of seven (7) days, terminate the Contractor and/or this Contract and may, subject to any prior rights of the Surety:

a. Take possession of the Project and of all material, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

b. Accept assignment of Subcontracts. Contractor acknowledges and agrees that if the District (in its sole and absolute discretion) decides to takeover completion of the Project, the Contractor agrees to immediately assign all subcontracts to the District which the District has chosen to accept;

c. Complete the Work by any reasonable method the District may deem expedient, including contracting with a replacement contractor or contractors; and,

d. Agree to accept a takeover and completion arrangement with Surety that is acceptable to the District Board.

14.2.3 Takeover and Completion of Work after Termination for Cause

A Termination for Cause is an urgent matter which requires immediate remediation since Project Work is open and incomplete, the site is subject to vandalism and theft, the Project site is considered a public nuisance, and there is a possibility of injury and deterioration of the Project Work and materials. Thus, the District shall be entitled to enter a takeover contract to either remediate the unfinished condition or complete the Work for this Project.

14.2.4 Payments Withheld

If the District terminates the Contract for one of the reasons stated in Article 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is complete. All costs associated with the termination and completion of the Project shall be the responsibility of the Contractor and/or its Surety.

14.2.5 Payments upon Completion

If the unpaid balance of the Contract Sum exceeds costs of completing the Work, including compensation for professional services and expenses made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor and its Surety shall pay the difference to the District. The amount to be paid to the Contractor, or District, as the case may be, shall be certified by the Architect upon application. This payment obligation shall survive completion of the Contract.

14.2.6 Conversion of Termination Upon Determination by Any Court or Other Tribunal

In the event the Contract or Contractor's performance of the Contract is terminated under Article 14.2, and it is finally determined by an arbitrator, court, jury or other tribunal having jurisdiction, for any reason, that the Contractor was not in default under the provisions hereof, or that the District's exercise of its rights under Article 14.2 was defective, deficient, ineffective, invalid or improper for any reason, the termination shall be deemed a Termination for Convenience by the District and thereupon, the rights and obligations of the District and the Contractor shall be determined in accordance with Article 14.3.1 hereof.

14.3 TERMINATION OF CONTRACT BY DISTRICT (CONTRACTOR NOT AT FAULT)

14.3.1 Termination for Convenience

District may terminate the Contract upon fifteen (15) calendar days of written notice to the Contractor and use any reasonable method the District deems expedient to complete the Project, including contracting with replacement contractor or contractors, if it is found that reasons beyond the control of either the District or Contractor make it impossible or against the District's interest to complete the Project. In such a case, the Contractor shall have no Claims against the District except for: (1) the actual cost for approved labor, materials, and services performed in accordance with the Contract Documents which have not otherwise been previously paid for and which are supported and documented through timesheets, invoices, receipts, or otherwise; and (2) profit and overhead of ten percent (10%) of the approved costs in item (1); and (3) termination cost of five percent (5%) of the approved costs in item (1). Contractor acknowledges and agrees that if the District (in its sole and absolute discretion) decides to takeover completion of the Project, the Contractor agrees to immediately assign all subcontracts to the District which the District has chosen to accept.

14.3.2 Non-Appropriation 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 for which value is received, 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 not otherwise already paid for by the District up to the time of termination under this Paragraph shall include a factor of fifteen percent (15%) for the Contractor's overhead and profit and there shall be no other costs or expenses paid to Contractor. All work, materials and orders paid for pursuant to this provision shall become the property of the District. District may, without cause, order Contractor in writing to suspend, delay or interrupt the Project in whole or in part for such period of time as District may determine. Adjustment shall be made for increases in the cost of performance of the Agreement caused by suspense, delay or interruption.

14.4 REMEDIES OTHER THAN TERMINATION

If a default occurs, the District may, without prejudice to any other right or remedy, including, without limitation, its right to terminate the Contract pursuant to Article 14.2, do any of the following:

a. Permit the Contractor to continue under this Contract, but make good such deficiencies or complete the Contract by whatever method the District may deem expedient, and the cost and expense thereof shall be deducted from the Contract Price or paid by the Contractor to the District on demand;

b. If the workmanship performed by the Contractor is faulty or defective materials are provided, erected or installed, then the District may order the Contractor to remove the faulty workmanship or defective materials and to replace the same with work or materials that conform to the Contract Documents, in which event the Contractor, at its sole costs and expense, shall proceed in accordance with the District's order and complete the same within the time period given by the District in its notice to the Contractor; or

c. Initiate procedures to declare the Contractor a non-responsible bidder for a period of two (2) to five (5) years thereafter.

All amounts expended by the District in connection with the exercise of its rights hereunder shall accrue interest from the date expended until paid to the District at the maximum legal rate. The District may retain or withhold any such amounts from the Contract Price. If the Contractor is ordered to replace any faulty workmanship or defective materials pursuant to Paragraph (b) above, the Contractor shall replace the same with new work or materials approved by the Architect and the District, and, at its own cost, shall repair or replace, in a manner and to the extent the Architect and the District shall direct, all Work or material that is damaged, injured or destroyed by the removal of said faulty workmanship or defective material, or by the replacement of the same with acceptable work or materials. In no event shall anything in this Article be deemed to constitute a waiver by the District of any other rights or remedies that it may have at law or in equity, it being acknowledged and agreed by the Contractor that the remedies set forth in this Article are in addition to, and not in lieu of, any other rights or remedies that the District may have at law or in equity.

ARTICLE 15
DEBARMENT

15.1 DEBARMENT MEANS THERE HAS BEEN A FINDING THAT THE CONTRACTOR IS NOT RESPONSIBLE.

During the course of the Project, or if it is determined through Change Orders, Claims, or Audit that a Contractor is not responsible, the District may, in addition to other remedies provided in the Contract, debar the Contractor from bidding or proposing on, or being awarded, and/or performing work on District contracts for a specified period of time, which generally will not exceed five (5) years, but may exceed five (5) years or be permanent if the circumstances warrant such debarment. In addition to the debarment proceeding, a finding that a Contractor is to be debarred shall result in the termination of any or all existing Contracts the Contractor may have with the District.

15.2 BOARD FINDING

The District may debar a Contractor if the Board, or the Board's delegatee, in its discretion, finds the Contractor has done any of the following:

15.2.1 Intentionally or with reckless disregard, violated any term of the Contract with the District;

15.2.2 Committed an acts or omission which reflects on the Contractor's quality, fitness or capacity to perform Work for the District;

15.2.3 Committed an act or offense which indicates a lack of business integrity or business honesty; or,

15.2.4 Made or submitted a false claim against the District or any other public entity.

15.3 HEARING AND PRESENTATION OF EVIDENCE

If there is evidence that the Contractor may be subject to debarment, the District shall notify the Contractor in writing of the evidence which is the basis for the proposed debarment and shall advice the Contractor of the scheduled date for a debarment hearing before the District Board or its delegated designee.

The District Board, or designee, shall conduct a hearing where evidence on the proposed debarment is presented. The Contractor or the Contractor's representative shall be given an opportunity to submit evidence at the hearing. The Contractor shall be provided an adequate amount of time to prepare and object to evidence presented. A tentative proposed decision shall be issued as a tentative decision and the District shall be entitled to modify, deny or adopt the proposed decision. The proposed decision shall contain a recommendation regarding whether the Contractor should be debarred, and, if so, the appropriate length of time of the debarment. The Contractor and the District shall be provided an opportunity to object to the tentative proposed decision for a period of 15 days. If additional evidence is presented, the District shall evaluate this evidence and either issue an amended ruling, issue the same ruling, or call a further hearing.

If a Contractor has been debarred for a period of longer than five (5) years, that Contractor may after the debarment has been in effect for at least five (5) years, submit a written request for review of the debarment determination to reduce the period of debarment or terminate the debarment. The District may, in its discretion, reduce the period of debarment or terminate the debarment if it finds that the Contractor has adequately demonstrated one or more of the following: (1) elimination of the grounds for which the debarment was imposed; (2) a bona fide change in ownership or management; (3) material evidence discovered after debarment was imposed; or (4) any other reason that is in the best interests of the District.

The District will consider a request for review of a debarment determination only where: (1) the Contractor has been debarred for a period longer than five (5) years; (2) the debarment has been in effect for at least five (5) years; and (3) the request is in writing, states one or more of the grounds for reduction of the debarment period or termination of the debarment, and includes supporting documentation. Upon receiving an appropriate request, the District will provide notice of the hearing on the request. At the hearing, the District shall review evidence on the proposed reduction of debarment period. This hearing shall be conducted and the request for review decided by the District pursuant to the same procedures as for a debarment hearing.

The District's proposed decision shall contain a recommendation on the request to reduce the period of debarment or terminate the debarment.

The terms shall also apply to Subcontractors of Contractor.

SUPPLEMENTARY GENERAL CONDITIONS

The following supplements modify the General Conditions. Where a portion of the General Conditions is modified and/or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

ARTICLE 8 – TIME

Article 8.4.1 Liquidated Damages – Contractor will be liable to the District for Liquidated Damages pursuant to Article 8.4 for each calendar day of delay in the amount set forth in the Agreement Form.

PER DAY $1,500.00

_____

CONTRACTOR'S INITIALS
(Must submit with bid)

Article 8.1.4.2 Inclement weather (Rain Days) – Bidders shall include in their schedule a minimum of five (5) "rain days."

ARTICLE 11 – INSURANCE AND BONDS

Article 11.10 Performance and Payment Bonds – The number of executed copies of the Performance Bond and the Payment Bond required is one (1).

Division 1 Forms

IMMEDIATE CONSTRUCTION CHANGE DIRECTIVE NO.

PROJECT: _____

TO: _____

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

DESCRIPTION OF CHANGE: _____

_____

COST (This cost shall not be exceeded): _____

TIME FOR COMPLETION: _____

NOTE:

Pursuant to Article 7.3.1.2 An Immediate Change Directive is a written order to the Contractor prepared by the Architect and signed by the District (and CM if there is a CM on the Project) and the Architect, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The District may by ICD, without invalidating the Contract, direct immediate changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions within. If applicable, the Contract Sum and Contract Time will be adjusted accordingly. CONTRACTOR SHALL PROCEED WITH WORK SET FORTH IN THIS ICD IMMEDIATELY UPON RECEIPT OR THE DISTRICT MAY EITHER HOLD THE CONTRACTOR IN EITHER PARTIAL DEFAULT PURSUANT TO ARTICLE 2.2 OR TOTAL DEFAULT PURSUANT TO ARTICLE 14.

_____

Architect

_____

District

SUPPLEMENTARY GENERAL CONDITIONS

CERTIFICATE OF SUBSTANTIAL COMPLETION

PROJECT: _____

TO: _____

As the Architect for the Project described above, the Project has reached Substantial Completion. Substantial Completion is not reached unless and until each of the following three (3) conditions have been met: (1) all contractually required items have been installed with the exception of only minor and Incomplete Punch Items (See Article 9.9 of the General Conditions); (2) All Fire/Life Safety Systems have been installed, and are working and signed off on the DSA Form 152 Inspection Card, all building systems including mechanical, electrical and plumbing are all functioning; and (3) the Project is fit for occupancy and its intended use

I certify that the Project has reached Substantial Completion as defined above on the following date: _____.

_____

Architect

SPECIAL CONDITIONS

PART 1 – GENERAL

1.1 Summary

The HMS Synthetic Turf Field Replacement Project consists of the comprehensive site preparation and reconstruction of the existing grass playground field and associated site improvements to create a new synthetic turf athletic field. The Work includes demolition and removal of existing grass, irrigation systems, and other site improvements as required; earthwork, excavation, grading, and subgrade preparation; installation and modification of drainage systems, underground utilities, and irrigation; construction and repair of concrete and asphalt hardscape improvements; installation of aggregate base, edge bands, and other site materials; installation of a new synthetic turf system, including field markings and connections to adjacent improvements; landscape restoration; renovation of restroom facilities and associated utility improvements; and accessibility improvements necessary to comply with the Americans with Disabilities Act (ADA) and applicable California Building Code accessibility requirements. The Project also includes all incidental work necessary to provide a complete, fully functional, and code-compliant athletic facility, including erosion and sediment control, utility coordination, testing and inspections, restoration of disturbed areas, and the furnishing of all labor, materials, equipment, permits, and appurtenances required for the complete execution of the Work in accordance with the Contract Documents.

A. **Owner provided**: Furnished and Installed Materials.
The District shall furnish and install the synthetic turf system, including the cooling additive infill, shock pad/drainage tile, nailer board, and geotextile fabric immediately under the pad as identified in the Contract Documents. The Contractor shall be solely responsible for providing all remaining labor, supervision, equipment, tools, transportation, incidentals, consumable materials, and all other sundry items necessary to prepare the subgrade, geotextile fabric under base, permeable base, drainage system, edge bands, header boards, and quick coupler valves and boxes and complete the Work in accordance with the Contract Documents. The Contractor shall coordinate the scheduling of all District-furnished and installed materials and shall be responsible for any damage or delays resulting from inappropriate scheduling or preparation of work prior to the installation of the turf system.

Product: TenCate Pivot Performance Turf
Scope of Work: The company shall receive the field area once the drain stone aggregate base is complete and ready to receive the turf system.

i. *Nailer* – Provide and install ±915 linear feet of plastic 2” x 4” EcoNailer™ attached to the concrete curb provided by others.

ii. *Geotextile Fabric* – Provide and install geotextile fabric over the drain stone aggregate base provided by others.

iii. *Shock Pad* – Provide and install ±50,598 square feet of 20mm Soteria shock pad with 25 years warranty.

iv. *Synthetic Turf* - Provide and install ±50,598 square feet of *PIVOT™ Performance Turf*

100 oz. blended fiber (biaxial face yarn with texturized and semi-textured support yarns) synthetic turf system with the noted installation options listed below.

- Soccer lines and markings per attached rendering.
- End zone colors and letters with standard colors
- One (1) center logo with standard colors.
- Color perimeter with standard blue color

v. *Cooling Additive* – Install *PIVOT*COOL™ a precision-engineered, low-volume subsurface layer designed for use with Pivot™ performance sports turf. Positioned between the primary backing and the thatch layer, PivotCool™ provides enhanced surface cooling and environmental stability while enhancing the dynamic load capabilities of the surface. It was developed as an integrated part of the Pivot™ system.

B. Engineer's Estimate: two million one hundred seventy-seven thousand six hundred ninety-three dollars ($2,177,693.00)

C. All work shall be completed within eighty days (80) working days from and after the date stated in the District's Notice to Contractor to proceed.

D. If the Contractor ("lowest qualified and responsible bidder") and the District cannot agree on the contract construction schedule within fifteen (15) days after the Notice to Proceed, the District may terminate the contract, for convenience, as outlined in the General Conditions.

Upon termination of the Contract pursuant to this provision, the District reserves the right, subject to applicable law and the terms of the Bid Documents, to award the Contract to the next lowest responsive and responsible bidder at the price and upon the terms set forth in that bidder's submitted bid. If the next lowest responsive and responsible bidder is unwilling or unable to enter into the Contract, the District may, to the extent permitted by law, proceed to the next lowest responsive and responsible bidder, reject all bids and readvertise the Project, or exercise any other right or remedy available to the District under applicable law and the Bid Documents.

2.1 Temporary Green Construction Screening.

The Contractor shall furnish, install, maintain, and remove green construction screening (privacy mesh) along the existing and/or temporary perimeter fencing surrounding the construction area, as directed by the District. The screening shall be installed prior to the commencement of construction activities and shall remain securely in place for the duration of the Work, unless otherwise authorized in writing by the District.

The Contractor shall ensure that the screening is properly secured, maintained in good condition, and installed in a manner that does not compromise the structural integrity, stability, or safe operation of the fencing. The Contractor shall promptly repair, replace, or resecure any screening that becomes torn, damaged, loose, detached, or otherwise ineffective during the course of the Work.

SPECIAL CONDITIONS

Installation and maintenance of the screening shall comply with all applicable laws, codes, regulations, safety requirements, and manufacturer recommendations, including requirements relating to wind loads and temporary fencing. The Contractor shall be solely responsible for determining and providing any additional bracing, supports, anchorage, or other measures necessary to safely accommodate the screening.

All labor, materials, equipment, installation, maintenance, repair, replacement, removal, and disposal associated with the green construction screening shall be deemed included in the Contract Price, and no additional compensation or extension of Contract Time shall be allowed for compliance with this requirement.

PROJECT SPECIFICATIONS

The Technical Project Specifications and requirements applicable to this Project are set forth on the following pages.

55319186.1/000834.00018

HAWTHORNE MIDDLE SCHOOL TURF FIELD & TRACK IMPROVEMENTS
City of Hawthorne, CA

PROJECT SPECIFICATIONS

100% CD | MARCH 10, 2026

PREPARED BY:

VERDE DESIGN

3685 Main St, Suite 350
Riverside, CA 92501
www.verdedesigninc.com

Project No. 2300900

DOCUMENT 00 01 07

SEALS PAGE

LANDSCAPE ARCHITECT / CIVIL ENGINEER

VERDE DESIGN INC.
3685 Main Street. Suite 350
Riverside CA 92501

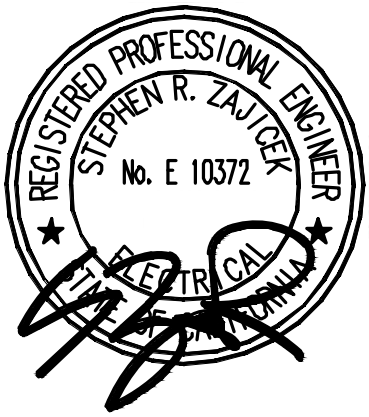
ARCHITECT

RUHNAU CLARKE ARCHITECTS
3775 Tenth St
Riverside, CA 92501

FBA ENGINEERING
150 Paularino Ave
Suite A120
Costa Mesa, CA 92626







IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-125961 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/12/2026

OWNER

HAWTHORNE SCHOOL DISTRICT
14120 S. Hawthorne Blvd
Hawthorne, CA 90250

_____ DATE: _____

END OF DOCUMENT

DOCUMENT 00 01 10

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SUMMARY OF WORK

1.01 WORK COVERED BY CONTRACT DOCUMENTS

A. Work of this Contract consists of synthetic turf, all weather track surfacing, drainage, and accessibility improvements including, but not necessarily limited to, the following:
   1. Replacement of natural turf field with infill synthetic turf field.
   2. Replacement of asphalt track with all-weather track surfacing.
   3. Grading, paving and gate improvements along accessible path of travel.
   4. Grading and paving improvements at ADA parking stalls.
   5. Improvements of Area Lighting.

B. The Work specifically includes all work as represented by the Drawings and Specifications issued for construction and subsequent approved revisions and addenda.

C. If certain features are not fully shown or called for on the Drawings, their construction shall be of the same character, quality and level of performance as for similar conditions that are shown, called for, or reasonably inferred.

1.02 RELATED REQUIREMENTS

A. Section 01 42 00 - References.

1.03 PROJECT LOCATION

Turf field at Hawthorne Middle School; 4366 W 129th Street, Hawthorne, CA. 90250

A. The general nature and extent of the work and the appurtenant facilities are shown on the Drawings.

B. Perform work within the Limit of Work line indicated on the Drawings and per the discretion of the Owner.

1.04 SPECIFICATIONS AND DRAWINGS

A. The General Conditions, Supplementary Conditions, and Division 01 - General Requirements apply to the Work of all Sections.

B. Drawings, such as irrigation plans, utility plans, and other utility Drawings, are diagrammatic. Actual runs indicated on the Drawings shall be followed as closely as coordination with the work of other trades will permit. The exact routing of such improvements and locations of equipment shall be governed by site conditions, obstructions, and locations of other utilities as acceptable to the Owner.

C. In the event that discrepancies arise over dimensions, product references, omissions, or written statements, these conflicts shall be immediately brought to the Owner's attention by the Contractor. If available, this may be accomplished with the use of a "Request for Information" (RFI) form. While awaiting direction or clarification from the Owner, the Contractor shall re-direct work as necessary so as not to cause delay to the project.

D. If discrepancies arise between the Drawings and Specifications, the order of descending precedence shall be:
   1. Specifications.
   2. Details on the Drawings.
   3. Plans on the Drawings.

E. Products, materials, labor, etc., installed or performed without proper clarification, or prior to Owner acceptance shall be the Contractor's sole responsibility and shall be removed, repaired, replaced, and/or reinstalled per the Owner's direction at no additional cost to the Owner or its agents.

1.05 CONTRACTOR'S DUTIES

A. Provide and pay for:
   1. Labor, materials, equipment, tools, construction equipment machinery, and other facilities and services necessary for proper execution and completion of the Contract.
   2. Water and temporary utilities required for construction excluding any metering and connection fees or charges.
   3. Subject to the discretion of the Owners Representative as verified by the Contractor, utilities which are in place and/or are in use by the Owner at the site, excluding telephone, may be utilized by the Contractor, to the extent available, at no cost.
   4. Other facilities and services necessary for proper execution and completion of work to provide a facility capable of operation.
   5. Legally required sales, consumer, and use taxes.

B. Permits:
   1. The Owner shall obtain and pay for the building permits, utility cut-offs and hook-ups including, but not limited to: water, gas, and electrical meters, sanitary and storm sewer connection fees.
   2. The contractor shall obtain and pay for other permits required by Owner, County and other agencies, including but not limited to business licenses and hauling and dumping permits as applicable.
   3. Provisions of required permits and licenses, whether obtained by the Owner's Representative or the contractor, shall become a part of the Contract Documents and shall be adhered to by the contractor.

C. Comply with latest adopted edition of the governing building code and other codes, ordinances, rules, regulations, orders and other legal requirements of public authorities which bear on performance of the work. Nothing in the Drawings or Specifications shall be construed to permit work not conforming to these applicable laws, ordinances, rules, and regulations. In case of conflicts between code requirements, the most restrictive shall apply; except that where the requirements of these Specifications exceed code requirements, the Specifications shall govern.

D. Attend pre-scheduled on-site job conference meetings and/or any special meetings as may be required by the Owner's Representative.

E. Promptly submit written notice to the Owner's Representative of any observed variance in Contract Documents from legal requirements. Appropriate modifications to Contract Documents will be performed by the Owner's Representative to incorporate such necessary modifications.
   1. Contractor shall assume responsibility for work performed and known to be contrary to such requirements.

F. Enforce strict discipline and good order among the contractor's or sub-contractor's employees per the discretion of the Owner's Representative.

G. The Contractor shall be held to have examined the site and to have compared it with the Drawings and Specifications, to have carefully examined all of the Contract Documents and to have satisfied itself as to the conditions under which the work is to be performed before entering in this Contract.
   1. No allowance shall subsequently be made on behalf of the Contractor on account of an error on its part or its negligence or failure to acquaint itself with the conditions of the site.

H. Examine site and verify that site conditions are acceptable to begin any work. Verify that work specified elsewhere has been completed to an appropriate stage to begin any applicable work. This includes, but is not limited to, lines, grades and surfaces prepared by others. Notify the Owner's

Representative in writing of any irregularities or unacceptable conditions. Start of work by Contractor shall indicate Contractor's acceptance of site conditions.

I. Throughout the job the Contractor shall be responsible for the general safety of the public and shall take appropriate means at no extra cost to Owner to provide a safe and secure job site to the satisfaction of the Owner's Representative.

J. Verify all measurements, materials and systems taken from the Drawings and Specifications. Contractor shall be responsible for all investigations, field measurements layouts, and coordination necessary to properly fit, install and complete the work required, including integration of new work into, and with existing.

K. Contractor shall deliver, receive, store, protect, install and apply materials in accordance with manufacturer's and/or industry specifications and instructions unless specifically modified and shown otherwise in the Contract Documents. Installations shall be tight, smooth, level, straight, true to line, and secure.

1.06 PROTECTION OF PROPERTY, MATERIALS AND WORK

A. Contractor shall be held responsible insofar as its operations are concerned for the care, protection, and preservation of the adjoining premises, buildings, trees, landscaping, utilities, walks, streets, and adjacent properties from damage resulting from or incidental to this Contract.

B. Protect existing structures, planted areas and improvements not designated for removal. Damage to existing structures including asphalt paving, utilities, and fixtures shall be replaced to an "as was" or better condition, at Contractor's expense, to the satisfaction of the Owner's Representative.

C. Materials and equipment, both before and after installation, shall be properly protected by the contractor from the weather and other hazards and kept in a clean and orderly manner.

D. Utility piping and conduit stub-outs, and parts or equipment left unconnected shall be capped, plugged, or otherwise properly protected by the contractor to prevent damage or the intrusion of dirt or other foreign matter.

E. Materials and equipment damaged or containing defects developed before acceptance of the work shall be replaced with new at the Contractor's expense.

1.07 WORK SEQUENCE AND SCHEDULE

A. The sequence and scheduling of the work to be performed by the Contractor shall be subject to review and acceptance by the Owner's Representative. The Contractor shall submit a Submittal Progress Log and Schedule in accordance with Section 01 33 00 - Submittal Procedures prior to starting work. Project schedules shall conform to Specification Section 01 33 00.

1.08 CONTRACTOR'S USE OF PREMISES

A. Confine operations to areas immediately within the proposed project sites.
   1. Develop and utilize construction access and haul routes as per the rules and regulations pertaining to the locale in which the work is to be performed and in accordance with the discretion of the Owner's Representative.
   2. Do not encumber site with materials or equipment.

B. Limit use of premises for work and construction operations to allow for work by other contractors.
   1. Conduct operations so as not to cause unnecessary delay or hindrance to other contractors.
   2. Conduct, adjust, correct, and coordinate work with others to prevent project discrepancies and/or delays.

C. Assume full responsibility for protection and safekeeping of products stored on premises and work performed until Final Acceptance of the work.

D. Move stored products under Contractor's control which interfere with operations of the Owner.

E. Obtain and pay for use of additional storage or work areas needed for construction operations.

1.09 WORK HOURS AND WORK DURING ONGOING ACTIVITIES

A. Carry on the work as quietly as possible to prevent possible annoyance to adjacent properties. Avoid unnecessary noise at all times. Comply with local noise regulations or requirements. No work, delivery of equipment or materials shall take place between the hours of 6:00 PM and 7:00 AM, or during non-working hours and days without written authorization by the Owner's Representative.

B. When connecting new utilities to existing, and similar operations, the contractor shall time and coordinate with Owner's Representative, facility operators, and utility companies such operations to minimize interference with existing activities and operations.

1.10 MATERIALS

A. Unless otherwise noted or scheduled, materials and equipment specified and used in the work of this Contract shall be new, in first class condition, and suited to the intended use.

B. Materials shall be delivered to the site and stored in original containers sheltered from the elements, but readily accessible for inspection by the Owner's Representative until installed.

C. Materials of the same general type shall be of the same make and quality throughout the work to provide uniform appearance, operation, and maintenance ease.

D. Equipment specified by manufacturer's number shall include all controls and accessories listed in catalog as standard equipment. Furnish optional or additional accessories as specified.

E. Where no specified make of material or equipment is specified, any product by a reputable manufacturer which conforms to the requirements of the Contract Documents may be used with the Owner's Representative's acceptance.

F. Materials and equipment shall be current products by manufacturers regularly engaged in the production of such products.

G. Equipment items shall be supported by service organizations, which are reasonably convenient to the equipment installation in order to render satisfactory service to the equipment on a regular and emergency basis during the Specified Warranty Period.

1.11 NUISANCE WATER

A. The Contractor shall protect the work, at all times, from damage and shall take measures to prevent delays in the progress of the work caused by nuisance water, such as rainfall, irrigation water and groundwater.

B. The Contractor shall dispose of nuisance water using appropriate mechanical means at their sole expense and without adverse effects upon the Owner's, or any other property.

C. The Contractor shall comply with all applicable non-point source pollution regulations required by the Owner.

1.12 REFERENCE POINTS

A. The Contractor shall leave existing stakes and reference points in their existing locations unless directed or authorized otherwise by the Owner's Representative. The Contractor shall set additional stakes and reference points as necessary to properly establish horizontal and vertical controls required for the work.

1.13 COORDINATION

A. The Contractor shall coordinate all items of its work to assure efficient and orderly sequence of installation of construction elements.
   1. The Contractor shall make provisions for accommodating items installed by the Owner or under separate contracts.
   2. The Contractor shall coordinate and cooperate fully with all other agencies, sub-contractors, or utility company personnel furnishing labor, materials, or services, so that the work, as a whole, shall be executed in the most efficient manner and without conflict or delay.

B. The Contractor shall verify that characteristics of interrelated operating equipment are compatible and coordinate work having interdependent responsibilities for installing of mechanical, irrigation, or electrical work, which may be indicated diagrammatically on Drawings.

C. The Contractor shall coordinate space requirements and installation of work, which is indicated diagrammatically on Drawings.
   1. Follow routing shown for pipes and conduits as closely as possible, run lines parallel with lines of construction edges whenever possible.
   2. Utilize spaces efficiently for other installations, for maintenance, and for repairs.
   3. Work out all conditions involving work of all trades in advance of installation. If necessary, and before work proceeds in areas with constricted clearances, prepare supplementary drawings for Owner's Representative review, showing all work in "tight" areas. Provide supplementary drawings and additional work necessary to overcome spatially constricted conditions.

D. Differences or disputes concerning coordination, interference or extent of work between divisions shall be decided by the Owner's Representative.

E. Access Doors and Panels: Coordinate access door and panel requirements with each trade installing work to which access must be available to the Owner's Representative from time to time.

1.14 CUTTING AND PATCHING

A. Contractor shall be responsible for all cutting, fitting, or patching of work which may be required to make its several parts come together properly and fix it to receive or be received by work of other trades.

B. Costs incurred by defective or poorly timed work shall be borne by the responsible party, as determined by the Owner's Representative. Contractor shall not endanger any work, persons or construction by cutting, digging, or otherwise, and shall not alter the work of any other contractor except as acceptable to the Owner's Representative.

C. Patching of openings for new installations and openings resulting from the removal or relocation of an installation shall be done with material of the same type adjoining openings and as acceptable to the Owner's Representative.

1.15 CLEANING DURING CONSTRUCTION

A. Execute weekly cleaning operations to keep the work, site, streets, and adjacent properties free from accumulations of waste materials, rubbish, and windblown debris resulting from construction operations.

B. Provide on-site containers for the collection of waste materials, debris and rubbish.

C. Remove hazardous waste materials, debris, and rubbish from the site periodically and properly dispose of such materials at legal disposal areas.
   1. Location of legal disposal sites and all costs incurred from waste disposal and transportation shall be the responsibility of the contractor.
   2. Waste material or debris shall not be buried or burned on the site.

D. The Owner's Representative may, at any time during construction, order general clean-up of the site at no additional cost to the Owner.

1.16 PROJECT COMPLETION

A. Conform to Section 01 77 00 - Contract Closeout.

B. The Contractor shall, at completion of the project, leave the installed work properly operating and in a thoroughly clean condition.

C. Thoroughly instruct the Owner's Representative and any applicable operation and maintenance personnel in the contents of the "operations and maintenance manual." Refer to Section 01 33 00 – Submittal Procedures.

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

1.01 SUMMARY

A. Section Includes: Specific requirements for submission and approval of products other than those specified or noted on the Drawings.

B. Related Requirements:
   1. Section 01 33 00 – Submittal Procedures
   2. Other applicable Sections of the Specifications

1.02 DEFINITIONS

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

B. Substitutions for Cause: Changes proposed by Contractor that are required due to changed project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.

C. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.03 INTENT OF SPECIFICATIONS – PRODUCT SELECTION

A. When a material, article, or process is indicated or specified by trade, patent, proprietary name, or name of manufacturer, the Specification shall be deemed to be followed by the words "or equal, as accepted in writing by the Owner's Representative" and a request for substitution shall be submitted as specified in this Section. Provide only the named product or products where products are specified followed by the words "no substitution." Substitutions are not allowed.

B. The naming of more than one manufacturer in a Section does not imply that all products produced by the listed manufacturers are acceptable for use on the project. Where more than one proprietary name, process, and product is specified, the Contractor may provide materials or equipment of any one of the manufacturers specified if it is in full compliance with the Contract Documents and is acceptable to the Owner's Representative.

C. Costs incurred due to requests, changes or revisions resulting from substitutions requiring Drawings or services of the Owner's Representative or Project Consultants to facilitate purchase, installation or erection of any portion of the work shall be borne by the Contractor. A flat hourly rate, as agreed upon, shall be paid by the Contractor whether the change is accepted or not. This fee shall be deducted, and paid, from Contract moneys due to the Contractor as determined by the Owner's Representative.

1.04 ACTION SUBMITTALS

A. Procedures: In accordance with Section 01 33 00 – Submittal Procedures.

B. Substitution Requests:
   1. Include sufficient data, drawings, samples, literature, and other detailed information which demonstrates to the Owner's Representative that the proposed substitute is equal in quality, operating efficiency, and durability of the material specified.
   2. Substitution Request Form: As mutually agreed upon by Architect and Contractor.

3. Documentation:
    a. Submit a detailed side-by-side comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
    b. Sufficient data, drawings, samples, literature, and other detailed information which demonstrates to the Owner's Representative that the proposed substitute is equal in quality, operating efficiency, and durability of the material specified.
    c. Statement indicating why specified product, fabrication, or installation cannot be provided, if applicable or requested.
    d. Samples for review, if applicable.
    e. Certificates and qualification data.
    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 reports evidencing compliance with building code in effect for Project, from ICC-ES.
    i. Cost information, including a proposal of change, if any, in the Contract Sum.
    j. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
    k. 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.

C. Submittal Timing:

1. Following Award of Contract:
    a. Substitutions for Cause: Submit requests immediately on discovery of need for change, but not later than 15 working days prior to time required for preparation and review of related submittals.
    b. Substitutions for Convenience: Submit within 20 days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Architect.

1.05 CONSIDERATION OF SUBSTITUTIONS

A. General:
1. Materials and equipment for the work shall be the standard product of a manufacturer regularly engaged in the production of such materials and equipment. Product options or substitutions shall not be the basis for any price increase above the original Contract Sum.
2. Substitutions which are equal in quality, efficiency, durability and utility to those specified will be permitted, subject to the following conditions.
3. The Owner's representative shall review such proposed substitutions and determine if a substitution is acceptable. If the following conditions are not satisfied, Owner's Representative will return requests without action, except to record noncompliance with these requirements.
4. Failure of the Contractor to submit proposed substitutions for review in the manner specified shall be sufficient cause for rejection by the Owner's Representative of any substitutions otherwise proposed.
5. Failure to place orders for specified equipment or material sufficiently in advance of the scheduled date of installation shall not be considered a valid reason upon which the Contractor may base a request for any substitutions or for any deviations from the Contract Documents.

B. Substitutions for Cause: Owner's Representative will consider Contractor's request for substitution for cause when the following conditions are satisfied. If the following conditions are not satisfied, Owner's Representative will return requests without action, except to record noncompliance with these requirements:
1. Substitution request is fully documented and properly submitted.

2. Requested substitution will not adversely affect the Project Construction Schedule.
3. Requested substitution has received necessary approvals of authorities having jurisdiction, if applicable.
4. Requested substitution provides specified warranty.
5. 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.

C. Substitutions for Convenience: Owner's Representative will consider Contractor's request for substitution for convenience when, in addition to the conditions specified for a substitution for cause, under the following conditions.
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 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.

D. Action by Owner's Representative:
1. Substitutions shall be favorably reviewed and accepted by the Owner's representative in writing prior to implementation. Favorable review shall not relieve the Contractor from complying with the requirements of the Contract Documents, and the Contractor shall be responsible for all expenses for any changes resulting from acceptable substitutions which affect other parts of the work.
2. If necessary, Owner's Representative will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution.
3. Owner's Representative will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
4. Forms of Acceptance: Change Order, Construction Change Directive, or Supplemental Instructions for minor changes in the Work.

E. The first or only named manufacturer is the basis for the project design and the use of alternative-names, second-names, or unnamed manufacturer's products may require modifications in the project design and construction.
1. Costs incurred due to requests, changes or revisions resulting from substitutions requiring drawings or services of the Owner's representative or project consultants to facilitate purchase, installation or erection of any portion of the work, shall be borne by the contractor. A flat hourly rate, as agreed upon, shall be paid by the contractor whether the change is accepted or not. This fee shall be deducted, and paid, from Contract moneys due to the contractor as determined by the Owner's representative.

F. Contractor shall furnish full information concerning the material or articles being proposed for substitution.
1. Testing of a proposed substitute material to assure compliance with the Specifications may be required by the Owner's representative at the contractor's expense.
2. Samples shall be submitted for review as specified in Section 01 33 00 – Submittal Procedures.
3. Equipment, material, and articles installed or used by the contractor without required review, shall be at the contractor's risk.

G. Substitutions shall comply with or exceed all requirements of size, function, structure, durability, and appearance without exception.
1. Use of accepted substitutions shall in no way relieve the contractor from responsibility for compliance with the Contract Documents after installation.
2. The contractor shall assume all extra costs caused using such substitutions where they affect other work or trades.

1.06 SUBSTITUTION REQUEST FORM

A. For proposed substitutions, the Contractor shall complete the following Substitution Request Form, attach substantiating back-up literature, and submit to the Owner's representative within time limit specified.

(Remainder of this Page is Blank)

SUBSTITUTION REQUEST FORM

DATE: _____

TO: OWNER'S REPRESENTATIVE

PROJECT NAME: _____

_____

_____

SPECIFIED ITEM: Section _____ Page _____ Item Number_____ Paragraph _____

DESCRIPTION:

_____

_____

_____

_____

_____

_____

_____

_____

SAMPLE

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION: (put N/A where not appropriate)

Manufacturer: _____ Color:_____

Model Number: _____ Material: _____

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the requests; applicable portions of the data are clearly identified.

Attached data also includes description of changes to Contract Documents which the proposed substitution requires for proper installation.

The undersigned states that the following paragraphs, unless modified on attachments, are correct:

1. The proposed substitution does not affect dimensions shown on Drawings. If, in fact, it does affect dimensions, the contractor shall provide shop drawings, accurately showing changes to documents.
2. The undersigned shall pay for changes to the design, including engineering design, detailing, and construction costs caused by the requested substitution.

3. The proposed substitution shall not adversely affect other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts are locally available for the proposed substitution.

The undersigned further states that the function, appearance, and quality of the proposed substitution are equivalent or superior to the specified item.

Submitted by:

Signature: _____ Title: _____

License Category: _____ License Number: _____

Firm: _____ Phone No.: _____

Address: _____ Fax No.:_____

Telephone: _____

OWNER'S REPRESENTATIVES REVIEW:

☐ NO EXCEPTIONS TAKEN ☐ EXCEPTIONS TAKEN (SEE ATTACHED COMMENTS)

☐ FURNISH AS CORRECTED ☐ REVISE AND RESUBMIT

By: _____ SAMPLE

Date: _____

Comments:

_____

_____

_____

_____

Attachments:

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Procedures to be followed in preparing and submitting the following supplementing and superseding those included in the General Conditions.
      a. Photographic documentation.
      b. Construction Schedule.
      c. Submittal Schedule.
      d. Project directory.
      e. Product list.
      f. Shop drawings.
      g. Design-build engineering design and drawings.
      h. Product data.
      i. Samples.
      j. Procedures for:
         1) Action Submittals.
         2) Informational submittals.
         3) Deferred submittals.
         4) Delegated design services.
      k. Colors and patterns submittals.
      l. Operating and maintenance manuals.
      m. Field samples and mockups, including on-site review of materials, colors, and textures.
      n. Requests for Information (RFI's).
   2. Final distribution of submittals.

B. Related Requirements:
   1. Section 01 25 00 - Substitution Procedures.

1.02 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Owner's Representative's responsive action. Action submittals are those submittals indicated in individual Specification Sections as action submittals.

B. Informational Submittals: Written and graphic information and physical samples indicated in individual Specification Sections as informational submittals that do not require Owner's Representative's responsive action.

C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.03 GENERAL

A. Comply with the requirements specified in addition to submittal review procedures and requirements of the General Conditions.

B. Do not commence any portion of the Work requiring submission of a shop drawing, product datum, or sample until the submittal has been reviewed by Owner's Representative and appropriate consultant. Such portions of the Work shall be in accordance with reviewed submittals.

C. Shop drawings, product data, and samples are in no case to be considered Contract Documents but are to be treated only as instruments of convenience and facility to further the progress of the Work.

D. Shop drawings, product data, samples and supporting data shall be prepared by Contractor or its suppliers but shall be submitted to Owner's Representative by Contractor as the instruments of the Contractor.
   1. Contractor shall check the drawings of its suppliers as well as its own drawings before submitting them to Owner's Representative.
   2. Contractor shall ascertain that shop drawings, product data, and samples meet all requirements of the Contract Documents and also conform to the structural and space conditions. If shop drawings, product data, and samples show variations from Contract Documents, whether because of standard shop practice or other reasons, Contractor shall make special mention thereof in its letter of transmittal and describe the reasons why there are variations.
   3. Contractor shall be fully responsible for observing the need for and making changes in arrangement and manner of installation of piping, connections, wiring, and similar items that may be required by equipment it proposes to supply, both as pertains to its own work and work affected under other parts, headings, or Divisions of the Contract Documents.
   4. Prior to submittal to Owner's Representative, each shop drawing, product datum, and sample submitted for review shall be stamped, dated, and signed by Contractor, verifying that it has been checked by Contractor to be in accordance with the Contract Documents. Submittals not signed by Contractor will be returned without review by the Owner's Representative.

E. Miscellaneous systems not specifically specified but installed to meet code requirements or for other reasons are subject to Owner's Representative's review prior to installation.

1.04 COORDINATION OF SUBMITTALS

A. Prior to submittal, use all means necessary to fully coordinate all material, including, but not necessarily limited to:
   1. Determine and verify all interface conditions, catalog numbers and other data.
   2. Coordinate with other trades as required.
   3. Clearly indicate all deviations from requirements of the Contract Documents.
   4. Verify that each item and the submittal conform in all respects with the requirements of the Contract Documents.

B. The following products do not require further review except for interface within the Work, unless indicated otherwise:
   1. Products specified by reference to standard specifications such as ASTM and similar standards.
   2. Products specified by manufacturer's name and catalog model number.

C. By affixing the Contractor's signature to each submittal, the Contractor certifies that this coordination has been performed.

1.05 GROUPING OF SUBMITTALS

A. Unless otherwise specified, make submittals in groups containing all associated items to assure that information is available for checking each item when it is received.
   1. Partial submittals may be rejected as not complying with the provisions of the Contract.
   2. The Contractor may be held liable for delays so occasioned.

1.06 IDENTIFICATION OF SUBMITTALS

A. Consecutively number all submittals.
   1. When material is resubmitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.
   2. On resubmittals, reference the original submittal number.

B. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.

C. On at least the first page of each copy of each submittal, and elsewhere as required for positive identification, clearly show the submittal number in which the item was included.

D. Maintain an accurate submittal log for the duration of the Work, showing current status of all submittals at all times. Make the submittal log available to the Owner's Representative for review.

E. Quality Control Set: Maintain returned final set of submittals at project site, in suitable condition and available for quality control comparisons by Owner's Representative.

1.07 TIMING OF SUBMITTALS

A. Make submittals far enough in advance of scheduled dates for installation to provide all time required for reviews, necessary approvals, possible revisions, resubmittals, and for placing orders and securing delivery.

B. In scheduling, allow for review by the Owner's Representative in a timely manner following receipt of the submittal by the Owner's Representative.

C. Delays caused by tardiness in receipt of submittals will not be an acceptable basis for extension of the Contract completion date.

1.08 SUBSTITUTIONS

A. Substitution requests shall be written, timely and submitted in accordance with the procedures specified in Section 01 25 00 - Substitution Procedures.

PART 2 - SUBMITTALS

2.01 PROJECT DIRECTORY

A. After execution of the Contract but prior to commencement of Work, Contractor shall submit to Owner's Representative a Project Directory listing subcontractors and vendors on the Project and giving a brief description of their scope of work, firm name, contact person, address, phone number, and fax number.

2.02 SUBMITTAL SCHEDULE

A. Contractor shall prepare and submit to Owner's Representative a "Submittal Schedule" when required by the General Conditions showing scheduled dates of submittals and date required for return of submittals to Contractor.

B. Contractor shall provide in schedule a minimum of 10 working days for Owner's Representative to review and check submittals as may be necessary provided it is not a deferred approval item. Based on the number and complexity of submittals at any one time, Owner's Representative's review period may be longer than 10 days.

C. Dates on "Submittal Schedule" shall be agreed upon by both Owner's Representative and Contractor.

2.03 PRECONSTRUCTION PHOTOGRAPHS

A. Before commencement of work on the site, take digital photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by the Owner's Representative.

B. Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as cracking or other damage caused by demolition, site preparation, and building construction operations.

C. Submit digital file as specified for Construction Photographs.

D. Submit before Work begins.

2.04 CONSTRUCTION PHOTOGRAPHS

A. Provide digital photographs of site and construction from beginning of demolition to completion of exterior work.

B. Photographs shall:
   1. Provide factual presentation.
   2. Provide correct exposure and focus, high resolution and sharpness, maximum depth of field, and minimum distortion.

C. Views:
   1. Provide non-aerial photographs from four cardinal views at each specified time until date of Substantial Completion.
   2. View and location for each orientation shall be maintained throughout Project.

D. Digital File:
   1. File Format: Joint Photographic Experts Group (JPEG), unless otherwise directed by Owner's Representative.
   2. Minimum Resolution: 2400 x 3000 pixels.
   3. Provide digital date/time information in each image file (EXIF metadata).
   4. Digital images shall be exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

E. Submit digital file of photographs on USB flash drive or cloud storage folder with each Application for Payment.
   1. Deliver USB flash drive with Project Record Documents. The USB flash drive shall contain digital files of the Project photographs.
   2. Provide digital files with dated folders and appropriate descriptions.

2.05 CONSTRUCTION SCHEDULE

A. In accordance with the General Conditions, prepare a comprehensive schedule of basic operations of the entire Project in the form of a Critical Path (CPM) network or other appropriate method acceptable to Owner's Representative.
   1. Indicate critical dates for submission of specified shop drawings, product data, samples, and certificates. Provide in Schedule a minimum of 10 working days for Owner's Representative to review and check submittals as may be necessary. No extension of time will be granted because of Contractor's failure to make submittals to allow for review and processing by Owner's Representative in accordance with the accepted milestones. Specific submittals considered by the Contractor to be on the "critical path" shall be indicated on the Schedule.

2. Include decision dates for products specified by allowance and for selection of colors/finishes.

B. The schedule shall be the basis for establishing starting and completing dates of Work for the Project.

C. Conform to accepted schedule, and arrange work in such a manner that it will be installed in accordance with the schedule.

D. Establish a program to reevaluate and update the schedule periodically in accordance with requirements of the Project. Submit first schedule 2 weeks after Notice to Proceed.

E. Coordinate letting of subcontracts, material purchases, delivery of materials, sequence of operations, and similar activities to conform to accepted schedule, and furnish proof of conformance as may be required by Owner.

F. In case Owner determines, after consultation with Owner's Representative, that Contractor fails or refuses to take appropriate and necessary measures to complete the Work in accordance with the accepted schedule or within time to which such completion may be extended, the Contract, or any part thereof, may be terminated under the provisions of the General Conditions.

G. Submit to the Owner's Representative for review, within 45 calendar days after date of the Contract or as allowed by the Schedule, all submittals for equipment, fabrications, and specialty items as listed in each Section of the Specifications.

2.06 SHOP DRAWINGS

A. Shop drawings shall be drawn to a scale, be completely dimensioned, and be sufficiently large to show all pertinent aspects of the item and its method of connection to the Work, or as specifically indicated elsewhere in other Sections of these Specifications.

B. Entitle shop drawings with name of the Project and list applicable divisions, sections, article, or reference on each sheet.

C. Submit separate items on separate sheets.

D. The reproduction of any Contract Documents for use in a shop drawing submittal is not permitted.
1. If the Contractor requires, it may request drawings/backgrounds from the Owner's Representative to use in its preparation of shop drawings. The Owner's Representative will send drawings, via e-mail, only after the following is completed:
   a. Contractor to complete a "CAD Release & Indemnity Agreement," or similarly named document, to be provided by Owner's Representative. Sign and return to the Owner's Representative.
   b. Requests for drawings prepared by consultant of Owner's Representative shall be directed to the office of the respective consultant and are subject to each consultant's firm policies.
2. Review comments of the Owner's Representative or it's consultants will be shown on the copy returned to the Contractor. The Contractor shall make and distribute additional copies as are required for its purposes.
3. The Owner shall be provided with a copy of shop drawing transmittals only if requested.

2.07 PRODUCT DATA

A. Manufacturer's standard drawings shall be modified to delete information which is not applicable and shall be supplemented to provide additional information where so required.

B. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, and other standard descriptive data shall:
1. Have each copy clearly marked to identify pertinent materials, products, models, finishes, etc.

2. Show clearly standard options included.
3. Show dimensions and clearances required.
4. Show performance characteristics and capacities.
5. Show wiring diagrams and controls, and show necessary rough-in requirements for utility services and connections, where applicable.
6. Include manufacturer's installation instructions on 8.5-inch by 11-inch format.

C. Identify each item of product data by reference to sheet and detail numbers of Contract Drawings and/or specific reference to Articles or paragraphs of a Specification Section.

D. Where product data, as submitted, contains extraneous information, unmarked options, or is incomplete, it will be returned to Contractor without review.

2.08 SAMPLES

A. Contractor shall forward to Owner's Representative, at its own expense, samples designated for use on the Project. Include material, equipment, textures, colors, and fabrics in sizes and quantities as required by the Drawings and Specifications or as requested by Owner's Representative. Where there is an expected range of color or texture variations for the specified item, submit sufficient number of samples to illustrate range.

B. Submit and resubmit samples until accepted by Owner's Representative.

C. No review of a sample shall be taken in itself to change or modify the Contract requirement.

D. Finishes, materials, and workmanship in the completed Project shall match accepted samples.

E. Samples of value will be returned to Contractor, when requested in writing at time of submittal, for its use in the Project after review, analysis, comparison, or testing as may be required by Owner's Representative.

F. No samples shall be incorporated into the Work, unless otherwise specified or specific approval is given by Owner's Representative.

2.09 COLORS

A. Unless the color and pattern are shown or specified, whenever a choice of color or pattern is available in a specified product, submit accurate color charts and pattern charts to Owner's Representative for review and selection.

B. Completely describe the relative costs and capabilities of each color and pattern, unless available colors and patterns have identical costs and wearing capabilities.

2.10 FIELD SAMPLES AND MOCKUPS

A. Comply with requirements specified in respective Specification Section.

2.11 REQUESTS FOR INFORMATION (RFI'S)

A. RFIs shall be submitted by the Contractor or by subcontractors to the Contractor who shall then assign the request an RFI number and forward the request on to the Owner's Representative. RFIs from contractors under separate contract with Owner, and performing work concurrently with work under this Contract, shall submit RFIs through the Contractor for coordination.

B. Subcontractors shall not submit RFIs directly to the Owner's Representative.

C. Each RFI shall be given a discrete, consecutive number such as “001,” “002,” “003,” etc. Revisions or resubmittal of the same RFI shall maintain the original RFI number but be otherwise identified with a suffix such as “001A” for first revisions, “001B” for second revision, etc.

D. Contractor shall identify in the RFI the specific issue that the Contractor is requesting information on, where the issue is referred to in the Contract Documents, and what is the Contractor’s proposed solution to the apparent conflict. RFIs not addressing these three issues will be rejected.

E. The Owner’s Representative's response to RFIs will confirm a stated interpretation or otherwise interpret the design intent and may include furnishing an alternative conflict resolution.

F. The Owner’s Representative will review and process RFIs in an average of 10 working days. It is acknowledged and understood that some RFIs will take longer to answer than others.

G. RFI Log: Contractor shall prepare and maintain a log of RFIs, and at any time requested by the Owner’s Representative, the Contractor shall furnish copies of the log showing all outstanding RFIs.

PART 3 - EXECUTION

3.01 PROCEDURES FOR ACTION SUBMITTALS

A. General: Submit as specified in the General Conditions and Specification Sections.
   1. Submittals shall be made to Owner’s Representative. Submittal of shop drawings via e-mail attachment will be generally accepted, though when requested by Owner’s Representative, Contractor shall provide full size and half size shop drawings.
   2. Subcontractors shall make submittals to Contractor.
   3. Submittals shall not be made directly to the Owner, unless specifically requested, or consultants of the Owner’s Representative. Even if a submittal is reviewed and returned by a consultant of the Owner’s Representative, such submittal shall be considered as not reviewed if not submitted through the Owner’s Representative.
   4. If more than one resubmittal of the same item or its component is required, the Contractor will be billed for additional review time and materials at current billing rates of the Owner’s Representative.

B. Unless otherwise agreed or requested, Owner shall be provided with a copy of transmittals only.

C. Copies required in each Action Submittal shall be as follows unless otherwise mutually agreed or specified in a respective Specification Section:
   1. Shop Drawings and Product Data: Digital PDF (Portable Document Format) files via email, ftp site, or other secure file transfer protocol.
      a. Digital submittals shall be fully compatible with Adobe Acrobat Reader.
      b. All parties shall view and print with Adobe Acrobat (fully up-to-date) to ensure compatibility, unless agreed upon otherwise.
      c. Owner’s Representative reserves the right to request hard copies of submittals as follows:
         1) Shop Drawings.
         2) Product Data.
   2. Samples:
      a. Unless otherwise specified, submit samples in the quantity which is required to be returned, plus 1 which will be retained by the Owner’s Representative.
      b. By prearrangement in specific cases, a single sample may be submitted for review and, when reviewed, be installed in the Work at a location agreed upon by the Owner’s Representative.

D. Identification:
   1. Properly identify each submittal with name of Project, Contractor, subcontractor, and date.

2. Accompany each submittal by an acceptable transmittal form referring to Project name and Specifications Section number, and paragraph number, when applicable, for identification of each item.
3. Consecutively number shop drawings for each Section of work; retain numbering system throughout all revisions.
4. Allow clear space on each drawing, product datum, and sample for stamp of Contractor and Owner's Representative. Where clear space is not available on samples, submit with tags or stickers attached.

E. Stamp each shop drawing, product datum, and sample to certify that it has been coordinated and checked for completeness and compliance with requirements of the Work, Project, and Contract Documents.

F. Review by Owner's Representative:
1. General:
   a. Except for finish, color, and other aesthetic matters left to Owner's Representative's decision by Contract Documents, Owner's Representative's review of shop drawings, product data, and samples is only for Contractor's convenience in following work and does not relieve Contractor from responsibility for deviations from requirements of Contract Documents.
   b. Do not construe review by Owner's Representative as a complete check or relief from responsibility for errors or omissions of any sort in shop drawings or schedules or from necessity of furnishing work required by Contract Documents that may not have been shown on shop drawings.
   c. Review of a separate item by Owner's Representative does not indicate review of complete assembly in which it functions.
   d. Review comments of the Owner's Representative (or its consultants) will be shown when it is returned to the Contractor. The Contractor shall make and distribute such copies as are required for its purposes.
2. Submittals not stamped by Contractor and submittals which, in opinion of the Owner's Representative, are incomplete, contain numerous errors, or have not been checked or have only been checked superficially will be returned to Contractor for resubmittal.
3. Processing:
   a. Owner's Representative will review shop drawings, product data, and samples in accordance with agreed upon "Submittal Schedule" and will return them to Contractor imprinted with stamp of the Owner's Representative.
   b. Notations by Owner's Representative which increase Contract cost or time of completion shall be brought to attention of the Owner's Representative before proceeding with work. Failure to do so will result in the increased costs being borne by the Contractor.
   c. Each submittal will be stamped indicating appropriate action required of the Contractor.
   d. If for any reason the Contractor cannot comply with the notations, Contractor shall re-submit submittal. In the transmittal letter accompanying the re-submittal, clearly describe the reason(s) for not being able to comply with the notations.

G. Consultants' Review:
1. Submittals requiring review by Owner's Representative or its consultants shall be sent to the Owner's Representative. Owner's Representative will forward submittal to applicable consultant for their review.
2. Processing shall be in accordance with consultants stamp.
3. If action required by consultants stamp is not clear, Contractor shall immediately notify the Owner's Representative for a clarification.
4. If returned submittal also includes stamp by the Owner's Representative, processing shall be in accordance with the Owner's Representative's stamp.

H. Revisions:
1. Make revisions pertinent to by comments noted on the submittal.
2. If the Contractor considers any required revision to be a change, they shall so notify the Owner's Representative as provided for in the General Conditions.

3. Show each revision by number, date, and subject in a revision block on the submittal.
4. If for any reason Contractor cannot comply with the notations, Contractor shall resubmit submittal.

I. Revisions after Review: When a submittal has been reviewed by the Owner's Representative, resubmittal for substitution of materials or equipment will not be considered unless accompanied by an acceptable explanation as to why the substitution is necessary, or unless directed by the Owner.

3.02 PROCEDURES FOR INFORMATIONAL SUBMITTALS

A. General:
1. Prepare and submit "Informational Submittals" where required by the Specifications.
2. Number of Copies: Submit PDF as specified for Action Submittals, unless otherwise indicated. Owner's Representative will not return copies.
3. 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.
4. Test and Inspection Reports: Comply with requirements specified in Section 01 45 00 – Quality Control.

B. The following items shall be considered "Informational Submittals" whether or not identified as such in the respective Specification Sections.
1. Qualification Data.
2. Certificates for or from the following:
   a. Installers.
   b. Manufacturers.
   c. Products and materials.
3. The following Reports:
   a. Material and Product Test Reports.
   b. ICC-ES Reports:
   c. Preconstruction Test Reports.
   d. Compatibility Test Reports.
   e. Field Test Reports.
4. Maintenance Data.
5. Design Data.
6. Manufacturer's Instructions.
7. Manufacturer's Field Reports.
8. Insurance Certificates and Bond.
9. Construction photographs as specified .
10. Material Safety Data Sheets (MSDSs).

3.03 PROCEDURES FOR DEFERRED SUBMITTALS

A. Deferred Approval submittals shall first be submitted to the Owner's Representative. If the Owner's Representative reviews the submittal with corrections noted, those corrections must be addressed and the submittal returned to the Owner's Representative. Once the Owner's Representative has no comments on a submittal, it will be returned and shall be resubmitted with approval by all government agencies having jurisdiction."

B. The Contractor shall then submit to these agencies and make revisions required by these agencies until approval by all government agencies having jurisdiction is obtained. See Section 01 11 00 - Summary of Work for further requirements.

C. When approval has been obtained by all governing agencies having jurisdiction, the approved submittal shall be resubmitted to the Owner's Representative for final approval. It is the responsibility of the Contractor to verify acceptability of government agency required revisions with the Owner's Representative. If the resubmittal to the Owner's Representative includes revisions that had not been

previously approved by the Owner's Representative in writing, the Owner's Representative has the right to reject these revisions. It is then the Contractor's responsibility to resubmit to government agencies having jurisdiction to obtain approval of the Owner's Representative's noted corrections.

3.04 PROCEDURES FOR CLOSEOUT AND MAINTENANCE MATERIAL SUBMITTALS

A. Number of Copies: Two, unless otherwise directed by Owner's Representative.

B. Comply with additional Closeout Procedures specified for the Project.

3.05 FINAL DISTRIBUTION AFTER REVIEW

A. In addition to copies of submittals required by Contractor, subcontractors, suppliers, and fabricators, Contractor shall make distribution to:
   1. Contractor's jobsite file.
   2. Project Record Documents file; see additional requirements specified in Section 01 78 39 - Project Record Documents.

END OF SECTION

SECTION 01 41 00

REGULATORY REQUIREMENTS

1.01 SUMMARY

A. Section Includes:
   1. The codes and regulations applicable to the Work.
   2. Code and regulatory abbreviations used in the Specifications.

B. Related Requirements:
   1. Section 01 42 00 - References, Abbreviations, and Definitions; requirements relating to industry standard references used in the Specification Sections.

1.02 APPLICABLE CODES AND REGULATIONS

A. Codes which apply to this Project include, but are not limited to, the following including additions, changes, and interpretations adopted by the enforcing agency in effect as of the date of these Contract Documents.
   1. City of Hawthorne, County of Los Angeles:
      a. Municipal Codes established by the Building Inspection Commission (BIC) including the Building Code (SFBC), Mechanical Code, Plumbing Code, and Electrical Code.
      b. Noise Ordinance.
      c. Construction debris and waste management regulations.
   2. State of California Code of Regulations (CCR):
      a. Title 8, Industrial Relations.
      b. Title 19, Public Safety.
      c. Title 24, Building Standards Code.
         1) Part 2, California Building Code.
         2) Part 3, California Electric Code.
         3) Part 4, California Mechanical Code.
         4) Part 5, California Plumbing Code.
         5) Part 6, California Energy Code.
         6) Part 9, California Fire Code.
   3. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."
      a. Control of Work: Conform to Section 5.
      b. Control of Materials: Conform to Section 6.
   4. The following additional Codes and Standards:
      a. California Occupational Safety and Health Act Standards (Cal-OSHA).
      b. Occupational Safety and Health Act (OSHA).
      c. Air Quality Standards of the Bay Area Air Quality Management District of the California Air Resources Board including emissions and dust during construction.
      d. Americans with Disabilities Act (ADA) Standards.
      e. Environmental Regulations including:
         1) 22 CCR, Section 66260 et seq.; California Hazardous Waste Management Regulations.
         2) 40 CFR, Part 260 et seq.; Hazardous Waste Management System.
         3) 42 USC, Section 6901 et seq.; Resource Conservation and Restoration Act (RCRA).
         4) National Pollutant Discharge Elimination System (NDPES).
      f. National Fire Protection Association (NFPA): Standards 13, 24, 72, and 80.
      g. National Electrical Code (NEC).
   5. Local ordinances and amendments to the above codes.

B. All work shall meet or exceed the requirements of the above codes.

C. References in the Specifications to "code" or to "building code," not otherwise identified, shall mean the foregoing specified codes, together with the additions, changes, amendments, and interpretations adopted by the enforcing agency and in effect on the date of these Contract Documents. Nothing on the Drawings or in the Specifications shall be interpreted as requiring or permitting work that is contrary to these rules, regulations, and codes.

D. Where other regulatory requirements are referenced in these Specifications, the affected work shall meet or exceed the applicable requirements of such references.

E. Regulatory requirements referred to shall have full force and effect as though printed in these Specifications.

F. Where the Drawings or Specifications call for or describe materials, workmanship, or construction of a better quality, higher standard, or larger size than is required by said laws, codes, rules, and regulations, the provisions of the Drawings and Specifications shall take precedence over said laws, codes, rules, and regulations.

1.03 OTHER APPLICABLE LAWS AND REGULATIONS

A. All applicable federal, state, and local laws, regulations of governing utility districts, regulations of the state fire marshal, federal, state and local environmental regulations, and the various other authorities having jurisdiction over the construction of the Project shall apply to the Contract throughout and they shall be deemed to be included in the Contract the same as though printed in these Specifications.

B. Discrepancies between these codes, rules, and regulations and the Contract Documents shall be brought to the attention of the Owner's Representative for resolution.

END OF SECTION

SECTION 01 42 00

REFERENCES, ABBREVIATIONS, AND DEFINITIONS

1.01 SUMMARY

A. Section Includes:
   1. Requirements for standard references used in the various Specification Sections.
   2. Standard reference abbreviations used in the Project Manual.
   3. Definitions of terms used in the Project Manual.

B. Related Requirements:
   1. Section 01 41 00 - Regulatory Requirements

1.02 STANDARD SPECIFICATIONS

A. The Contract Documents contain references to various standard specifications, codes, practices, and requirements for materials, work quality, installation, inspections, and tests published and issued by the organizations, societies, and associations. Such references are hereby made part of the Contract Documents to the extent required.

B. When standard specifications are included by abbreviation and number only, it is assumed that the Contractor is familiar with and has ready access to the specified standards.

C. When the effective date of a reference standard is not given, it shall be understood that the current edition or latest revision thereof and any amendments or supplements thereto in effect on the date of original issue of these Contract Documents, as indicated on the cover, shall govern the Work.

D. Reference standards are not furnished with the Contract Documents, because the Contractor, subcontractors, manufacturers, suppliers, and the trades involved are assumed to be familiar with their requirements.

E. Contractor shall obtain its own copies of required specified referenced publications.

F. The specification or standard referred to shall have full force and effect as though printed in these Specifications.

G. In addition to those standards specifically referenced in the Specifications, comply with the accepted industry standards and trade association recommendations for the respective portions of Work.

H. In the case of difference between referenced standards and the Contract Documents, the most stringent requirements prevail.

1.03 STANDARD SPECIFICATION ABBREVIATIONS

A. In addition to abbreviations indicated on the Drawings, references in the Project Manual to trade associations, technical societies, recognized authorities, and other institutions may include the following organizations, which are sometimes referred to by only the corresponding abbreviations. Not all abbreviations are listed, and not all listed abbreviations are used.

B. Abbreviations:

1.	AA	Aluminum Association
2.	AAMA	American Architectural Manufacturer's Association.
3.	ACI	American Concrete Institute
4.	AEIC	Association of Edison Illuminating Companies
5.	AIA	American Institute of Architects

6. AIEEE American Institute of Electrical and Electronic Engineers
7. AISC American Institute of Steel Construction, Inc.
8. AJCHN American Joint Committee on Horticultural Nomenclature
9. ANSI American National Standards Institute
10. APA APA - The Engineered Wood Association
11. ASHRAE American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc.
12. ASLA American Society of Landscape Architects
13. ASME American Society of Mechanical Engineers
14. ASTM American Society for Testing and Materials
15. AWMAC Architectural Woodwork Manufacturers Association of Canada
16. AWPA American Wood Protection Association
17. AWI Architectural Woodwork Institute
18. AWS American Welding Society, Inc.
19. AWWA American Water Works Association
20. BHMA Builder's Hardware Manufacturers Association
21. CBC California Building Code
22. CRA California Redwood Association
23. CSI Construction Specifications Institute
24. CLFMI Chain Link Fence Manufacturers Institute
25. CRSI Concrete Reinforcing Steel Institute
26. CS Commercial Standard of National Bureau of Standards, U.S. Department of Commerce
27. DHI Door and Hardware Institute
28. FGMA Flat Glass Marketing Association
29. FM Factory Mutual
30. FS Federal Specification of General Services Administration
31. GA Gypsum Association
32. ICC-ES International Code Council Evaluation Service, Inc.
33. MIL Military Specification of U.S. Department of Defense
34. NAAMM National Association of Architectural Metal Manufacturers
35. NAAWS North American Architectural Woodwork Standards
36. NAFM National Association of Fan Manufacturers
37. NBS National Bureau of Standards
38. NEC National Electric Code
39. NEMA National Electrical Manufacturers' Association
40. NFC National Fire Code
41. NFPA National Fire Protection Association
42. NIST National Institute of Standards and Technology
43. NLMA National Lumber Manufacturers Association
44. NSF National Sanitation Foundations
45. PCI Precast Concrete Institute
46. PDI Plumbing and Drainage Institute
47. RIS Redwood Inspection Service [Grading Rules]
48. SDI Steel Deck Institute
49. SDI Steel Door Institute
50. SFPA Southern Forest Products Association
51. SMACNA Sheet Metal and Air Conditioning Contractors' National Association, Inc.
52. State of California:
    a. Caltrans Business and Transportation Agency, Department of Transportation
    b. SFM Office of State Fire Marshal
    c. DSA Division of State Architect.
53. SSPC SSPC: The Society for Protective Coatings
54. TCNA Tile Council of North America
55. UL Underwriters' Laboratories, Inc.
56. WCLIB West Coast Lumber Inspection Bureau
57. WDMA Window and Door Manufacturers Association
58. WI Woodwork Institute

59. WMMP Wood Moulding & Millwork Producers Association
60. WRCLA Western Red Cedar Lumber Association
61. WWPA Western Wood Products Association.

1.04 DEFINITIONS

A. Reference to Drawings: Where the words "shown", "indicated", "detailed", "noted", "scheduled". or words of similar import are used, it shall be understood that reference is made to the Drawings accompanying these Specifications, unless otherwise noted.

B. Addendum: The word "Addendum" shall mean written and/or graphic modifications to the Contract documents provided to holders of the Contract Documents prior to the opening of bids. Addenda shall be issued by the Owners Representative.

C. Alternates: The word "Alternates" shall be understood to mean alternate products, materials, equipment, systems, methods, units of work or elements of the construction, which may, at the Owners option and under the terms established by the Contract Documents, be added to, or deleted from the work.

D. Approvals: The words "approved", "approval", "acceptable", "acceptance", shall mean acceptance by the Owners Representative is required.

E. Contract Change Order: The words "Contract Change Order" shall mean a change order authorization to the Contractor, covering changes to the Contract found by the Owner Representative to be necessary for the proper completion or construction for the whole work required by the Contract, and establishing the basis of payment and/or time adjustments for the work affected by the changes, also sometimes referred to as a "Change Order."

F. Contract Documents: The words "Contract Documents" shall mean the documents contained within the General Conditions, Special Provisions of the Contract, the Drawings, the Specifications, Change Orders, and other modifications issued by the Owners Representative prior to and after execution of the Contract and identified as a Contract Document. The words "Contract Documents" shall mean those documents as defined in the General Conditions.

G. Directions: The words "directed," "designated," and "selected" shall mean the directions, designations, selection, of the Owners Representative, unless otherwise noted.

H. Drawings: The word "Drawings" shall mean the official Project bid or construction plans, plan details, profiles, typical cross sections, working drawings, shop drawings, supplemental drawings, and/or reproductions thereof, accepted or issued by the Owners Representative, which show the locations, character, dimensions, and details of work to be performed. All such documents are to be considered as a part of the Drawings.

I. Equals: The words "or equal," "equal to," "approved equal," "or approved equal," “accepted equal,” and "equivalent," shall mean "equal to or acceptable in the opinion of the Owners Representative," unless stated otherwise.

J. Language: Words and phrases requiring an action or performance, such as "perform," "provide," "install," "furnish," "connect," "test," "coordinate," and words and phrases of similar import, shall be understood to be preceded by the phrase "The Contractor shall" unless otherwise stated.

K. Modifications: The word "modifications" shall mean a written amendment to the Contract signed by both parties to the Construction Contract, a Change Order, a written interpretation issued by the Owners Representative or a written order for a minor change in the work issued by the Owners Representative.

L. Notice To Proceed: The words "Notice to Proceed" shall mean the written notice issued by the Owners Representative to the contractor fixing the date on which or within which dates the contractor shall start to perform the contractor's obligations under the Contract Documents.

M. Perform: The word "perform" shall mean that the contractor, at their expense, shall perform all operations including necessary labor, tools, and equipment and further including the furnishing and installation of materials that are indicated, specified, and required to complete such the conditions of the Contract and Contract Documents.

N. Project: The word "project" shall mean the total construction of the work performed under the Contract Documents.

O. Provide: The word "provide" shall mean that the Contractor, at its expense, shall furnish and install the work, complete in place and ready for use, including furnishing of necessary labor, materials, tools, equipment and transportation.

P. Required: The word "required" shall mean "as required to properly complete the work and as required and acceptable to the Owner's Representative" unless otherwise noted.

Q. Shop Drawings: The words "shop drawings" shall mean drawings, diagrams, schedules, and other data specifically prepared for the work by the contractor or their sub-contractor, manufacturer, supplier, or distributor to illustrate some portion of the work.

R. Site: The words "Site" or "Sites" shall be understood to mean the property or properties described within the Contract Documents and indicated on the Drawings where the work shall commence.

S. Substantial Completion: The words "substantial completion" shall mean the time and date when the work, or designated portion thereof, is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the work, or designated portion thereof, for the use for which it was intended, as evidenced by the Owner's Certificate of Substantial Completion. The Certificate of Substantial Completion shall set forth the date on which Substantial Completion is deemed by the Owners Representative in its sole discretion to have occurred. This shall occur only when the site improvements are 100 percent complete and shall exclude correction of final punch list items(s) and the execution of the Landscape Maintenance Period. The issuance of a Certificate of Substantial Completion shall signify the date on which the accounting of Contract "Working Days" or "Calendar Days" is terminated insofar as they may relate to Liquidated Damages.

T. Work: The word "work" whether capitalized or in lower case, shall be understood to mean labor, materials, or both, and the entire construction encompassed by the Contract Documents.

END OF SECTION

SECTION 01 45 00

QUALITY CONTROL

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Testing and inspection requirements.
   2. Testing Agency qualifications.
   3. Manufacturer's field services.

B. Related Requirements:
   1. Inspections and Testing Required by Laws, Ordinances, Rules, Regulations, Orders, or Approvals of Public Authorities: Conditions of the Contract.
   2. Additional requirements for inspections and testing are included in the General Conditions.

1.02 TESTING LABORATORY SERVICES

A. General:
   1. Requirements for testing are included in governing codes and described in various Sections of the Specifications.
   2. The Owner will employ and pay for the services of an Independent Testing Agency to perform testing and inspection requirements required by code and other tests and inspections when specified to be performed and paid for by the Owner. Employment by the Owner of the Testing Agency shall in no way relieve Contractor's obligations to perform the Work of the Contract.
   3. Tests required by the Specifications and not specified or required by Code to be performed and paid for by the Owner shall be performed by a testing laboratory employed and paid for by the Contractor and meeting the qualification requirements specified in this Section.
   4. Where no testing requirements are described, but the Owner decides that testing is required, the Owner may require such testing be performed under current pertinent standards for testing. Payment for such testing will be by the Owner.
   5. Inspections, tests, and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with the Contract Documents.

B. Qualification of Testing Agency:
   1. Meet "Recommended Requirements for Independent Laboratory Qualification," published by American Council of Independent Laboratories.
   2. Meet basic requirements of ASTM E329, "Use in the Evaluation of Testing and Inspection Agencies as Used in Construction."
   3. Authorized to operate in the State of California.

C. Limitations of Authority of Testing Agency: Testing Agencies are not authorized to:
   1. Release, revoke, alter, or enlarge on requirements of Contract Documents.
   2. Approve or accept any portion of the Work.
   3. Perform any duties of the Contractor.

D. Testing Agency Duties:
   1. Cooperate, together with Contractor, in notifications, information, scheduling, storage, and access as necessary to meet requirements for service without causing delays on Project.
   2. Perform specified inspections, sampling, and testing of materials and methods of construction.
   3. Comply with specified standards.
   4. Ascertain compliance of materials with requirements of Contract Documents.

5. Notify Owner's Representative and Contractor when test or inspection reveals undesirable conditions, nonconformance, or failure to meet requirements.
6. Promptly submit written report of each test and inspection, with copies to Owner's Representative, Contractor, and governing agencies as required.
    a. Include all samples taken and tests made, regardless of results.
    b. Include reports to show specified requirements, and state whether or not test results comply with requirements.
7. Perform additional tests as required by the Owner's Representative.

1.03 CONTRACTOR'S RESPONSIBILITIES

A. It is the Contractor's responsibility to coordinate the services of all testing and inspection required by the separate Specification Sections whether or not to be performed by the Owner's or Contractor's Testing Agency.

B. Contractor shall furnish promptly, without additional charge, all reasonable facilities; labor and materials necessary for safe, thorough, and convenient inspection; and tests that may be required by the Contract Documents.

C. Prepare and submit to Owner's Representative a schedule of tests required of the Testing Agencies at least 15 working days in advance of first test. In addition, Contractor shall give minimum 48 hours' notice to the Testing Agency prior to required tests and inspections.

D. Furnish, prepare, and deliver test samples and specimens as required by the Testing Agency except where such preparation and handling are to be performed by Testing Agency. Contractor shall be solely responsible for delays due to such samples' not being submitted and resubmitted, if necessary, in the time required for tests or inspections before material is incorporated into the Work.

E. Cooperate with Testing Agency personnel in providing access to materials being tested or inspected.

F. Make necessary repairs to in-place work caused by removal of required test samples.

G. Materials furnished and installed on the Project shall be equal to approved test samples in every respect.

H. Samples which are of value after testing will remain the property of the Contractor, but no such samples shall be incorporated in the Work without written approval of the Owner's Representative.

I. Costs associated with testing, inspections, and observations due to the following shall be the responsibility of the Contractor:
    1. Re-testing due to failure of initial samples.
    2. Unacceptable changes in sources, lots, or suppliers of materials after original testing established compliance.
    3. Changes in methods or materials of construction by contractor that require testing, inspection, or other related services in excess of those required by original design.
    4. Failure to properly notify the Owner's Representative at critical stages of construction.
    5. Requesting testing, inspection, and/or observation of work not ready.

1.04 QUALITY ASSURANCE

A. Materials furnished and work performed under the Contract shall be subject to review by the Owner's Representative. The Contractor shall be held strictly to the requirements of the Contract Documents regarding quality of materials, workmanship, and diligent execution of the Contract. Review by the Owner's Representative may include mill, plant, shop, or field review as deemed necessary.

B. Work performed in the absence of any prescribed inspection or observation may be subject to removal and replacement. In such a case, the entire cost of removal and replacement shall be borne by the Contractor, regardless of whether the work removed is found to be defective or not.

1.05 CONFLICTING REQUIREMENTS

A. 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 Owner's Representative for a decision before proceeding.

B. 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 Owner's Representative for a decision before proceeding.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 EXAMINATION OF CONDITIONS

A. Prior to installing any portion of the work, the Contractor shall examine the site and verify that site conditions are acceptable to begin work of each section.

B. Verify that work specified elsewhere has been completed to an appropriate stage to begin work of each section.

C. Materials or products requiring installation under the supervision or inspection of a specific materials manufacturer or manufacturer's representative shall be examined and/or tested, and accepted in writing, by such representative(s) prior to installation of work.

D. Notify the Owner's Representative immediately in writing of any irregularities or unacceptable conditions and re-direct work to avoid delay.

E. Start of work by Contractor shall indicate Contractor's acceptance of site conditions.

3.02 TOLERANCES

A. Tolerances not specifically identified shall meet the written standards and/or recognized commercial tolerances established for the specific materials or product. Refer to Section 01 42 00 - References.

3.03 REQUIRED TESTS AND INSPECTIONS

A. "Special Inspections" as required by the CBC.

B. Additional Tests and Inspections: See the various technical Sections of the Specifications.

3.04 FAILURE TO PASS TESTS

A. Failure of any material or article to pass specified tests will be sufficient cause for refusal to consider any further samples of the same brand or make of that material or article.

B. Where an individual material is to be part of an assembly with other materials for incorporation in the Work, failure of the material to pass specified tests or to conform to indicated standards will be sufficient cause for its rejection and removal and replacement, regardless of whether tests or inspections have been made or not in an assembled or in an unassembled condition.

C. When tests indicate non-compliance, the Contractor shall pay all direct and indirect costs of subsequent re-testing until compliance is established.

3.05 MANUFACTURER'S FIELD SERVICES

A. When specified in respective Specification Sections, Contractor shall require supplier or manufacturer to provide qualified personnel to observe field conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, testing, adjusting and balancing of equipment as applicable, and to make appropriate recommendations. Contractor is responsible for proper notification of manufacturer's representative before installation of applicable work and for obtaining necessary inspection certificate stating that installation was observed and approved.

B. Product Performance Verification: The supplier of products specified based on performance criteria shall, at the request of the Agency, inspect the installed product and certify conformance of the product to specified criteria under the installed conditions.

C. Manufacturer's representative shall submit written report to the Owner's Representative listing observations and recommendations.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Temporary facilities and controls needed for the Work during construction including, but not necessarily limited to:
   1. Temporary utilities.
   2. Sanitary facilities.
   3. Enclosures such as coverings, barricades, and fences.
   4. Site security.

B. Related Requirements:
   1. Equipment normally furnished by individual trades in execution of their portions of the Work shall comply with requirements of pertinent safety regulations.
   2. Permanent installation and hookup of utility lines are included under other Sections.

1.02 SELECTED REFERENCE AND REGULATORY REQUIREMENTS

A. National Fire Protection Association (NFPA):
   1. 10 - Portable Fire Extinguishers.
   2. 241 - Safeguarding Building Construction and Demolition Operations.

B. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 GENERAL

A. Furnish, install, and pay for meters, equipment, wiring, and piping necessary to provide such utilities.

B. Additional requirements for construction facilities and temporary controls are included in the General Conditions.

C. Provide written notification to the Owner to request use of new building equipment for temporary facilities. New building equipment shall not be used for temporary facilities without prior written approval from Owner.

1.04 REQUIREMENTS FOR REGULATORY AGENCIES

A. Comply with applicable standards referenced in Section 01 42 00 - References, Abbreviations, and Definitions.

B. All facilities shall be provided and maintained by the contractor in accordance with Cal-OSHA and applicable laws and ordinances.

C. Contractor shall:
   1. Take suitable steps to ensure that public utilities encountered in connection with the Work will not be damaged.
   2. Send notices, make necessary arrangements, and provide services required for the care of gas mains, water pipes, sewer pipes, conduits, cables, and other equipment or property.

3. Arrange with utility companies for fees required to move or remove their meters, poles, cables, guy wires, or equipment in or set under the property which will interfere with the construction work or which will not be required in the new construction.

PART 2 - TEMPORARY FACILITIES AND CONTROLS

2.01 MATERIALS

A. General: Materials may be new or used but shall be adequate in capacity for the required usage, shall not create unsafe conditions, and shall not violate requirements of applicable codes and standards.

B. Tools, extension cords, and electrical equipment shall conform to Underwriters' Laboratory standards and OSHA requirements and shall be in proper working order to preclude hazard to occupants and premises.

2.02 UTILITY SERVICES

A. Power and Lighting: Furnish, install, and maintain temporary wiring, poles, meter board, service entrance switch, lamps, and equipment as necessary to provide temporary lighting and power for the construction site.
   1. Pay all costs for temporary electrical systems required for construction.
   2. Source of power shall be at location on site acceptable to the Owner's representative. Required temporary transmission lines shall be arranged by contractor in conjunction with the appropriate utility company.

B. Water:
   1. Install temporary piping and valves downstream from permanent (new) meter locations as acceptable to the Owner's representative. No temporary water services shall be installed prior to meter installation without prior Owner review and acceptance.
   2. Temporary water facilities shall be installed with an acceptable reduced pressure backflow prevention unit furnished and installed by the contractor.
   3. Locate temporary sources of water route, and construct pipelines so that they do not create a hazard or interfere with public access, traffic, or construction operations.
   4. Design and construct such pipelines.

C. Utility Costs for Contractors: Distribution of temporary utility services to sub-contractors shall be Contractor's responsibility and cost.

2.03 TEMPORARY TELEPHONE AND INTERNET SERVICE

A. Contractor shall arrange, provide, and pay for the following temporary service at the site.
   1. A cell phone line and phone for the Contractor's Superintendent.
   2. Internet access for laptop or another acceptable internet access device.

2.04 TEMPORARY SANITARY FACILITIES

A. Provide, pay for, install, and maintain, for duration of the Work, necessary enclosed toilet and sanitary facilities for construction personnel.
   1. Sanitary facilities shall be provided, maintained with supplies as required for the number of construction personnel in compliance to local regulations.
   2. Locate such facilities a reasonable distance from all working areas.

B. New or existing restroom facilities, if available, shall not be used by construction personnel except with written permission from the Owner.

2.05 FIRST AID

A. Provide and maintain first aid supplies as required Cal-OSHA and applicable local ordinances.

B. Make arrangements with local emergency center and nearest hospital to receive personnel requiring medical attention, including emergencies. Information for emergency center shall be conspicuously displayed at the construction office when an office is required on the Project.

2.06 STORAGE ENCLOSURES

A. Provide sheds and enclosures necessary for storing applicable materials and equipment.

B. Enclosures shall be conveniently located, substantially and neatly constructed, and weather tight.

C. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible.

D. For exterior storage of fabricated products, place on sloped supports, above ground.

E. Provide off-site storage and protection when site does not permit on-site storage or protection.

F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of product.

G. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent contamination by foreign matter.

H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

J. Hazardous or Flammable Materials:
   1. Use and store hazardous or flammable chemicals, liquids, or gases brought into the Project site in approved containers, conforming to local, state, and national fire codes.
   2. Use hazardous materials in a manner that will prevent their accidental release into other areas.
   3. Do not discard hazardous materials into the jobsite waste-disposal facilities.
   4. Remove empty containers from the premises immediately and disposed of in a legal manner.

2.07 STAGING AND HOISTS

A. Furnish and maintain hoists, staging, rigging, and runways required in the execution of the Work.

B. Erect, equip, and maintain temporary work in accordance with the statutes, laws, ordinances, rules, or regulations of the state or other authorities and state-approved insurance companies having jurisdiction.

2.08 SAFETY AND PROTECTION

A. General:
   1. Follow construction procedures necessary to provide a safe working condition through all phases of the Project. Procedures shall conform to the Safety Orders, Division of Industrial Safety, Title 8, California Code of Regulations.
   2. The Owner, Owner's Representative, and field inspectors are not hired to review or approve safety procedures followed by the Contractor.

B. Contractor is solely responsible for outlining safety procedures to be followed by its workers, subcontractors, and related trades working on its Project. Provide for safety of the public both day and night where they are exposed to construction operations.

C. Contractor shall also take whatever care is necessary to avoid damage to existing facilities or utilities to remain, whether on the Project or adjacent to it, and shall be liable for any damage thereto or interruption of service as a result of its operations.

D. Provide fences, barricades, railings, warning lights, lights and other protection required by law, Contract Documents, and common sense to ensure public safety.

E. Give adequate warning to the public at all times whenever a dangerous condition exists as the result of construction work. Furnish Owner's Representative with name, address, pager number and local telephone number of the superintendent responsible and at least one other person for the maintenance of barriers, signs, lights, and other accident prevention devices for evenings and weekends.

F. Protection of Work and Facilities:
   1. Protect adjacent property, roads, streets, curbs, planting areas, erosion control materials and other improvements during construction operations. All damaged materials shall be replaced and/or repaired at the expense of the contractor and to the satisfaction of the Owner's Representative.
   2. Protect installed work and provide special protection where applicable.
   3. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
   4. New turf areas shall be fenced off during turf establishment and specified Landscape Maintenance Period subject to the discretion of the Owner's Representative.
   5. Contractor shall install temporary construction fencing per contract documents and place signage on the fence stating, "Construction Area – Keep Out" and "No Trespassing". Signs shall be located along fence every 75 feet.

G. Vehicular Safety: Motorized and/or self-propelled construction equipment shall be equipped with a hub-cap type reverse signal alarm.

2.09 WATER CONTROL

A. Furnish and maintain pumps or other devices that may be required by Contractor's work under this Contract.

B. The Work shall be kept free of standing water during construction.

2.10 MAINTENANCE OF TRAFFIC, ACCESS, AND PARKING

A. Throughout progress of work, do not interfere with use of or access to adjacent buildings or property.

B. Construct, designate and maintain specific vehicular access as required for the orderly progress of the work.
   1. Engineer construction access roads and parking areas as necessary to provide suitable support during all weather conditions for anticipated loads, including municipal fire apparatus.
   2. Provide adequate surface drainage without interrupting natural flow of existing drainage.

C. Parking:
   1. Provide temporary on-site parking to accommodate construction personnel and Owner's Representative to the greatest extent possible. Coordinate location with the Owner's Construction Coordinator.
   2. Contractor shall make arrangements for offsite parking, if required, with adjacent public parking facilities to accommodate vehicles of construction personnel. Cost of parking is the responsibility of the Contactor and/or its subcontractor.

D. Restore temporary vehicular access and parking areas to original or specified conditions prior to Project Final Acceptance.

E. Move and relocate traffic signs and signals, controls, power and light poles, and similar utility and public service items obstructed by Project barricades and operations.

F. Maintain accessibility from street at all times to fire hydrants within construction area.

G. Construction traffic shall be routed, whenever possible, to avoid noise impacts on the surrounding neighborhood.

H. Construction period for trucks hauling fill and piling materials shall be restricted to nonpeak hours to minimize impact to rush hour traffic and to avoid noise impacts on the surrounding existing residential areas.

I. Vehicles (wheels in particular) shall be cleaned before leaving site so as to minimize impact on City streets.

J. Clean and sweep all streets muddied or littered from construction activity to the satisfaction of the City.

2.11 HAUL ROUTES

A. Comply with any and all local governing ordinances and guidelines.

2.12 FIRE PROTECTION

A. Take precautions to prevent and eliminate fire hazards. The Contractor shall be responsible for providing, maintaining, and enforcing any necessary or required fire prevention safeguards until project final acceptance.

B. Provide fire extinguishers on the premises during the course of construction of the type and sizes recommended by the NFPA 10 and NFPA 241 to control fires resulting from the particular work being performed. Instruct employees in their use. Place extinguishers in the immediate vicinity of the work being performed, ready for use.

C. Fire Inspection: The Contractor's Superintendent shall inspect the entire project as necessary to make certain the required precautions are being maintained.

D. Combustible and/or flammable Building Materials: Only an appropriate working supply of flammable fuel or building materials shall be located inside storage facilities.

E. During the use of hazardous equipment, such as acetylene torches, welding equipment, bitumen kettles, and similar devices, no work shall start or equipment used unless fire extinguishers of specified type and capacity are placed in the working area and available for use by workmen using such hazardous equipment. Extinguishers shall meet standards established by Underwriter's Laboratory and shall be inspected at regular intervals and recharged by the contractor, as necessary.

F. Combustible and/or flammable Waste Materials. Oil-soaked rags, papers, and other highly combustible materials must be stored in closed metal containers with tightly-hinged lids at all times, and shall be removed from the site at the close of each day's work and more often when necessary.

2.13 TOOL AND ELECTRICAL EQUIPMENT

A. Tools, extension cords, and electrical equipment shall conform to Underwriters' Laboratory standards and OSHA requirements and shall be in proper working order.

2.14 TEMPORARY SIGNS AND NOTICES

A. Contractor shall post and maintain all signs and notices required by law or ordinance. No advertisements will be permitted on the premises without approval of the Owner.

B. Project Sign:
   1. Contractor shall provide a project sign as directed by the Owner.
   2. Sign graphics shall include, as a minimum, the following:
      a. Project name.
      b. Owner's name.
      c. Landscape Architect's name and address.
      d. Contractor's name and address.
   3. Full-scale artwork for logos, if required, will be provided.
   4. Location of sign shall be as directed by the Owner.

2.15 TRASH REMOVAL

A. Store trash or rubbish resulting from construction within the Contract work area.

B. Provide the necessary on-site containers for the collection of recycling materials, waste materials, and debris.

C. Remove waste materials and debris from the site periodically and dispose of at recycling centers or legal disposal sites in accordance with governing construction and demolition debris regulations.

D. Keep the work area clean at all times. Increase frequency of trash removal, when requested by the Owner, to conform to this requirement.

E. Waste material and debris shall not be buried at the site.

F. Burning of trash and debris on the site will not be permitted.

2.16 SECURITY

A. All site security shall be the responsibility of the Contractor at its expense and no additional cost to Owner.

B. Employment of security personnel for non-construction hours shall be left to the discretion of the Contractor, who shall be fully responsible for any theft or damage to any material, equipment or to portion of the work until Project Final Acceptance.

C. Security provisions shall be provided 24 hours a day, 7 days a week, including holidays, until acceptance of the Project by Owner.

D. If security personnel are used, provide Owner’s Representative with the name and pager number or 24-hour telephone number of a contact person who shall have primary responsibility for security.

E. Contractor is strongly encouraged to provide site security during installation and curing of the track surfacing in order to prevent damage to surfacing.

2.17 DUST CONTROL

A. Blowing dust shall be reduced by timing construction activities so that paving begins as soon as possible after completion of grading and by landscaping disturbed soils as soon as possible.

B. All portions of the site shall be watered as many times a day as required to ensure proper dust control seven (7) days a week for the duration of the Project.
   1. Sprinkle unpaved construction areas with water at least twice per day or as necessary to eliminate dust.
   2. Cover stockpiles of soil, sand, and other similar materials.
   3. Cover trucks hauling debris, soil, sand, and other similar materials.

C. The Contractor shall obtain reclaimed water from the City, if available, for compliance with the above requirements.

D. The Contractor shall maintain and operate construction equipment so as to minimize exhaust emissions of PM10 and other pollutants by means of the following:
   1. Prohibition on idling of motors of equipment that is not in use and by waiting trucks.
   2. Implementation of specific maintenance programs to reduce emissions for equipment in frequent use during construction.

PART 3 - EXECUTION

3.01 SYSTEMS

A. Maintain and operate systems to assure continuous service.

B. Modify and extend systems as work progress requires.

3.02 STORM WATER POLLUTION PREVENTION

A. Contractor shall be required to adhere to the project's Storm Water Pollution Prevention Plan (SWPPP) prepared and approved for this Project.

3.03 MAINTENANCE AND REMOVAL

A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the work.

B. Completely remove temporary materials and equipment when their use is no longer required.

C. Clean and repair damage caused by temporary installations or use of temporary facilities.

D. After removal of temporary facilities, restore existing facilities used for temporary services back to an "as was" or better condition subject to the discretion of the Owner's Representative.

E. Full compensation for cleanup shall be included in other items of work. No separate compensation will be allowed for work pertaining to cleanup or disposal of material.

END OF SECTION

SECTION 01 57 23

STORMWATER POLLUTION PREVENTION PLAN

PART 1 - GENERAL

1.01 SUMMARY

A. Construction shall adhere with the requirements of the California State Water Resource Control Board, General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit). Project construction is covered under the General Permit WDID#: _____.

B. The project Stormwater Pollution Prevention Plan (SWPPP) applies to operations within the limits of work and adjacent points of discharge that may be outside the limits of work. The SWPPP describes the proposed facilities, identifies potential sources of pollution and recommends appropriate Best Management Practices (BMPs) to reduce the discharge of pollutants. The contractor shall be strictly held to the requirements of the General Permit and shall provide the services of Qualified Stormwater Practitioner (QSP) as the agent to the District, who is the Legally Responsible Person (LRP).

C. Scope of work:
Provide such work to satisfy the requirements of the General Permit including but not limited to:
1. Qualified Stormwater Practitioner (QSP) services.
2. Install, adjust and maintain all necessary; BMPs, non-stormwater pollutants, safe storage, hazardous material controls and construction activities to protect discharge with best available technology.
3. Monitoring, testing and action plans as required by the project SWPPP Document.
4. Amend the SWPPP whenever there is a change in construction or operations that will affect the discharge of pollutants, or change in schedule delaying completion of grading activities beyond completion date identified in the project SWPPP.
5. All necessary data entry submit documentation to the Storm Water Multiple Application and Report Tracking System (SMARTS) during construction and closeout.

D. Related sections can include, but may not be limited to the following:
1. Section 01 50 00 - Construction Facilities and Temporary Controls
2. Section 02 41 00 - Site Clearing and Demolition
3. Section 31 20 00 - Earthwork
4. Section 33 40 00 - Storm Drainage

1.02 REFERENCES AND REGULATORY REQUIREMENTS

A. California State Board of Water Resources Construction General Permit Order 2022-0057-DWQ

A. SWPPP Document WDID#_____

B. California Stormwater Quality Association (CASQA) Industrial and Commercial BMP Handbook.

1.03 MONITORING AND TESTING:

A. Monitoring, testing, and action plans documentation required by the project SWPPP Document, and/or as required by the General Permit.

PART 2 - PRODUCTS – NOT APPLICABLE

PART 3 - EXECUTION

3.01 PREPARATION, MONITORING AND DOCUMENTATION

A. Prior to installing any portion of the work, the contractor shall examine the site and verify that site conditions are acceptable to begin work.

B. Prior to grading and demolition operations, the contractor shall install and manage all necessary BMPs with best available technology, making all necessary adjustments for the duration of construction.

C. Contractor shall be responsible for all necessary, modifications and additions to the BMPs and site conditions to meet the requirements of the General Permit at no additional cost to the District.

D. Regardless of construction schedule or weather conditions, it shall be the contractor's responsibility to; provide all necessary measures, adjust BMPs, protect discharge from pollutants and take necessary actions should numeric action levels be triggered, at no additional cost to the District.

E. Contractor shall provide QSP to conduct all monitoring and testing and prepare action plans as required by the project SWPPP.

F. The contractor shall amend the SWPPP and prepare the COI whenever there is a change in construction or operations that will affect the discharge of pollutants or change in schedule that will delay completion of grading activities beyond completion date identified in the project SWPPP.

G. Contractor shall prepare, track and submit all necessary documentation to SMARTS during construction and closeout. This shall include filing all required Ad Hoc reports, Annual Reports, and the Notice of Termination on the SMARTS site.

END OF SECTION

SECTION 01 71 23

FIELD ENGINEERING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Field engineering services for proper completion of the Work including, but not necessarily limited to:
   1. Establishing and maintaining lines and levels.
   2. Structural design of shoring, forms, and similar items provided by the Contractor as part of its means and methods of construction.
   3. Excavations and elevations, footings and piers required for installation of work items.
   4. Establishing horizontal and vertical control for site construction items.

B. Related Requirements:
   1. Section 01 78 29 - Conformance Survey

1.02 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Informational submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

1.03 INFORMATIONAL SUBMITTALS

A. Name and address of surveyor or professional engineer to the Owner's Representative.

B. Upon request of the Owner's Representative, submit:
   1. Data demonstrating qualifications of persons proposed to be engaged for field engineering services.
   2. Documentation verifying accuracy of field engineering work.
   3. Certification, signed by the Contractor's retained field engineer, certifying that elevations and locations of improvements are in conformance or nonconformance with requirements of the Contract Documents.

1.04 QUALITY ASSURANCE

A. Contractor shall employ a California Registered Civil Engineer or Licensed Land Surveyor, hereafter referred to as Surveyor, to lay out the entire work and set grades, lines, levels, and positions throughout the site.

1.05 SURVEY REFERENCE POINTS

A. Existing horizontal and vertical control points for the Project are those designated on the topographic survey. Locate and protect these control points prior to starting site work and preserve permanent reference points during construction.

B. Do not change or relocate reference points or items of the work without specific review and acceptance by the Owner's Representative.

C. Promptly advise the Owner's Representative when a reference point is lost, destroyed, or requires relocation because of other changes in the work. Upon direction of the Owner's Representative, replace reference stakes or markers according to the original or appropriate survey control.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 LAYING OUT THE WORK

A. Prior to beginning work, locate or set all general reference points, benchmarks, establish monuments and take action as necessary to prevent their destruction, then layout all lines, elevations, and measurements for entire work.

B. Verify figures and dimensions shown on the Drawings and son surveys furnished by the Owner before starting work. Notify the Owner's Representative immediately of any discrepancies and re-direct work to avoid delay.
   1. Contractor shall accept responsibility for errors resulting from failure to notify Owner's Representative of known discrepancies.
   2. Offsets will be as agreed upon, in writing, by the Contractor and the Owner's Representative.

C. Establish monuments on curbs, manholes or pavements with concrete embedded steel pipe with lead plug and/or brass nail with washer, as acceptable to the Owner's Representative.

D. Verify layout from time to time as work progresses.

3.02 RECORDS

A. Maintain a complete and accurate log of all control and survey Work as it progresses in accordance with the requirements of Section 01 78 39 - Project Record Documents. Show exact locations of the monuments if any are disrupted or destroyed.

END OF SECTION

SECTION 01 77 00

CONTRACT CLOSE-OUT

PART 1 - GENERAL

1.01 SUMMARY

A. Scope of work: This section specifies administrative and procedural requirements for project close-out, that may include but are not necessarily limited to:
   1. Inspection and/or observation procedures
   2. Project record document submittal
   3. Operating and maintenance manual submittal
   4. Warranty submittal
   5. Final cleaning

B. Related sections can include, but may not be limited to the following:
   1. All pertinent Sections of the Specifications

1.02 SUBSTANTIAL COMPLETION

A. Refer to the General Provisions as applicable, and section 01 42 00 for procedures required to establish Substantial Completion.
   1. Final, regular Certificate for Payment (progress payment) shall be issued when all pertinent requirements of the achieving Substantial Completion are met. Final retention payment shall be made after project Final Acceptance and conclusion of any specified Landscape Maintenance Periods subject to the discretion of the Owner's representative.

B. inspection Procedures: Upon receipt of a request for inspection or observation, the Owner's representative shall either proceed or advise the Contractor of unfilled requirements. The Owner's representative shall prepare the Certificate of Substantial Completion following review or advise the contractor of what must be completed or corrected by "punch-list" before the Certificate is issued. Upon receipt of "punch-list", contractor shall complete all work described in a timely manner subject to the discretion of the Owner's Representative.
   1. The Owner's representative shall repeat inspection and/or observation when requested provided the contractor has made the request within the specified lead time and given written assurance that the "punch-list" work has been completed.
   2. Results of the completed inspection and/or observation shall help form the basis of requirements for Final Acceptance and if acceptable, may signal the beginning of the specified Landscape Maintenance Period.

1.03 UNCORRECTABLE WORK

A. Should the Owner's representative determine it is not practical or possible for the contractor to correct work that is damaged or improperly executed, an equitable deduction from the Contract sum may be made at the sole discretion of the Owner's representative.

1.04 CLOSE-OUT SUBMITTALS

A. Submit two (2) copies of the following, where applicable, in accordance with applicable Contract Documents:
   1. Project record documents (as-constructed)
   2. Operation and maintenance manuals

3. Warranties, guaranties, and bonds
4. Keys and keying schedule
5. Spare parts and extra materials
6. Other items required by the Specifications
7. Binder of all manufactured items final submittal information that were installed or provided for the project.

B. Specified number of copies of above close-out submittals shall be received and accepted by the Owner's representative before Final Acceptance shall be given.

C. In addition to those items previously mentioned in this section, the contractor shall submit to the Owner's representative the following items before a Notice of Completion will be filed:
1. Up-to-date sub-contractor list with names, addresses and telephone numbers.

D. Final Adjustment of Account:
1. Submit a final statement of accounting to the Owner's representative showing all adjustments to the Contract sum.

1.05 MAINTENANCE MANUALS

A. Submit two (2) copies of proposed manual(s) to the Owner's representative for review and acceptance. All maintenance manuals shall be received and accepted by the Owner's representative before Final Acceptance shall be given.

B. Organize operating and maintenance data into properly indexed heavy duty 2-inch, 3-ring vinyl covered binders. Mark appropriate identification on front and spine of each binder. Manuals can include but are not limited to the following types of information:
1. Emergency instructions
2. Spare parts list
3. Copies of warranties or actual warranty cards
4. Wiring diagrams
5. Recommended "turn around" cycles
6. Inspection procedures
7. Shop drawings and product data
8. Fixture lamping schedule

C. Product submittal items (1.04-A-7) can be provided with warranty information binders.

1.06 DEMONSTRATION

A. Prior to Final Acceptance, the contractor shall fully instruct Owner's representative's designated operating and maintenance personnel in the operation, adjustment and maintenance of all products, equipment, and systems installed.
1. Provide services of factory trained instructors from the manufacturers of each major item of equipment or system, if necessary or requested by the Owner's representative.

B. Operation and maintenance manual(s) shall be fully described at this instruction meeting.
1. Review contents of manual(s) with personnel in full detail to explain all aspects of operations and maintenance such as:
a. Maintenance manuals
b. Record documents
c. Spare parts and materials
d. Tools

e. Fuels
f. Identification systems
g. Control sequences
h. Hazards
i. Cleaning
j. Warranties and bonds
k. Maintenance agreements and similar continuing commitments.

2. As part of instruction for operating equipment, demonstrate the following procedures:
   a. Start-up
   b. Shutdown
   c. Emergency operations
   d. Noise and vibration adjustment
   e. Safety procedures
   f. Economy and efficiency adjustments
   g. Effective energy utilization

1.07 WARRANTY/GUARANTY FORMAT

A. Provide written warranties, guaranties (except manufacturers' standard printed warranties and/or guaranties), addressed to the Owner's representative, in the format shown within the General Provisions. Manufacturers' standard printed warranties and/or guaranties shall be submitted as-is.

B. Warranties and guaranties shall be submitted in duplicate, in the format shown within the General Provisions, signed by all pertinent parties and by the contractor in every case, with modifications as accepted by the Owner's representative to suit the conditions pertaining to the warranty or guaranty. Collect and assemble written warranties and guaranties into bound booklet form and deliver bound books to the Owner's representative for review.

1.08 REMOVAL OF TEMPORARY FACILITIES

A. Prior to final inspection, the contractor shall remove tools, materials, sheds, temporary power poles, temporary tree protection, and other articles from the project site. Should the contractor fail to take prompt action, the Owner's representative may, given 30 days written notice, treat them as abandoned property.

1.09 FINAL SITE CLEANING

A. Broom clean and power wash exterior paved surfaces and adjacent public streets. Utilize appropriate cleaning methods to remove spills, stains, tire tracks, etc. from all paved surfaces. Rake clean other surfaces of the site.

B. Hose down and scrub walls and paving surfaces dirtied or stained as a result of the construction work, as directed by the Owner's representative.

C. Remove from the site construction waste, unused materials, excess earth, and debris resulting from the work.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 78 29

CONFORMANCE SURVEY

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Conformance surveying required for proper completion of the work including, but not necessarily limited to, the following:
   1. Synthetic turf construction, including subgrade and base preparation.
   2. Running track construction, including track paving, surfacing, and edges/curbing.
   3. Other applicable Project components.

B. Related Requirements:
   1. Section 01 33 00 – Submittal Procedures
   2. Section 01 71 23 – Field Engineering
   3. Section 01 78 39 – Project Record Drawings
   4. Section 31 20 00 – Earth Moving
   5. Section 32 11 00 – Base Courses
   6. Section 32 12 16 – Asphalt Paving
   7. Section 32 12 17 – Asphalt Track Paving
   8. Section 32 18 13 – Synthetic Turf Playing Field
   9. Section 32 18 24 – Polyurethane Track Surfacing

1.02 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

1.03 ACTION SUBMITTALS

A. Conformance Survey: In addition to required prints, submit 1 electronic copy in AutoCAD or scaled PDF image of all conformance surveys for the Project. Review response by the Owner Representative shall identify any areas out of tolerance.

1.04 INFORMATIONAL SUBMITTALS

A. Name and address of Contractor's licensed surveyor to the Owner's Representative.

1.05 QUALITY CONTROL AND REWORK

A. Contractor shall retain a California Licensed Land Surveyor to obtain survey data and supervise preparation of the Conformance Surveys as specified.

B. Portions of a survey that does not conform to the grading tolerance requirements identified in this Section will be corrected by the Contractor at its expense. Areas out of conformance shall be resurveyed at the Contractor's expense by its Surveyor. Revised points shall be added to the original digital file for resubmittal, review, and acceptance by the Owner Representative.

C. Delays and costs incurred due to grades out of conformance are the sole responsibility of the Contractor. At any time during construction and following acceptance of a portion of the survey by the Owner, the Owner reserves the right to recheck the surface grades at its expense to verify it is still in conformance.

D. It is the Contractor's responsibility to protect the grading and compaction tolerances of surveyed surfaces after Conformance Surveying operations are complete and accepted, and prior to installation of subsequent materials.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 LAYING OUT THE WORK

A. Prior to beginning work, Contractor shall secure the electronic grading plan from the Owner for use by the Surveyor.

B. The Contractor's Surveyor shall provide all conformance survey drawings. The drawings shall provide both the design elevations and the as-constructed spot elevations. These elevations shall be for comparison to those on the Contract Documents for the same location. Contractor shall also show the difference in these two numbers. Unique reference numbers shall be assigned to each point for reference purposes. For spacing requirements, refer to specific type of improvement identified in this Section.

C. Accuracy of the Contractor's surveys provided under this Section shall be to 0.01 feet.

D. The Contractor's Licensed Surveyor shall provide all conformance survey drawings and all 25-foot grid or other grid conformance grades based on the designed grades shown on the Drawings.

3.02 NEW SYNTHETIC TURF FIELD SUBGRADE AND BASE CONFORMANCE SURVEYING

A. Subgrade:
   1. Contractor shall verify that subgrade has been prepared according to the Specifications with regard to compaction and grade tolerances and is free of debris, non-compactable material, topsoil, or organics prior to beginning work.
   2. Prior to acceptance of the subgrade, a Conformance Survey shall be prepared by the Contractor and a digital file submitted to the Owner Representative as specified. The survey shall be based on a 20-foot grid showing the field subgrade elevations and specifically needs to include the following items:
      a. field crown / high point,
      b. the centerline of the field low points, typically the subgrade elevation of the subdrain trenches,
      c. perimeter field edges, (both the adjacent finish surface and the field subgrade)
   3. The plan shall show the comparison of the design grades as interpreted from the design grades given on the construction drawings and/or the provided virtual 3D surface for the grading design versus the as-constructed grades at each surveyed location. The design versus as-constructed elevations shall be clearly delineated on the drawing through the use of an example label in the legend. The comparison shall also show the deviation between the two elevations next to the label.
   4. Top of subgrade elevations shall be verified using laser-operation survey instruments. Grades at each point shall be within plus or minus 1/2-inch (0.04 feet) from the elevations shown on the Drawings. In addition, no two adjacent points within the grid shall cumulatively deviate more than 3/4-inch (0.06 feet) from the respective points' design grades.

B. Completed Rock Base:
   1. Prior to acceptance of the rock base, a Conformance Survey will be prepared by the Contractor's Surveyor and submitted by the Contractor to the Owner's Representative as specified.
      The survey shall be based on a 20-foot grid and specifically need to include showing the field crown, perimeter of the field, adjacent curb edge. The plan shall show the comparison of the design grades versus the as-constructed grades at each surveyed location, with the design versus as-constructed

elevations clearly delineated on the drawing thru the use of an example label in the legend. The comparison shall also show the deviation between the two elevations next to the label.

2. A portion of the survey that does not conform to the requirements identified above shall be corrected by the Contractor.
    a. Areas out of conformance shall be resurveyed following the identical procedure stated above by the Surveyor, and these revised points shall be added to the original digital file for review and acceptance by the Owner's Representative.
    b. Delays and costs incurred due to grades out of conformance are the sole responsibility of the Contractor.
3. It is the Contractor's responsibility to protect the grading and compaction tolerances of the base after conformance survey is complete and prior to installation of the synthetic turf.
4. The top of field rock elevations shall not vary from the specified design grades more than 1/4-inch (0.02) feet at any location when measured in any direction. In addition, no two adjacent points within the grid shall cumulatively deviate more than 1/2-inch (0.04 feet) from point to point of the design grades.

C. Finish surface planarity shall be verified, and if necessary adjusted, by the Contractor using the string line method.
1. A mason's line held taught between two workers separated by a distance of approximately 80-125 feet shall be placed directly on the finished surface parallel to the direction of greatest slope.
2. A third worker shall check for separations between the mason's line and the finished surface that are equal to or greater than the specified tolerances.
3. Entire finished surface shall be "walked" with mason's line in increments of approximately 3-8 feet.
4. Areas of separation shall be outlined with marking paint and the depth of separation indicated.

3.03 POLYURETHANE TRACK TOLERANCES AND CONFORMANCE SURVEYING REQUIREMENTS

A. Pre-Track Paving and Surfacing:
1. Prior to the pouring of track curbing, Contractor shall be responsible for verifying the proper horizontal and vertical controls of all concrete formwork. This quality control process does not need to be completed by a licensed surveyor. However, the Contractor shall employ a licensed surveyor to determine finish surface grades of track curbing / inside and outside edges upon completion of initial concrete curing process.
2. A digital file of the curb elevations shall be provided on a maximum 20-foot spacing, including points at all beginning, mid-, and end points of curve, and changes in direction including those at the end of the chutes.
3. Required Tolerance: No point along the curbing shall be greater than 1/4 inch (0.02 feet) outside the design grades and no spot shall deviate more than 1/2 inch (0.04 feet) from any other adjacent point within the 20-foot spaced curb survey.
4. After curbing is confirmed to be within the specified tolerances, the Contractor shall proceed with paving the track.
5. Upon completion of the track paving, Contractor shall survey the track area utilizing the previous Conformance Survey data.
    a. The Conformance Survey shall be completed on a 20-foot longitudinal grid with grades shot across the track paving in a minimum of 2 locations, at a distance of 10 feet and 20 feet from the center of the inside track curb.
    b. Grades shall include the top of inside and outside track curbing.
    c. Grades shall be measured so that no point within a 10' grid horizontally (moving from inside to outside of track) deviates more than 1/4 inch (0.02 feet) from any other point within the grid.
6. The track paving shall also undergo a flood test to inspect for birdbaths and low points that may not be identified by the Conformance Survey. A bird bath is a puddle of water that has not evaporated after one hour in 70 degrees F or warmer temperature. If the bird bath has a water depth greater than 1/16 inch, which shall be verified by using a nickel with the nickel being fully submerged in the birdbath, then corrective measures shall be taken by the Contractor prior to installation of the final court surface.

B. Post Asphalt Paving Track Surfacing:

1. After the track surfacing is complete and before the track is striped, finish surface grades shall be verified on a 20-foot longitudinal grid with grades shot across the track at a distance of 10 feet and 20 feet from the center of the inside track curb using laser operation survey equipment.
2. Grades at each point within the 20-foot grid shall not deviate more than 1/4 inch (0.02) from any other point within the 20-foot grid.
3. The finished track surface shall also undergo a flood test to inspect for birdbaths and low points that may not be identified by the conformance survey. A birdbath is a puddle of water that has not evaporated after one hour in 70 degrees F or warmer temperature. If the bird bath has a water depth greater than 1/16 inch, which shall be verified by using a nickel with the nickel being fully submerged in the birdbath, then corrective measures shall be taken by the Contractor prior to installation of the final court surface.

END OF SECTION

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

1.01 SUMMARY

A. Section Includes: Requirements for preparing, maintaining, and submitting the Project Record documents.

B. Related Requirements:
1. Section 32 80 00 - Irrigation
2. Section 33 40 00 - Storm Drainage Utilities
3. Electrical Conduit

1.02 DOCUMENT MAINTENANCE

A. Maintain one record copy of each of the following at the site for the Owner:
1. Contract Drawings, Specifications, Addenda, Change Orders, RFIs and other modifications marked currently to record changes made during construction.
2. Reviewed submittals.
3. RFI log.
4. Addenda log.
5. Submittal log.
6. Inspection reports and log.

B. Documents shall be kept at the site and maintained in a clean, dry, legible condition.

C. The Contractor shall advise the Owner's Representative of changes and deviations made during construction.

D. Make documents available at all times for review by Owner's Representative.

E. Comply with related requirements of the individual Specification Sections.

F. Maintenance of Record Drawings shall be delegated to one person on Contractor's staff who will be present at all meetings.

1.03 RECORDING

A. Label each document "PROJECT RECORD."

B. Do not permanently conceal any work until required information has been recorded.

C. Drawings:
1. Make day-to-day changes and notations on a specially designated complete "Job Set" of prints or digital files as the work proceeds.
2. Markings and notations shall be neatly and accurately made, using nonfading, clear, permanent markings. Use contrasting colors for different disciplines of work and where required for clarity.
3. Clearly identify deviations by drawing a "cloud" around affected area and make sufficient notations to describe the change.
4. Convert schematic layouts to portray precise physical layout (including depths) of exposed and concealed work.
5. Drawings shall be marked to indicate:
a. Measured depths of various elements of foundation in relation to survey or other approved datum.

b. Measured horizontal and vertical locations of underground utilities and appurtenances referenced to permanent surface improvements.
c. Measured locations of utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure.
d. Variations in layout of site improvements.
e. Field changes of dimensions and detail.
f. Changes made by Change Order or Construction Change Directive.
g. Significant details not shown on the original Contract Drawings.

6. Contractor shall solely bear any cost of uncovering, recording and re-covering work not recorded on Job Set.
7. Upon completion of the Work and unless otherwise mutually agreed between Owner and Contractor, all changes and notations shall be neatly and accurately transferred by the Contractor to a complete set of Drawings, as originally issued for construction, obtained from the Owner.
   a. Where the Contract Drawings are not of sufficient size and detail, the Contractor shall furnish its own drawings for incorporation of details and dimensions.
   b. Each sheet of record drawing shall be signed and certified by the Contractor as to their correctness and turned over to the Owner's Representative.
8. Record Drawings are specifically required for the following work:
   a. Electrical including exterior lighting and all other related work.
   b. Water distribution.
   c. Storm, sanitary, and site drainage.
   d. Irrigation.

D. Specifications:
1. On a complete and designated copy or digital file of the Project Manual, legibly mark each Specification Section to record:
   a. Manufacturer, trade name, catalog number, color designation (if applicable), and supplier of each product and item of equipment actually installed.
   b. Changes made by Addendum, Change Order, or Construction Change Directive.
   c. Other matters not originally specified.
   d. Where selection of manufacturers is offered, indicate which manufacturer's product was installed.

E. Product Data: Maintain one copy or digital file of each product data submittal. Note related Change Orders and markup of Contract Drawings and Specifications.
1. Mark these documents to show significant variations in actual work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.
2. Give particular attention to concealed products and portions of the Work that cannot be readily reviewed by direct observation.

F. Samples: Immediately prior to Substantial Completion, meet with Owner's Representative and Owner's personnel at the Project site to determine which samples are to be transmitted to the Owner for record purposes. Comply with the Owner's instructions regarding delivery to the Owner's storage area.

G. Miscellaneous Record Submittals: As specified in other Specification Sections.
1. Immediately prior to Substantial Completion, complete these miscellaneous records and place in good order.
2. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Digital files are acceptable.
3. Submit for the Owner's records as directed.

1.04 INTERIM REVIEW

A. Project Record Documents are subject to review at time of review of payment request.

B. If Record Documents are not properly maintained, Owner may withhold all or a portion of payment to Contractor.

1.05 SUBMITTALS

A. At completion of work under the Contract, deliver Record Documents as directed.

B. Partial submittals are not acceptable, unless specifically acceptable to Owner.

C. Submit documents specified and required prior to claim for final Application and Certificate for Payment.

D. Accompany submittal with transmittal letter, in duplicate, containing:
1. Date.
2. Title of Work.
3. Contractor's name and address.
4. Title of each Record Document.
5. Certification that each document, as submitted, is complete and accurate.
6. Signature for Contractor or its authorized representative.

END OF SECTION

SECTION 02 41 13

SITE CLEARING AND DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Site clearing and demolition work and related activities as shown on the Drawings and specified herein. The general extent of the site clearing and demolition work includes, but is not necessarily limited to, the following:
   1. Demolition, removal and disposal of designated items.
   2. Careful removal, protection and re-installation of designated items.
   3. Careful removal and salvage of designated items.
   4. Disconnection and capping of existing utility and irrigation lines.
   5. Incidental demolition of abandoned utility and irrigation lines.
   6. Spraying until dead, clearing, grubbing vegetated areas and rototilling in existing turf areas.
   7. Protection of existing plant material.
   8. Removal of designated trees and planting areas.

B. Related Requirements:
   1. Section 31 20 00 - Earth Moving
   2. Section 32 01 90 - Existing Tree Protection and Maintenance

1.02 REFERENCES AND REGULATORY REQUIREMENTS

A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Action Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

1.04 ACTION SUBMITTALS

A. Product Data: Manufacturer's product information on herbicides to be used for approval prior to use.

1.05 INFORMATIONAL SUBMITTALS

A. Schedule: Indicate the proposed timeline for site clearing and demolition work including shut off times and capping of utility services on the project schedule.

1.06 QUALITY ASSURANCE

A. The Owner will obtain and pay for all permits required in connection with this work. Fees for the dumping of debris shall be paid for by the Contractor.

1.07 FIELD CONDITIONS

A. Dust Control:
   1. The Contractor shall prevent the formation of airborne dust on and around the project site with the use of sprinkled water or other means acceptable to the Owner's Representative. Non-compliance

with proper dust control measures may be grounds for issuance of a "stop work" order by the Owner until satisfactory measures are implemented.

B. Utility Services:
   1. Issue written notices of planned demolition operations to utility companies and coordinate site clearing and demolition improvements as requested by the utility companies.
   2. Existing power poles and lines serving existing occupied buildings shall remain. Arrange work in order to maintain utilities not designated for removal.
   3. Coordinate work in order to maintain utilities to temporary on-site facilities.

PART 2 - PRODUCTS

2.01 HERBICIDES

A. Herbicide shall be non-selective broad-spectrum systemic herbicide for perennial vegetation and straight contact herbicide for annual vegetation in accordance with a licensed pest control advisor or herbicide manufacturers' recommendations.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Conform to applicable requirements of Section 01 45 00 - Quality Control.

B. Carefully identify limits of demolition and site clearing.

C. Mark project areas in coordination with the Owner's Representative and as necessary to clearly identify the interface of items to be removed and items remain.

3.02 PREPARATION

A. Protection:
   1. Make provisions and take necessary precautions to protect all existing items not designated for removal. An existing item or area damaged during construction operations shall be replaced or repaired to an "as-was" or better condition at no additional cost to the Owner and subject to the acceptance of the Owner's Representative.
   2. Erect barriers, fences, guard rails, enclosures, chutes, and shoring as necessary to protect personnel, structures, and utilities to remain.
   3. Provide warning signs and lighting as necessary for vehicular and personnel protection. Maintain warning signs during construction as required by applicable safety ordinances and as reasonably prudent.
   4. Coordinate arrangements for items to be salvaged and turned over to the Owner.
   5. Notify Underground Service Alert (USA), (800) 640-5137, and local utility companies to verify locations of existing utilities a minimum of 48 hours prior to beginning work.
   6. Provide tree protection fencing prior to commencing demolition and site clearing work.

B. Traffic Access:
   1. Ensure minimum interference with roads, streets, driveways, sidewalk and adjacent facilities.
   2. Do not close or obstruct streets, sidewalk, alleys or passageways without acceptance from the Owner's Representative or governing authorities as applicable.
   3. Provide approved alternate routes around closed or obstructed traffic ways as required by the Owner's Representative.
   4. Maintain access to adjacent existing buildings to ensure uninterrupted operations during demolition work.

3.03 DEMOLITION

A. General: Refer to the Drawings for extent of demolition and site clearing work.

B. Paving: Demolish paving in accordance with local noise ordinance regulations and as acceptable to the Owner's Representative.

C. Filling:
1. Completely fill below-grade areas and voids resulting from demolition work.
2. Install appropriate, acceptable fill material consisting of soil, gravel, or sand, free of trash and debris, stones over 6-inch diameter, roots, or other organic matter. Meet fill and compaction requirements specified and recommended by the Owner's Geotechnical Engineer.

D. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both the nature and extent of the conflict. Submit report to Owner's Representative in written, accurate detail. Pending receipt of response from Owner's Representative, rearrange selective demolition and site clearing schedule as necessary to continue overall job progress without delay.

3.04 CLEARING AND GRUBBING

A. Irrigation heads, valves, and controllers shall be salvaged and provided to Owner.

B. Clear/strip vegetative material from soil surface and remove unless noted otherwise. Existing turf areas to be removed need to be stripped to remove organic soil.

C. Utilities and Related Equipment:
1. The locations of existing utilities, as may be shown on the Drawings, are approximate. Should existing utilities not shown on the Drawings be encountered during construction operations, notify the Owner's Representative immediately, and re-direct work to avoid delay. The Owner's Representative will then determine what action, if any, is required.
2. Remove abandoned utilities as indicated and as uncovered by the work and terminate in a manner conforming to code.
3. Remove and salvage designated items and related equipment and deliver to a location acceptable to the Owner's Representative.

D. Underground Piping:
1. Existing storm drain and irrigation systems, as may be shown on the Drawings, shall be modified to allow for construction of new items and systems as a part of this project. Caution shall be exercised so as not to damage underground piping not scheduled for removal.
2. Remove underground piping as indicated or necessary and backfill to specified compaction density.
3. Existing piping abandoned but not removed shall be backfilled with slurry fill (grout), and ends shall be capped with concrete.
4. Manholes and lines scheduled for removal which connect to active systems shall have their active remaining portions capped, plugged, or blind-flanged as appropriate.
5. Materials used for pipe terminations and temporary connections shall be the same as the existing lines. Fittings and flanges shall be of weight and class suitable for the service in which used.

3.05 SALVAGE

A. Demolition:
1. Materials or equipment to be demolished shall become the property of the Contractor except for items specified or noted on the Drawings to be salvaged for the Owner.
2. Carefully remove items to be salvaged to avoid damage.

3. Irrigation heads, valves and existing controller shall be salvaged and provided to Owner. Contractor shall clean and box items. Items shall be returned to Owner in accordance with instructions provided by the Owner.

B. Replacement: In the event items not scheduled to be demolished are damaged, promptly replace or repair such items to an as-was or better condition per the discretion of the Owner's Representative at no additional cost to Owner.

C. Materials scheduled for removal shall not be placed on view to prospective purchasers or sold on site.

3.06 CLEANING

A. Debris and Rubbish:
1. Remove and transport debris and rubbish as it accumulates and dispose in a legal manner via recognized haul routes in accordance with Section 01 50 00 - Temporary Facilities and Controls in a manner that will prevent spillage on streets or adjacent areas.
2. Remove tools, equipment and appliances used for demolition from the site upon completion of the work.
3. Clean entire project area, adjacent streets, and pavements to a broom-clean, "stain-free" condition per the discretion of the Owner's Representative.

END OF SECTION

SECTION 09 91 15

EXTERIOR SITE PAINTING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Painting and painter's finish on site and landscape improvements, except prefinished items and unless otherwise noted, as required to complete finishing of the Work. The Work includes the following specific items:
      a. Field painting of exposed bare and shop-primed mechanical items.

B. Items Not Included in This Section:
   1. Factory-prefinished items as specified in various Sections.
   2. Painting specified elsewhere and included in respective Sections, including but not necessarily limited to shop priming.

C. Related Requirements:
   1. Section 32 36 00 - Landscape Decorative Metal; site finishing of landscape metal fabrications.

1.02 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

B. Coordination: Perform painting work in proper sequence with work of other trades so as to avoid damage to finished work.

1.03 ACTION SUBMITTALS

A. Product Data: A complete list of materials proposed for use, together with manufacturer's technical information, including paint label analysis and application instructions.

B. Color Samples:
   1. Appropriately label and identify each sample, including location and application. Include paint color to match existing on site including manufacturer's name, color number, and gloss units.
   2. Other Surfaces: Prepare on hardboard, 8 inches square.
   3. Each sample shall have stepped finish, clearly showing each coat and build-up of specified finish. Submit separate samples for each required gloss level.
   4. Resubmit samples as requested until required sheen, color, and texture are achieved.
   5. See also requirements for field samples below.

1.04 INFORMATIONAL SUBMITTALS

A. Statement of applicator qualifications.

1.05 CLOSEOUT SUBMITTALS

A. Extra stock as specified.

B. Specified warranty.

1.06 QUALITY ASSURANCE

A. Unsuitability of Specified Products: Claims concerning unsuitability of any material specified (or inability satisfactorily to produce the Work) will not be entertained, unless such claim is made, in writing, to Owner's Representative before beginning of application.

B. Single-Source Responsibility:
   1. To the maximum extent practicable, select a single manufacturer to provide all materials required by this Section, using additional manufacturers to provide systems not offered by the selected principal manufacturer.
   2. For each individual system:
      a. Provide primer and other undercoat paint produced by same manufacturer as finish coat.
      b. Use thinner within manufacturer's recommended limits.

C. Applicator Qualifications:
   1. Not less than 5 years of documented experience in painting work similar in scope to work of this Project.
   2. Maintain a crew of painters who are fully qualified to satisfy requirements of this Section.

D. Field Samples:
   1. Request review, by the Owner's Representative, of first finished item of each finish type or color scheme required for color, texture, and workmanship.
   2. Modify selected colors, if requested by Owner's Representative, to achieve desired effect.
   3. Use first acceptable surface or item as the Project standard for each color scheme.

E. Primers:
   1. Provide finish coats that are compatible with prime paints used.
   2. Review other Sections of these Specifications in which prime paints are to be provided in order to ensure compatibility of total coatings system for various substrates.
   3. Upon request, furnish information to other Sections regarding characteristics of finish materials proposed for use.
   4. Provide barrier coats over incompatible primers, or remove and re-prime as required.
   5. Notify Owner's Representative, in writing, of any anticipated problems arising from using specified coating systems with substrates primed by other Sections.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original, new, unopened packages and containers bearing the manufacturer's name and label describing contents including the following information:
   1. Name or title of material.
   2. Manufacturer's stock number and date of manufacture.
   3. Contents by volume for major pigment and vehicle constituents.
   4. Thinning instructions.
   5. Application instructions.
   6. Color name and number.

B. Store materials in tightly covered containers. Maintain containers in a clean condition, free of foreign materials and residue.

C. Store materials at ambient temperature of between 45 degrees F minimum and 90 degrees F maximum, in a well-ventilated area.

D. Ensure that storage area is neat and orderly.

E. Take precautionary measures to prevent fire and health hazards.

1.08 FIELD CONDITIONS

A. Ambient Conditions:
   1. Comply with manufacturer's recommendations as to environmental conditions under which coatings and coating systems can be stored and applied.
   2. Do not apply finish in areas where dust is being generated.

B. Cover or otherwise protect in progress and finished work of other trades, and surfaces not being painted concurrently or not to be painted.

1.09 WARRANTY

A. Color and Life of Film:
   1. At the end of 1 year, colors of surfaces shall have remained free from serious fading. Variations (if any) shall be uniform.
   2. Materials shall have their original adherence at end of 1 year. There shall be no evidence of blisters, running, peeling, scaling, chalking, streaks, or stains at end of this period.

1.10 EXTRA MATERIALS

A. At completion of the Work, deliver to Owner extra stock of paint of each color used in each coating material used.

B. Containers shall be full, tightly sealed, and clearly marked.

C. Provide the following quantities:
   1. Field Colors: One 1-gallon container.

PART 2 - PRODUCTS

2.01 MANUFACTURERS AND PRODUCTS

A. Products are specified under "Paint Systems" in Part 3 below and are manufactured by Kelly-Moore Paints, unless otherwise indicated. Equivalent products manufactured by PPG, Benjamin Moore, Sherwin-Williams, or Dunn-Edwards are acceptable.

B. Materials selected for coating systems for each type surface shall be the product of a single manufacturer or shall be acceptable to manufacturer of finish coating for system.

C. If more than one quality level of product type is marketed, use material of highest quality.

2.02 COLORS

A. Colors shall match existing colors on site as noted on the Drawings. Scheduled colors may have manufacturer identifications other than the acceptable manufacturers listed above. The Drawing listing is solely for the purpose of conveying color information and does not imply manufacturer's approval or waiver of the requirement that all coatings be from the same manufacturer, unless a specific system is not available from the primary manufacturer.

B. Submit samples of selected colors as specified in Part 1 above.

C. Colors of paints, shall match existing colors on site.

2.03 MIXING AND TINTING

A. Deliver paints and stains ready mixed to jobsite.

B. Accomplish job mixing and job tinting only if required for adjustment to finish applied to field test areas to achieve color acceptable to Owner's Representative.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine surfaces scheduled to receive paint and finishes for conditions that will adversely affect execution, permanence, or quality of work and that cannot be put into acceptable condition through preparatory work as included in Article 3.02, "Preparation."

B. Do not proceed with surface preparation or coating application until conditions are suitable.

3.02 PREPARATION

A. General:
   1. Verify that surfaces to be painted are dry, clean, smooth, and free from deleterious materials.
   2. Protect hardware, exposed metals, and other surfaces that are not to be painted by masking, removal, or other means to ensure a neat job.

B. Metals:
   1. Remove mill scale, rust, and corrosion.
   2. Clean oils, grease, and dust from surfaces.
   3. Touch up chipped or abraded areas in shop coatings, using appropriate primer.
   4. Soluble Salts: Removal of soluble salts from bare metal and galvanized metal surfaces, both interior and exterior, is required prior to application of primer coats to preclude pre-mature coating failure and accelerated corrosion.
      a. Removal shall be in accordance with SSPC-Guide 15, "Field Methods for Retrieval and Analysis of Soluble Salts on Steel and Other Nonporous Substrates."
      b. Abrasive blasting, where specified as a required surface preparation procedure, shall be performed after removal of soluble salts. Abrasive blasting is not an acceptable procedure for removal of soluble salts.
   5. Previously Painted Metal: Prepare in accordance with recommendations of coating manufacturer based on condition of surfaces and the following:
      a. Remove loose paint, dirt, and chalk with scraper and strong detergent solution.
      b. Abrade shiny surfaces, such as baked enamel.
      c. Clean surfaces of dust from sanding and other foreign matter that could adversely affect adhesion or performance of coating system. Remove sanding dust with a clean, wet rag.
      d. Surfaces shall be clean, dry, smooth, and even.

C. Concrete:
   1. Fill cracks and irregularities with Portland cement grout or patching mortar in order to provide uniform surface texture.
   2. Surfaces shall not be painted until they have completely cured and have a stabilized moisture content but in no case less than 60 days from completion of surface.

D. Cement Plaster:
   1. Fill cracks and irregularities with Portland cement grout or patching mortar in order to provide uniform surface texture.

2. Surfaces shall not be painted until they have completely cured and have a stabilized moisture content but in no case less than 60 days from completion of surface.

E. Concrete Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions

F. Surfaces that cannot be prepared or painted as specified shall be immediately brought to the attention of the Owner's Representative, in writing.
1. Starting of work without such notification will be considered acceptance by the Contractor of surfaces involved.
2. Replace unsatisfactory work caused by improper or defective surfaces, as directed by Owner's Representative.

3.03 FACTORY FINISHING AND PRIMING

A. Pertinent Work and Requirements Specified Elsewhere: Review all Sections for products that are to be factory finished or factory (shop) primed.

B. Touch-up: Touch up abrasions in prime coat immediately after products arrive on jobsite and as required prior to application of finish coats.

3.04 APPLICATION

A. Do not apply initial coating until moisture content of surface is within limitations recommended by paint manufacturer.

B. Application:
1. Apply paint with suitable brushes, rollers, or spraying equipment.
2. Guardrails and other exposed metal requiring field finish painting shall be sprayed to the fullest extent conditions will permit. If brush or roller application is used, surface finish shall be subject to review by the Owner's Representative for complying with the appearance requirements specified herein.
3. Apply coatings in accordance with manufacturer's recommendations.
4. Rate of application shall be within limits recommended by paint manufacturer for surface involved.

C. Spray-Gun Application - Standard Coatings:
1. Spray-apply standard paints only with airless sprayer.
2. Apply in fine, even spray, without addition of thinner, using nozzle pattern suitable to surface being painted.
3. When necessary, follow by brushing to ensure uniform coverage and to eliminate wrinkling, blistering, and air holes.
4. If spraying becomes detrimental to equipment or objectionable to personnel, brush painting will be required.

D. Comply with recommendation of product manufacturer for drying time between succeeding coats.

E. Finish coats shall be smooth and free from brush marks, streaks, laps or pileup of paints, and skipped or missed areas.

F. Leave all parts of moldings and trim clean and true to details with no undue amount of paint in corners and depressions.

G. Make edges of paint adjoining other materials or colors clean and sharp, with no overlapping.

H. Refinish whole area where portion of finish is not acceptable.

3.05 CLEANING

A. Touch up and restore finish where damaged.

B. Remove spilled, splashed, or spattered paint from all surfaces. Do not mar surface finish of item being cleaned.

C. Leave storage space clean and in condition required for equivalent spaces in Project.

3.06 PAINT SYSTEMS

A. General:
1. This Specification shall serve as guide and is meant to establish procedure and quality. Confer with the Owner's Representative to determine exact finish desired.
2. Number of coats scheduled is minimum. Additional coats shall be applied at no additional cost as required to hide base material completely, produce uniform color, and provide required and satisfactory finish.

B. Acceptance of Final Colors: Final coat of paint shall not be applied until colors have been accepted by the Owner's Representative.

C. Gloss and Sheen Ratings: It is recognized that manufacturer's use various identifiers for the sheen of their paints. The sheen rating of applied paint, therefore, shall be identified as a Gloss Level and generally fall within the following limits established by the Master Painters Institute, Inc. (MPI) Standards and ASTM D523. Not all of the Gloss Levels are necessarily scheduled or used on this Project.
1. Gloss Level 1: Matte or Flat; not more than 5 units at 60 degrees and 10 units at 85 degrees.
2. Gloss Level 2: Velvet or Low Sheen; not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees.
3. Gloss Level 3: Eggshell; 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees.
4. Gloss Level 4: Satin; 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees.
5. Gloss Level 5: Semi-gloss; 35 to 70 units at 60 degrees.
6. Gloss Level 6: Gloss; 70 to 85 units at 60 degrees.

D. Clarification of System Terminology:
1. Exterior paint Systems are specified and identified herein by initial letters "EXT."
2. Initial numbers for each System identify the substrate to be coated.
3. Letter following substrate numbers identify the general finish coat chemistry summarized as follows:

CODE	DESCRIPTION
A	Standard acrylic
B	Standard alkyd
C	Semi-transparent stain
D	Semi-solid stain
H	High performance polyurethane
M	Premium performance acrylic polymer
T	Fluoropolymer

4. Hyphenated suffix identifies the topcoat gloss levels.

E. Exterior Painting Systems:

EXT 3.1A-1
Acrylic on Concrete and Cement Plaster - Gloss Level 1

1 coat	6001-XXXX	Acrylic Bonding Primer
2 coats	2200-XXXXV	100% Acrylic Flat

EXT 4.2A-1
Latex on Concrete Unit Masonry - Gloss Level 1

1	coat	"Bloxfil" 4000	Heavy-duty Block Filler
2	coats	2200-XXXX	100% Acrylic Flat

EXT 5.1A-5
Acrylic over Waterborne Primer on Ferrous Metal - Gloss Level 5

1	coat	4020-1000	Metal Primer (If Not Shop Primed)
2	coats	4206-XXXX	Acrylic Semi-gloss

EXT 5.1M-6
Acrylic over Waterborne Primer on Ferrous Metal - Gloss Level 6

1	coat	4020-1000	Metal Primer (If Not Shop Primed)
2	coats	4208-XXXX	Acrylic Gloss

EXT 5.3-5
Acrylic over Waterborne Primer on Galvanized Metal – Gloss Level 5

Pretreatment (SSPC SP-1)		Devprep 88	Heavy-duty cleaner
1	coat	4020-1000	Primer
2	coats	2406-XXXX	100% Acrylic Semi-gloss

EXT 5.4G-5
Acrylic on Factory-Primed Aluminum - Gloss Level 5

2	coats	2406-XXXX	100% Acrylic Semi-gloss

EXT 5.1M-5
Premium-Performance Acrylic Polymer over Epoxy on Shop Primed Decorative Metal- Gloss Level 5

Pretreatment			As specified in Section 05 7000, "Decorative Metal"
1	coat	Tnemec 27WP	Two-component, water-based epoxy tinted to match color of topcoat (if primer not shop applied)
1	coat	Tnemec Series 1029	High dispersion acrylic polymer

Note: Provide additional topcoat if required to achieve manufacturer's recommended total DFT (primer plus finish coats), or to achieve complete hiding for selected color.

EXT 5.1H-5
High Performance Polyurethane over Galvanized Metal, Gloss Level 5

Pretreatment			As specified in Section 32 3600 – Landscape Decorative Metal
1	coat	Tnemec 27WB	Two-component, water-based epoxy tinted to match color of topcoat (if primer not shop applied)
1	coat	Tnemec UVX Series 750	Polyurethane

Note: Provide additional topcoat if required to achieve manufacturer's recommended total DFT (primer plus finish coats), or to achieve complete hiding for selected color. Comply with manufacturer's maximum recoat time.

EXT 5.3T-5
High Performance Fluoropolymer Finish on Galvanized Steel - Gloss Level 5: Tnemec coatings as specified, or equal.

Pretreatments			
	Cleaner	SSPC SP-1	Heavy-duty cleaner
	Additional Surface Preparation	ASTM D6386	Brush Blast
1	coat	Tnemec "Chembuild" Series 135"	Modified polyamidoamine epoxy applied at 102 microns to 127 microns (4.0 to 5.0 mils) in one or more coats
1	coat	Tnemec "Endura Shield" Series 740	Low VOC hybrid aliphatic polyurethane applied at102 microns to 127 microns (4.0 to 5.0 mils) in one or more coats
1	coat	Tnemec "Fluoronar" Series 1071	High-solids thermoset fluoropolymer applied at 51 microns to 76 microns (2.0 to 3.0 mils) in one or more coats

Note: Provide additional topcoat if required to achieve manufacturer's recommended total DFT (primer plus finish coats), or to achieve complete hiding for selected color.

END OF SECTION

SECTION 31 01 90

LANDSCAPE AND SITE MAINTENANCE

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Landscape maintenance and related work as shown on the Drawings and specified herein including, but not necessarily limited to, the following:
   1. Tree, shrub, ground cover and turf areas.
   2. Irrigation systems.
   3. General site clean-up.

B. Related Requirements:
   1. Section 32 80 00 - Irrigation
   2. Section 32 90 00 - Planting

1.02 REFERENCES AND REGULATORY REQUIREMENTS

A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Action Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

1.04 ACTION SUBMITTALS

A. Product Data: Manufacturer's product information on pesticides and herbicides to be used for approval prior to use.

1.05 QUALITY ASSURANCE

A. Control of Work: Comply with Section 5 of the Standard Specifications.

B. Control of Materials: Comply with Section 6 of the Standard Specifications.

C. The Maintenance Contractor shall be experienced in horticulture and landscape maintenance, practices, and techniques, and shall provide sufficient number of workers with adequate equipment to perform the work during the Landscape Maintenance Period.

1.06 LANDSCAPE MAINTENANCE PERIOD

A. Landscape Maintenance Period shall be 90 calendar days.

B. Continuously maintain the entire project area during the progress of the work, during the specified Landscape Maintenance Period or until Final Acceptance of the project by the Owner's Representative.

C. Landscape Maintenance Period shall not start until all elements of construction, planting and irrigation for the entire project are completed in accordance with Contract Documents. A prime requirement is that turf and landscape areas shall be planted and that turf areas shall show an even, healthy stand of "sod-like" turf which shall have been mown twice. If such criteria are met to the satisfaction of the Owner's

Representative, a written notification shall be issued to establish the effective beginning date of Landscape Maintenance Period. Additionally, elements included in the Pre-maintenance Punch-list shall have been completed to the satisfaction of the Owner's Representative. The Landscape Maintenance period shall, at the discretion of the Owner's Representative, be allowed to start and finish at different times in different areas as applicable.

D. A day of improper maintenance, as determined by the Owner's Representative, shall not be credited as an acceptable Landscape Maintenance Period day. The Landscape Maintenance Period shall be extended on a day-for-day basis should this occur until proper maintenance, as determined by the Owner's Representative, is being performed.

E. Contractor shall secure the project site against trespass, vandalism, and theft during the Landscape Maintenance Period. Security procedures shall be coordinated with the Owner's Representative.

F. Access to fields by Owner in each project area may be required prior final acceptance of turf. Contractor shall coordinate its mowing schedule and other maintenance schedules with Owner. School use will have priority over maintenance.

1.07 GUARANTEE

A. All work executed under this section shall be guaranteed against any and all poor, inadequate or inferior materials and/or workmanship, as determined by the Owner's Representative, for the entire Landscape Maintenance Period and for a period of one year after Final Acceptance of project.

B. The Contractor shall install all replacement material in conformance with the Contract Documents.

1.08 FINAL ACCEPTANCE

A. Upon completion of all project work, including Landscape Maintenance Period, the Owner's Representative will, upon written request from the Contractor (2 working day minimum notice), make an observation to determine conformance with the Contract Documents.

B. If, at the final project observation, work is found at variance with the Contract Documents, or is otherwise unacceptable, the Owner's Representative shall issue a punch-list of items requiring attention to the Contractor. The Contractor shall repair, replace, or otherwise correct all non-compliant work, continue Landscape Maintenance Period, and make another written request to the Owner's Representative to verify punch-list completion. If punch-list is found to be incomplete, or if site is still found to be unacceptable, the Contractor shall be back-charged as necessary for this and all additional observations required to issue Final Acceptance. All replacement materials and installations shall be in accordance with the Contract Documents. Remove rejected work and materials immediately from project. Prior to Final Acceptance, Contractor shall provide the Owner's Representative with all Record Drawings and written Guaranty Statements in accordance with the Contract Documents.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Materials used shall either conform to Specifications in other Sections or shall otherwise be acceptable to the Owner's Representative. The Owner's Representative shall be given a monthly record of all herbicides, insecticides and disease control chemicals used.

B. Maintenance Fertilizer: "Gro-Power High Nitrogen" as available through Gro-Power, Inc., 800-473-1307, or accepted equal, and shall contain the following chemical analysis:

Percent	Chemical

14%	nitrogen
4%	phosphoric acid
9%	potash

C. Humus: Inactive, decomposed organic material approved by Owner's Representative.

PART 3 - EXECUTION

3.01 MAINTENANCE

A. General: Proper maintenance, including watering, weeding, mowing, edging, fertilization, repairing, and protection is required until Final Acceptance of the entire project but not less than the specified Landscape Maintenance Period.

B. Watering: Water appropriately for each plant type to insure vigorous and healthy growth until work is accepted. Water or irrigate in a manner to prevent runoff or erosion. When hand watering, use a "water wand" to break the water force.

C. Weeding: Entire project site shall be kept free of weeds at all times. Control new weed growth with pre-emergent herbicides. If weeds develop, use legally approved herbicides.
   1. No herbicide shall be used without the Owner's Representative prior consent. Use herbicides in accordance with manufacturer's recommendations. If selective herbicides are used, extreme caution shall be observed so as not to damage other plants. Spraying shall only be done under windless conditions.
   2. Disease and Pest Control: Disease and insect damage shall be controlled by the use of fungicides and insecticides, subject to the prior consent of the Owner's Representative. Mole and gopher mitigation shall be accomplished using legal means other than poison baits.

D. Staking: Stakes shall remain in place through the maintenance and guaranty periods and shall be periodically inspected and adjusted by the Contractor to prevent rubbing that causes bark wounds, loosen for proper growth or other appropriate reasons.

E. Protection: The Contractor shall maintain protection of planting areas until Final Acceptance. Damaged areas shall be repaired or replaced at the Contractor's expense. Install a temporary maintenance fence using 4-foot blaze orange with steel driven stakes, or acceptable equal, around all turf areas for the entire length of Landscape Maintenance Period.

F. Trash: Remove trash in all project areas plus adjacent pedestrian walkways and parking areas for the entire length of Landscape Maintenance Period.

G. Replacement: Refer to the Article "Guarantee" in Part 1.

H. Fertilizing: Turf shall be fertilized on day 45 and 85 after initial seeding or installation with 20 pounds of fertilizer per 1,000 square feet.

3.02 TURF MAINTENANCE

A. Mowing and Edging
   1. Turf shall not be allowed to exceed 3 inches in height and shall not be mown shorter than 1-1/2 inches in height. Turf shall be well established, free of bare spots and weeds, and of a "sod-like" quality to the satisfaction of the Owner's Representative prior to Final Acceptance.
   2. All grass clippings shall be picked up and removed from the site and premises.
   3. Let turf areas dry out enough so that mower wheels do not skid, tear, or mark the surface.
   4. Edges shall be trimmed at least twice monthly or as needed for neat appearance. Clippings shall be completely removed and disposed of off-site.

B. Watering: Turf shall be watered at such frequency as weather conditions require to replenish soil moisture below root zone and to establish healthy turf areas.

C. Disease Control: Control all turf diseases throughout the Landscape Maintenance Period with legally approved fungicides and herbicides.

D. Weed Control: Control broad leaf weeds with selective, legally approved herbicides. No herbicide shall be used without the prior consent of the Owner's Representative.

E. Replacement: At or near the end of specified Landscape Maintenance Period, a final observation of turf areas will be made jointly by the Owner's Representative and Contractor. Remove deceased areas and unhealthy stands of turf from the site; do not bury into the soil. Replant all applicable areas with materials and in a manner acceptable to the Owner's Representative.

3.03 IRRIGATION SYSTEM

A. System Observation: The Contractor shall visually check all systems for proper operation on a weekly basis and make necessary repairs. Equipment shall be adjusted as necessary for proper coverage and function.

B. Controllers: Program automatic controllers for appropriate seasonal water requirements. Perform a full instruction session in the presence of the Owner's designated maintenance personnel demonstrating programming, system testing, and trouble shooting. Include instructions on how to turn off system in case of emergency.

C. Repairs: Repairs made to the irrigation system shall be at the Contractor's expense. Repairs, when required, shall be made within 24 hours of discovery by either Owner or Contractor.

3.04 FIELD QUALITY CONTROL

A. Final Review:
   1. At, or near the end of specified Landscape Maintenance Period, the Contractor shall make a written request for a final review and the work shall be reviewed for conformance with the Construction Documents.
   2. If the work is not accepted at time of review, a punch-list of items requiring attention will be prepared by the Owner's Representative and issued to the Contractor for correction.
   3. The Landscape Maintenance Period shall be extended at Contractors sole cost, as necessary.
   4. Upon completion of the punch-list, the Contractor shall again make written request for review. If, upon re-visiting the site, it is found that the punch-list has not been completed, the review shall end and a subsequent visit shall not be scheduled until the Contractor can assure the Owner the work is complete. The incomplete punch-list review meeting and any further visits and reviews, and re-inspections required due to Contractor not being prepared, or non-conformance with the Construction Documents, shall be back charged to the Contractor.

B. Final Acceptance: When work is found to be in conformance with the Contract Documents, subject to the discretion of the Owner's Representative, a statement of Final Acceptance shall be issued to the Contractor.

END OF SECTION

SECTION 31 20 00

EARTH MOVING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Site excavation and backfilling as shown on the Drawings including, but is not necessarily limited to, the following:
   1. Topsoil stripping, stockpiling, and replacement into planting areas.
   2. Rough grading.
   3. Filling and backfilling to attain required grades.
   4. Excavating for paving, footings, and foundations.

B. Related Requirements:
   1. Section 01 33 00 - Submittal Procedures
   2. Section 01 71 23 - Field Engineering
   3. Section 01 78 39 - Project Record Drawings
   4. Section 02 41 13 - Site Clearing and Demolition
   5. Section 31 23 00 - Excavation and Fill
   6. Section 32 11 00 - Base Courses
   7. Section 32 90 00 - Planting

1.02 REFERENCES

A. California Building Code (CBC).

B. American Society for Testing and Materials (ASTM):
   1. D 1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.

C. California Occupational Safety and Health Standards (OSHA):
   1. Article 6 - Excavations and Shoring.

D. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

1.04 CLOSEOUT SUBMITTALS

A. Project Record Drawings:
   1. Conform to requirements specified in Section 01 78 39 - Project Record Documents.
   2. Accurately record locations of utilities remaining, re-routed utilities, new utilities, and newly discovered utilities by horizontal dimensions, elevations, inverts, and slope gradients.

1.05 ACTION SUBMITTALS

A. Import Topsoil:
   1. It is the Contractor's responsibility to determine if import topsoil is required on the Project.

2. If required, Contractor shall submit four 1/2-pound samples in nominal 1 quart-sized "zip-lock" plastic bags for each proposed import topsoil. Each sample shall include current accompanying fertility and structure analyses prepared by a recognized soil and plant laboratory.

1.06 QUALITY ASSURANCE

A. Adhere to requirements, recommendations, and Best Management Practices (BMPs) for storm water management as may be outlined in the Project Storm Water Pollution Prevention Plan (SWPPP) prepared for this project, or as required by governing agencies.

B. Geotechnical Investigation:
1. A Geotechnical Report is available for use on this Project. The recommendations contained therein have been incorporated into the Contract Documents.
2. Accuracy, sufficiency, and competency of Geotechnical Report are not ratified by the Owner or its design consultants and remain the sole responsibility of Geotechnical Engineer.
3. The Geotechnical Report is available from the Owner.
4. Unless otherwise specified or indicated on the Drawings, it is intended that all work shall be done in accordance with applicable provisions of the Geotechnical Report.

C. The Owner may retain the services of the Geotechnical Engineer to make recommendations based on the soil conditions encountered the results of field and laboratory tests, and observations of the activities performed under this Section.
1. If, in opinion of the Geotechnical Engineer, work performed does not meet technical or design requirements stipulated, the Contractor shall make necessary readjustments to the approval of the Geotechnical Engineer.
2. No deviations from the Contract Documents shall be made without specific and written acceptance of the Owner's Representative.
3. In event of conflict between the Specifications and recommendations contained in Geotechnical Report, the Owner's Representative and Geotechnical Engineer shall be notified.
   a. Contractor shall follow clarification and interpretation issued through the Owner's Representative at no extra cost to the Owner.
   b. If clarification or interpretation should change scope of work, there will be mutually agreed-to adjustment in the Contract price by written Change Order.
4. The Geotechnical Engineer will not inspect the Contractor's safety measures.

D. Compaction densities specified for structural fills under footings, slabs, or pavements shall be determined in accordance the Geotechnical Engineer's written recommendations.

E. Certification:
1. The Contractor shall certify source and type of backfill and topsoil proposed to be incorporated into the work, at the request of the Owner's Representative.
2. The Contractor shall certify elevations of excavations, footings, subgrades, and finish grades with the use of a Licensed Surveyor, at Contractor's expense, at the request of the Owner's Representative.

F. Control of Work: Conform to Section 5 of the Standard Specifications.

G. Control of Materials: Conform to Section 6 of the Standard Specifications.

1.07 PROTECTION

A. Protect all existing structures, fences, roads, sidewalks, paving, curbs, and other items as necessary from earthwork activity.

B. Protect above or below grade utilities which are to remain.

C. Protect trees to remain in accordance with Section 32 01 90 - Existing Tree Protection and Maintenance as applicable.

D. Repair damage to any existing site features which are to remain. Repair and restoration shall be equal to quality and appearance of prior condition and to the satisfaction of the Owner's Representative.

1.08 FIELD CONDITIONS

A. Underground Utilities: Unknown buried utility lines may exist. If encountered, notify Owner's Representative immediately for direction and re-direct work to avoid delay.
   1. Cooperate and coordinate with Owner's Representative and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
   2. Do not interrupt existing utilities serving occupied facilities without proper notification to, and written direction from, Owner's Representative.

B. Wet Conditions: No grading operations shall be conducted when excessively wet conditions exist as determined by the Owner's Representative.

C. Contractor shall provide de-watering equipment as required to continue scheduled operations and provide optimum working conditions at no additional cost to Owner.

D. Dry Conditions: Contractor shall apply sufficient water to materials during construction to properly compact materials and control dust. Contractor shall provide dust control in conformance with Section 10 of Standard Specifications and shall provide water to subgrades as necessary to achieve compaction goals.

1.09 GRADE STAKES AND LINES

A. Grading and subgrading shall be controlled by Contractor-installed intermediate grade stakes and lines necessary to obtain the finished grade elevations shown or implied in the Drawings. Subgrade and finish grade surfaces shall conform to the control planes established by these grade stakes and lines.

B. Protect and maintain all existing benchmarks, monuments, and other reference points. If disturbed or destroyed, they shall be replaced at the Contractor's expense.

C. Contractor shall set temporary benchmarks as necessary to properly complete construction operations.

1.10 SURVEYING

A. Contractor shall be responsible for hiring a licensed professional surveyor to perform all surveying, layout and staking in accordance with requirements specified in Section 01 71 23 - Field Engineering. Contractor shall be responsible for informing Owner's Representative a minimum 5 working days' notice when staking and layout is scheduled so that a review of completed chalk lines and staking can take place.

1.11 TOLERANCES

A. Refer to related specification sections for grading tolerances of specified improvements.

PART 2 - PRODUCTS

2.01 PERFORMANCE CRITERIA

A. Excavations shall not exceed plus or minus 1/10-foot variation from dimensions and elevations shown or noted, unless otherwise accepted by Owner's Representative.

B. Grading Tolerance: Refer to related specification sections for grading tolerances of specified improvements.

2.02 MATERIALS

A. Fill Material: Soil excavated from the site or imported conforming to requirements for fill material contained in applicable portions of Division III Grading, Section 19 - Earthwork of the Standard Specifications, unless modified by recommendations for fill material contained in the Geotechnical Report. Imported fill shall be approved by the Geotechnical Engineer before importation to the site.

B. Topsoil: Excavated material from top 6 inches maximum of existing grade at unpaved areas and/or import material graded free of roots and rocks larger than two inches, subsoil, debris, weeds, large mats of grass, and other deleterious material. Topsoil shall be approved by the Owner's Representative and comply with the additional requirements specified in Section 32 90 00 - Planting.

C. Subsoil: Excavated material below top 6 inches of existing grade, graded free of clay clods larger than 6 inches, rocks larger than 3 inches, and debris.

D. Permeable Fills: As specified in Section 32 11 00 - Base Courses

E. Water: Clean and free from deleterious amounts of acids, alkalis, salts, and organic matter.

F. Additional Materials: As noted in the Geotechnical Report.

PART 3 - EXECUTION

3.01 PREPARATION

A. Identify all required lines, levels, contours, datum, control points and property lines required to properly establish limits of work.

B. Verify elevations of critical existing grades as noted on Drawings and as directed by Owner's Representative. Notify Owner's Representative of discrepancies prior to start of work and re-direct work to avoid delay.

C. Identify all known below grade utilities. Stake and flag locations.

D. Identify and flag surface grades and utilities.

E. Contact Underground Service Alert (USA), 800-642-2444, and local utility companies to verify locations of existing utilities a minimum of 5 working days prior to excavation.

3.02 PROTECTION

A. Maintain and protect existing utilities remaining which pass through work area.

B. Perform excavation work near utilities by hand. Provide necessary protection as the work progresses.

C. Provide and maintain protection for walks, curbs, drains, trees, corners of structures, and other improvement, as necessary to prevent damage.

D. Barricade and/or cover open excavations occurring as part of this work and post with warning lights to the satisfaction of the Owner's Representative. Operate warning lights during hours from dusk to dawn each day and as otherwise required.

E. Keep adjacent properties, streets and drives clean of any dirt, dust, or stains caused by earthwork operations.

F. Upon discovery of unknown utility or concealed conditions, notify the Owner's Representative immediately and re-direct work to avoid delay.

G. Control dust on and near the work, and on and near off-site borrow areas.
   1. Thoroughly moisten surfaces as required to prevent dust from being a nuisance to the public, neighbors, and concurrent performance of any other activities that may occur on the site.
   2. Non-compliance with proper dust control measures will be cause for issuance of a "stop work" order by the Owner until such time as satisfactory measures can be implemented.

3.03 TOPSOIL EXCAVATION

A. Excavate topsoil from areas scheduled for paving or rough grading and stockpile material in neat wind-row(s) and in location(s) previously established and accepted in coordination with the Owner's Representative and which will cause least interference to construction operations.

B. Do not excavate topsoil that has become wetted to, or beyond, the saturation point that would be required for optimum compaction.

C. Stockpile topsoil in wind-row(s) of a height not to exceed 8 feet, protect from erosion, and cover as necessary to prevent formation of dust.

3.04 ROUGH GRADING

A. Grade site subsoil to establish proper subgrade elevations and site contouring as described or implied in the Drawings:

B. Contouring:
   1. Construct landforms depicted in the Drawings to the satisfaction of the Owner's Representative.
   2. "Round-off" tops of slopes.
   3. "Feather" toes of slopes.

C. Compaction:
   1. Compact subgrade and engineered fill in accordance with the procedures and to relative compaction percent indicated in the Geotechnical Report.
   2. Compact by power tamping, rolling, or combinations thereof as accepted by Geotechnical Engineer.
      a. Where impractical to use rollers in close proximity to adjacent construction, compact by mechanical tamping.
      b. Scarify, moisture condition, and recompact any layer not attaining compaction until required density is obtained.
   3. Repeat compaction procedure until proper grade is attained.

D. Compaction: Compact subgrade for the specific areas as follows unless otherwise noted:
   1. Areas to be Planted: Maximum 8-inch loose lifts to be between 85 percent and 88 percent relative compaction.
   2. Areas to be Paved:

a. Maximum 8-inch loose lifts to at least 95 percent relative density.
b. Additional lifts should not be placed if the previous lift did not meet the required density, relative compaction, moisture content or if the soil conditions are not stable. The top 12 inches shall be compacted to at least 95 percent relative compaction.
c. Fill soils shall be compacted to no less than 90 percent relative compaction at moisture content of 2 to 4 percent for pavement area.
d. Compacted subgrade should be non-yielding under construction traffic, including a loaded ten-wheel truck such as a water or dump truck, in all pavement areas. Removal and subsequent replacement of some material (i.e. areas of excessively wet materials, unstable subgrade, or pumping soils) may be required to obtain the minimum 95 percent compaction to the recommended depth of 12 inches.
e. Subgrade preparation for pavement areas shall extend laterally for at least two feet beyond the edge of pavement.

3. Areas to Receive synthetic Turf: Shall be as follows:
a. Maximum 8-inch loose lifts to at least 90 percent relative density. The top 12 inches shall be compacted to at least 95 percent relative compaction.
b. Additional lifts should not be placed if the previous lift did not meet the required density, relative compaction, moisture content or if the soil conditions are not stable.
c. Fill soils shall be compacted to no less than 90 percent relative compaction at moisture content of 2 to 4 percent for pavement area.
d. Compacted subgrade should be non-yielding under construction traffic, including a loaded ten-wheel truck such as a water or dump truck, in all pavement areas and synthetic turf subgrade areas. Removal and subsequent replacement of some material including areas of excessively wet materials, unstable subgrade, or pumping soils, may be required to obtain the minimum 95 percent compaction to the recommended depth of 12 inches.

E. Remove all excess subsoil material from site and dispose of in a legal manner. Refer to "Material Storage" below.

F. Entire project or individual field area shall be rough graded at one time. No earthwork operation shall occur for partial field areas without receiving direction from the Owner or prior written approval from the Owner.

3.05 EXCAVATION

A. Remove and dispose of all miscellaneous materials encountered when establishing required grade elevations:
1. Miscellaneous materials can include but are not limited to: pavements and other obstructions, underground structures, utilities, abandoned irrigation materials, and other materials encountered per the discretion of the Owner's Representative.

B. Stability of Excavations:
1. Comply with any applicable recommendations contained within the Project Geotechnical Report and requirements of agencies having jurisdiction.
2. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

C. De-watering: Provide and maintain, at all times during construction, ample means and devices with which to promptly remove and properly dispose of water from any source entering structural excavation, pipe trenches, or other excavations. All costs incurred from de-watering activities shall be paid for by the Contractor.

D. Excavation for Structures: Conform to elevations and dimensions shown in the drawings within a tolerance of plus-or-minus 1/10 (0.10) of a foot, and extending a sufficient distance from footings and foundations to permit placing and removal of concrete form-work, installation of services, and quality review. See Geotechnical report for over excavation requirements.

E. Excavation for Pavements: Cut surface under pavements to comply with cross-sections, elevations, and grades as shown in the Drawings. See Geotechnical report for over excavation requirements.

F. Material Storage:
   1. Stockpile satisfactory excavated materials where appropriate, until required for use.
   2. Place, grade, and shape stockpiles for proper drainage.
   3. Locate and retain stockpiles away from edge of excavations.
   4. Dispose of excess soil material in a legal fashion after it has become evident that the material is no longer needed on the project and is of no value to the Owner.

G. Compact topsoil to 84 percent to 89 percent relative density.

H. Maintain slopes and gradients established during subgrade operations and shape landforms to satisfaction of the Owner's Representative.

I. Refer to Section 32 90 00 - Planting for finish grading information and finish grades at edge of planting areas and hardscape.

3.06 FIELD QUALITY CONTROL

A. Tolerances: Conform to Conform to Section 19 of the Standard Specifications, unless more stringent requirements in these Contract Documents are provided, in which place the more stringent tolerances shall govern. Refer to Section 01 71 23 - Field Engineering for additional project requirements.

B. The Owner Representative shall review and accept work at the following stages:
   1. Topsoil removal and stockpile.
   2. Grading plan for project. Plan shall provide strategy for grading sequence for entire site at one time or by field. Limits and sequence shall be reviewed and coordinated.
   3. Cross ripping of subgrade shall be reviewed and observed.

END OF SECTION

SECTION 31 23 00

EXCAVATION AND FILL

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Trenching, backfilling, and compaction required for, but not necessarily limited to, the following:
   1. Storm drainage system installation.
   2. Irrigation system installation.

B. Related Requirements:
   1. Section 01 33 00 - Submittal Procedures
   2. Section 01 71 23 - Field Engineering
   3. Section 01 78 39 - Project Record Drawings
   4. Section 02 41 13 - Site Clearing and Demolition
   5. Section 31 20 00 - Earth Moving
   6. Section 32 11 00 - Base Courses
   7. Section 32 90 00 - Planting
   8. Section 33 40 00 - Storm Drainage Utilities

1.02 REFERENCES

A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 SEQUENCING AND SCHEDULING

A. Refer to all other Contract Documents, determine the extent and character of related work, and properly coordinate work specified herein with that described elsewhere to produce a complete, operational installation.

1.04 CLOSEOUT SUBMITTALS

A. Project Record Drawings:
   1. Conform to requirements specified in Section 01 78 39 - Project Record Documents.
   2. Accurately record locations of utilities remaining, re-routed utilities, new utilities, and newly discovered utilities by horizontal dimensions, elevations, inverts and slope gradients as practical.

1.05 QUALITY ASSURANCE

A. Control of Work: Comply with Section 5 of the Standard Specifications.

B. Control of Materials: Comply with Section 6 of the Standard Specifications.

C. Trench Safety: Comply with applicable portions of Sections 5 and 7 of the Standard Specifications and requirements of OSHA and other agencies having jurisdiction).

1.06 FIELD CONDITIONS

A. Wet Conditions: No trenching shall occur when excessively wet conditions exist in the opinion of the Owner's Representative.

B. Dry Conditions: Contractor shall provide dust control in conformance with Section 10 of Standard Specifications and shall provide water to work as necessary to achieve compaction goals.

PART 2 - PRODUCTS

2.01 MATERIALS

A. General: Materials shall be free of debris, roots, wood, scrap material, vegetative matter, refuse, soft unsound particles, or other deleterious and objectionable materials.

B. Bedding for Utility Piping: Sand conforming to Section 19-3.02F(2) of the Standard Specifications.

C. Backfill for French Drain and Vertical Drain Lines, refer to Section 33 40 00 - Storm Drainage Utilities.

D. Native Backfill: Native backfill shall be acceptable soil material excavated from the project site. This material will be considered unclassified and no testing other than for compaction will be required. Additional material required for backfill shall be acceptable to the Owner's Representative.

E. Permeable Material: Permeable material shall be Caltrans Class II permeable rock material.

F. Slurry Fill: Controlled low-strength fluid material (CLSM) consisting of water, Portland cement, aggregate, and fly ash with slump of 10 inches or more and an unconfined compressive strength of 200 psi or less.

G. Aggregate Base: As specified in Section 32 11 00 - Base Courses.

PART 3 - EXECUTION

3.01 PREPARATION

A. General:
1. Prior to trenching, the Contractor shall pothole existing utilities at locations indicated or implied on the Drawings, where new piping or utilities will cross existing utilities of uncertain depth to determine the elevation of the utility in question and ensure that the new line will clear the potential obstruction.
2. The Contractor shall mark out construction areas in white with non-permanent paint and contact Underground Service Alert (U.S.A.), 800-642-2444, to locate all known utilities a minimum 48 working hours prior to any excavation.
3. Should an existing crossing utility present an obstruction, the proposed line shall be adjusted as acceptable to the Owner's Representative to clear the existing utility.

3.02 TRENCH EXCAVATION

A. General:
1. Excavation shall include removal of water and materials that interfere with construction. Remove water which may be encountered in the trench by pumping or other methods prior to pipe laying, bedding and backfill operations. Trenches shall be sufficiently dry to permit proper jointing and compaction.
2. Contractor is responsible for directing vehicular and pedestrian traffic safely through or around the work area at all times.
3. The Contractor shall relocate, replace, reconstruct or repair, to an "as-was" or better condition, surface or subsurface improvements which are in the line of construction or which may be damaged, removed, disrupted or otherwise disturbed by the construction activities. Except as specified in other Sections or shown in the Drawings, this provision applies to all surface improvements of

whatever nature such as walls, fences, above-grade utilities, landscaping, paving, structures, or other physical features whether shown in the Drawings or not and to all subsurface improvements such as utilities which may be indicated in the Drawings or marked in the field. The Contractor shall connect modified utilities to existing systems and leave work in an operating condition. The cost of this work shall be considered as included in other items of work and no additional compensation will be allowed.

4. The maximum allowable trench width at the top of pipe shall be 18 inches greater than the pipe diameter.
5. New utility trenches extending deeper than 2 feet below finish grade should be located a minimum of 5 feet away from footings and foundations.

B. Existing Paving Areas:
   1. Existing asphalt paving over new trenches shall be sawcut, removed, and legally disposed. Existing asphalt paving shall be neatly sawcut 1 foot greater on each side than the trench width. If a longitudinal pavement joint or edge of pavement is located within 3 feet of the limit of excavation, intervening pavement shall be removed and replaced after completion of backfilling. If curb, gutter, or similar concrete improvement are to be replaced, the adjacent existing asphalt paving shall be sawcut 2 feet from the edge of concrete.
   2. Existing Portland cement concrete paving over new trenches shall be sawcut to a minimum depth of 1-1/2 inches in straight lines either parallel to the curb or at 90-degree angles to the alignment of the sidewalk prior to being broken out. No section to be replaced shall be smaller than 30 inches in either length or width. If the sawcut would fall within 30 inches of a construction joint, expansion joint, or edge, or within 12 inches of a score mark, the concrete shall be removed to the joint, edge, or mark.

C. Walkway Areas:
   1. Backfill for trenches or other excavations within walkway areas should be compacted in 6-inch maximum layers, unless otherwise noted, with hand-held tampers to assure adequate subgrade support.

D. Compacted Fill Areas:
   1. Where trenches are to be excavated in compacted fill, these trenches shall be backfilled with the fill materials excavated and re-compacted in the layers and to the density specified for the particular area.

E. Open Trench:
   1. No trench shall be left in an open un-protected condition at the end of the day. At the end of the day, open trenches shall be protected in a manner acceptable to the Owner's Representative.
   2. Provisions for trench crossings and access shall be made at all street crossings, driveways, water gate valves, and fire hydrants unless otherwise acceptable to the Owner's Representative.

F. Excavated Material:
   1. Excavated material not required for backfill or of value to the Owner shall be removed and legally disposed of by the Contractor at no additional cost.
   2. Material excavated in streets and roadways shall be laid alongside the trench no closer than 2 feet from the trench edge and kept trimmed to minimize inconvenience to public traffic.
   3. Provisions shall be made whereby all storm and waste water can flow uninterrupted in gutters or drainage channels to drainage structures.
   4. Excavated material shall not be stored on existing landscaping or paving without provisions being made to protect the surface below from being stained or otherwise adversely affected.

G. Shoring
   1. Should excavations extend more than 4 feet below existing ground surface, shoring will be required.
   2. For trenching greater than 4 feet deep side slopes are not to exceed 1-1/2: 1 with a depth of 20' max.

3. When trenching greater than 4 feet deep, provide a trench box or shield approved by a PE or designed with accompanying tabulated data approved by a PE.
4. Provide shoring, bracing, or underpinning when trenching next to adjoining walls, sidewalks, or pavements. There shall be no trenching below the base or footing of a foundation that can reasonably expected to pose a hazard to workers unless one of the mentioned support systems is used.
5. Follow OSHA standards for maintaining, installing, and removing support systems.
6. Utility trenches shall be excavated according to accepted engineering practices following OSHA.

3.03 PIPE BEDDING

A. Stabilization of Trench Bottom:
1. When the trench bottom is unstable due to wet or spongy foundation, trench bottom shall be de-watered as necessary. The Owner's Representative will determine the suitability of the trench bottom and the amount of sand, gravel, or crushed rock needed to stabilize the soft foundation.

3.04 TRENCH BACKFILL AND COMPACTION

A. General:
1. Construct backfill in two operations, initial and final.
2. Do not backfill where the foundation material in trench is already saturated, except as acceptable to the Owner's Representative. Provide a minimum cover as shown or specified.
3. Where settling greater than the tolerance allowed for grading occurs in trenches and pits due to unstable subgrade material, excavate to the depth necessary to rectify the problem, then backfill and compact the excavation as specified herein and restore the surface to the required elevation.
4. Place final backfill in 6-inch maximum loose lifts for utilities under roads, streets, concrete slabs or other areas to be paved and synthetic turf subgrade areas.
5. Compact backfill surrounding ducts, conduits, pipes and other structures, including the top 12-inches of subgrade to 95 percent maximum density in accordance with ASTM D1557.
6. Backfill to permit the rolling and compacting of the completed excavation with the adjoining material providing the specified density necessary to enable rock placement of paving of the area immediately after backfilling has been completed.

B. Initial Backfill:
1. Prior to trench backfill, the condition of the trench and laying of pipe shall be acceptable to the Owner's Representative.
2. Select backfill material shall be used as initial backfill for all utilities except irrigation piping, except as otherwise noted and specified.
   a. After the pipe has been properly laid and accepted by the Owner's Representative, selected backfill material shall be placed on both sides of the pipe and compacted to the depth shown in the Drawings.
   b. Compaction: The initial backfill material shall be hand tamped in layers not exceeding 4 inches in uncompacted depth and shall be brought up uniformly on both sides of the pipe to avoid bending or distortional stress. After hand-tamping, the relative compaction of the initial backfill material shall be at least 95 percent relative compaction.

C. Final Backfill:
1. Native backfill material shall be used for final backfill, unless otherwise noted.
2. Compaction: Final backfill compaction shall be by mechanical means with backfill material placed in layers not exceeding 6 inches in loose depth. Each layer shall be thoroughly compacted before succeeding layers are placed. The use of machine tampers, except manually held types, shall not be permitted. Final backfill shall be compacted to a relative compaction of 95 percent for paving areas and synthetic turf subgrade areas. In planting areas, provide acceptable topsoil to required depth compacted to 85 percent to 89 percent maximum relative compaction.

D. Jetting: No jetting will be allowed.

3.05 TRENCH SURFACING

A. General:
   1. In unimproved areas, the trench surface shall be restored to its original condition. No mounds of earth shall be left along the trench.
   2. Backfill shall be flush with adjoining grade in a firm, unyielding position with no visible settling for a period of one year after Final Acceptance.

B. Paved Areas:
   1. Temporary surfacing acceptable to the Owner's Representative shall be laid within 1 day after backfilling, except where the Contractor elects to place permanent surfacing within this time period, until permanent paving is installed.

END OF SECTION

SECTION 32 11 00

BASE COURSES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Grading and compaction of subgrade soil for areas to receive pavement, structures, and base material.
   2. Furnishing and placing of aggregate base material.

B. Related Requirements:
   1. Section 01 71 23 - Field Engineering
   2. Section 31 20 00 - Earth Moving
   3. Section 32 12 16 - Asphalt Paving
   4. Section 32 13 13 - Concrete Paving

1.02 REFERENCES

A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Action Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

B. Sequencing and Scheduling
   1. Work of this Section shall not proceed until all underground utilities and irrigation sleeving have been installed and accepted.
   2. Contractor shall schedule work so that installation of paving and surfacing occurs no later than 5 working days after placement and proper compaction of base materials. Base materials left un-paved longer than this time period shall be subject to testing and re-compaction at the contractor's expense.

1.04 ACTION SUBMITTALS

A. Certificates of compliance, including sieve analyses, for products and materials proposed to be used in work covered by this Section.

1.05 QUALITY ASSURANCE

A. Control of Work: Conform to Section 5 of the Standard Specifications.

B. Control of Materials: Conform to Section 6 of the Standard Specifications.

1.06 FIELD CONDITIONS

A. Wet Conditions: Do not prepare subgrade or place base material when excessively wet conditions exist as determined by the Owner's Representative.

B. Dry Conditions: Contractor shall provide dust control in conformance with Section 10 of Standard Specifications and shall provide water to subgrades and base courses as necessary to achieve compaction goals.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Materials shall be stockpiled on site in locations that, in the opinion of the contractor, cause least interference with construction operations and as acceptable to the Owner's Representative.

B. Materials shall not be stockpiled in proposed planting areas.

C. Protect materials from segregation, contamination and wind and water erosion.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Aggregate Base: Class 2, 3/4-inch maximum material conforming to Section 26-1.02A of the Standard Specifications. No recycled materials will be accepted for synthetic turf, all-weather track surfacing, or building pad areas. All other paving and surfacing using aggregate base can use recycled materials.

PART 3 - EXECUTION

3.01 SUBGRADE PREPARATION

A. Preparation of subgrade shall conform to Section 6 of the Standard Specifications and as specified in Section 31 20 00 - Earth Moving.

B. Remove unsuitable subgrade material as necessary and replace with suitable material or aggregate base per the discretion of the Owner's Representative.

3.02 BASE MATERIAL PLACEMENT

A. Conform to Section 26 of the Standard Specifications.

B. Obtain acceptance of subgrade preparation work prior to placing base material thereon.

C. Place and compact base material in 6-inch maximum lifts unless otherwise noted. Compaction shall be at least 95 percent relative compaction.

D. Base material shall be moisture conditioned to between optimum and 3 percent above optimum prior to placement and compaction.

3.03 TOLERANCES

A. Conform to Section 26 of the Standard Specifications, unless more stringent requirements in these Contract Documents are provided, in which place the more stringent tolerances shall govern.

3.04 CLEAN-UP OF WORK AREA

A. The Contractor shall remove and legally dispose of excess materials, spoils, and debris from the job site on a daily basis.

3.05 PROTECTION OF FINISHED PRODUCT

A. The Contractor shall provide lighted barricades, signs, and other devices as necessary to prevent damage to finished base courses.

END OF SECTION

SECTION 32 12 16

ASPHALT PAVING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Asphalt paving is shown on the Drawings including, but is not necessarily limited to, the following:
   1. Plant-mixed asphalt and other asphalt items.
   2. Header boards.

B. Related Requirements:
   1. Section 01 33 00 - Submittal Procedures
   2. Section 31 20 00 - Earth Moving
   3. Section 32 11 00 - Base Courses
   4. Section 32 12 17 - Asphalt Track Paving
   5. Section 32 13 13 - Concrete Paving
   6. Section 32 33 00 - Site Furnishings
   7. Section 33 40 00 - Storm Drainage Utilities

1.02 REFERENCES

A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

B. Sequencing and Scheduling:
   1. Time delay between placement and compaction of base material and installation of asphaltic shall not be more than 5 calendar days. Base material left unpaved longer than this time period shall be subject to testing and re-compaction at the expense of the contractor.

1.04 ACTION SUBMITTALS

A. Product Data: Descriptive literature for primer and other materials proposed for use if requested by the Owner's Representative.

B. Certificates, signed by asphaltic producer and Contractor, stating that materials comply with specification requirements. Minimum information submitted shall include a manufacturer's certification for asphalt products and an asphalt mix design by an independent, qualified laboratory.

C. The Contractor shall furnish vendor's certified test reports for each carload, or equivalent of bituminous material shipped to the project, signed by asphaltic producer and Contractor stating that materials comply with specification requirements.
   1. Minimum information submitted shall include a manufacturer's certification for asphalt products and an asphalt mix design by an independent, qualified laboratory.
   2. The report shall be submitted and approved before material is used on the Project. The furnishing of the vendor's certified test report for the bituminous material shall not be interpreted as basis for final acceptance.

3. Test reports shall be subject to verification by testing samples of materials received for use on the project.

1.05 CLOSEOUT SUBMITTALS

A. Warranty as specified.

1.06 QUALITY ASSURANCE

A. Work shall conform to the appropriate portion of the referenced “Standard Specifications” except references to "measurement" and "payment" are not applicable.

B. Control of Work: Conform to Section 5 of Standard Specifications.

C. Control of Materials: Conform to Section 6 of Standard Specifications.

D. Asphalt paving surfaces shall have positive drainage as indicated on the Drawings.

1.07 PROTECTION OF WORK

A. Curbs and other work shall be covered with suitable material and protected from staining or injury by equipment and contact with oil, emulsion, and asphalt.

B. Manholes, catch basins, and other gratings shall be covered with suitable material so that no asphalt or emulsion will come in contact with the inside walls or floors of the structures.

C. Damage to adjacent improvements shall be repaired or replaced at the Contractor's expense and to satisfaction of the Owner’s Representative.

1.08 FIELD CONDITIONS

A. Grade Control:
1. Establish and maintain required lines and grades, including crown and cross slope.
2. The final grades and elevations of the ground paving shall be a consistent depth below adjacent concrete work.

B. Ambient Conditions:
1. Apply bituminous prime and tack coats only when ambient temperature in shade is at least 50 degrees F and when temperature has not been below 35 degrees F for 12 hours immediately prior to application.
2. Do not apply when substrate surface is wet or contains an excess of moisture.
3. Construct asphaltic surface course only when atmospheric temperature is above 40 degrees F and underlying base is thoroughly dry.

1.09 WARRANTY

A. Contractor: Provide an extended 2-year warranty for asphalt paving.
1. Warranty shall be limited to ordinary wear and tear by weather or defects due to faulty materials and workmanship.
2. Make repairs at no expense to Owner.

PART 2 - PRODUCTS

2.01 DESIGN AND PERFORMANCE REQUIREMENTS

A. At no point shall paved surface fail to drain. Provide drainage as indicated on the Drawings.

B. Asphalt paving shall be free from excessive segregation defined as gaps between aggregate visible at 3/16 inch or larger, cracking, potholes, raveling, slippage, depressions, corrugations, or other defects at the date of completion and acceptance of the project.

C. Unless otherwise noted, aggregates in asphalt mix may be a blend of virgin material and reclaimed asphalt paving (RAP), with the RAP constituting no more than 15% of the aggregate blend per Section 39 of the Standard Specifications.

D. Asphalt mix for use beneath track surfacing, tennis court surfacing, or other court system to receive surface coating shall consist of only virgin material; RAP shall not be used.

2.02 ASPHALT PAVING

A. Paving Asphalt Binder: Shall be PG 64-10, conforming to Section 92 of the Standard Specifications.

B. Prime Coat: Liquid asphalt to conform to the requirements for SS-1h liquid asphalt as per Section 94 of the Standard Specifications and approved by the Owner's Representative.

C. Tack Coat: Asphaltic emulsion to be penetration type conforming to the RS-1requirements of Section 94 of the Standard Specifications.

D. Aggregates:
   1. Traffic Areas (Vehicular Asphalt Paving): 1/2-inch medium in accordance with the gradation requirements of Section 39 of the Standard Specifications, unless otherwise specified or noted. Traffic area aggregate shall be used in parking and street areas.
   2. Pedestrian and Non-Vehicular Areas: 3/8 inch maximum or No. 4 maximum aggregate in accordance with the gradation requirements of Section 39 of the Standard Specifications, unless otherwise specified or noted.

2.03 HEADERS

A. Refer to details on the Drawings.

2.04 AGGREGATE BASE

A. Aggregate base shall conform to Section 32 11 00 - Base Courses.

2.05 EQUIPMENT

A. Spreading and rolling equipment shall be in accordance with Section 39-5 of the Standard Specifications and additional requirements specified.

B. Spreading and compaction shall be in accordance with Section 39-6 of the Standard Specifications and additional requirements specified.

C. Pavers that leave ridges, indentations or other marks in the surface that cannot be eliminated by rolling or prevented by adjustment in operation shall not be used.

PART 3 - EXECUTION

3.01 EDGEBAND AND WOOD HEADER INSTALLATION

A. Install to conform to shapes, lines, dimensions, and grades shown on the Drawings.

B. Radii shall be smooth and constant with properly aligned tangent points.

3.02 PAVING INSTALLATION - GENERAL

A. Conform to requirements of Sections 37 and 39 of the Standard Specifications.

B. Place plastic materials under asphaltic paving equipment while not in use, to catch and/or contain drips and leaks.

C. Areas shall be paved in sequence and direction to avoid driving loaded trucks on the new asphalt surface.

3.03 PREPARATION – PRIME COAT

A. Apply primer in accordance with Standard Specifications Section 39 on aggregate base.

B. Immediately before applying the prime coat, loose dirt and other objectionable material shall be removed from the full width of the surface to be primed.

C. The bituminous material including solvent shall be uniformly applied with a bituminous distributor at the rate of 0.25 to 0.50 gallon per square yard depending on the base course surface texture. The type of bituminous material and application rate shall be approved by the Owner's Representative prior to application.

D. Following the application, the primed surface shall be allowed to dry not less than 24 hours without being disturbed or for such additional time as may be necessary to permit the drying out of the prime coat until it will not be picked up by traffic or equipment. This period shall be determined by the Owner's Representative. The surface shall then be maintained by the Contractor until the surfacing has been placed.

E. Suitable precautions shall be taken by the Contractor to protect the primed surface against damage during this interval, including supplying and spreading sand necessary to absorb excess bituminous material.

3.04 PREPARATION – TACK COAT

A. General: Apply tack coat to contact surfaces of adjacent pavement and concrete curbs.

B. Immediately before applying the tack coat, the full width of surface to be treated shall be swept with a power broom and/or air blast to remove all loose dirt and other objectionable material.
   1. Vegetation shall be removed and an approved herbicide applied to those areas before cleaning.
   2. Emulsified asphalt shall be diluted by the addition of water when directed by the Owner's Representative and shall be applied a sufficient time in advance of the paver to ensure that all water has evaporated before the overlying mixture is placed on the tacked surface.
   3. The bituminous material including vehicle or solvent shall be uniformly applied with a bituminous distributor at the rate of 0.05 to 0.07 gallons per square yard. The type of bituminous material and application rate shall be approved by the Owner's Representative prior to application.

C. Following the application, the surface shall be allowed to cure without being disturbed. The curing period shall be not less than 24 hours, unless otherwise approved by the Owner's Representative, and shall be sufficient to permit drying out and setting of the tack coat.

D. After tack coat has cured, suitable precautions shall be taken by the Contractor to protect the surface against damage prior to placement of next course.

3.05 PLACING ASPHALT PAVEMENT

A. General:
   1. Place asphalt within 48 hours of applying primer or tack coat and after required curing time for emulsions.
   2. Each course of asphalt concrete shall be installed or constructed in accordance with the Standard Specifications Section 39.
   3. All layers, except as otherwise provided in these Specifications, shall be spread with mechanical spreading and finishing equipment as provided for in the Standard Specifications Section 39-5.01.

B. Tack and Levelling Course:
   1. After completion of the base course a tack coat shall be applied and a leveling course of minimum 1-inch thickness shall be placed and compacted over entire area.
   2. After compacting, the surface of the leveling course shall be check for compliance with the specified tolerances.
   3. Where required, depressions shall be filled with asphalt concrete fines prior to proceeding with subsequent pavement construction.

C. Paver Equipment Requirements:
   1. Asphalt pavers shall be self-propelled mechanical spreading and finishing equipment provided with a screed or strike-off assembly capable of distributing the material to not less than the full width of a traffic lane.
      a. Screed action shall include cutting, crowding, and other practical action which is effective on the mixture without tearing, shoving, or gouging, and which produces a surface texture of uniform appearance.
      b. The screed shall be adjustable to the required section and thickness. The paver shall be provided with a full width roller or tamper or other suitable compacting devices.
   2. Asphalt pavers shall be operated to insure continuous and uniform movement of the paver.
   3. The asphalt paver shall operate independently of the vehicle being unloaded or shall be capable of propelling the vehicle being unloaded in a satisfactory manner and, if necessary, the load of the haul vehicle shall be limited to that which will insure satisfactory spreading.
   4. While being unloaded, the haul vehicle shall be in contact with the machine at all times, and the brakes on the haul vehicle shall not be depended upon to maintain contact between the vehicle and the machine.

D. Placing Hot-Mix Asphalt:
   1. The completed mixture shall be deposited at a uniform quantity per linear foot to provide the required compacted thickness without resorting to spotting, picking-up or otherwise shifting the mixture.
      a. Segregation shall be avoided, and the surfacing shall be free from pockets of coarse or fine material.
      b. Asphalt containing hardened lumps shall not be used.
   2. Unless lower temperatures are directed by the Owner's Representative, mixtures shall be spread, and the first coverage of initial or breakdown compaction shall be performed, when the temperature of the mixture is not less than 275 degrees F. Breakdown compaction shall be completed before the temperature of the mixture drops below 250 degrees F.
      a. A layer shall not be placed over another layer that exceeds 2 inches in compacted thickness until the temperature of the layer that exceeds 2 inches in compacted thickness is less than 150 degrees F at mid depth.

b. Layer thickness shall not be less than 1.25 inches or exceed 2 inches unless approved in advance and in writing by Owner's Representative.

E. Construction Joints: Before placing the top layer adjacent to cold transverse construction joints, the cold transverse construction joints shall be trimmed to a vertical face and to neat line.
1. Transverse joints shall be tested with a 16-foot straightedge and shall be cut back to conform to meet the specified tolerances.
2. Connections to existing surfacing shall be feathered to conform to the requirements for smoothness.
3. Longitudinal joints shall be trimmed to a vertical face and to a neat line if the edges of the previously laid surfacing are, in the opinion of the Owner's Representative, in such condition that the quality of the completed joint will be affected.

F. Rollers and Roller Equipment: The Contractor shall furnish a sufficient number of rollers to achieve the compaction and surface finish required by these Specifications.
1. Each roller shall have a separate operator.
2. Rolling equipment shall be self-propelled and reversible.
3. Rollers shall be equipped with pads and water systems that prevent sticking of asphalt mixtures to the pneumatic- or steel-tired wheels.
4. A parting agent that will not damage the asphalt mixture, as determined by the Owner's Representative, may be used to aid in preventing the sticking of the mixture to the wheels.

G. Compaction:
1. Compact pavement by rolling to a specified relative compaction that is 93-96% of bulk unit weight, tested in accordance with the nuclear gauge or CTM 309 core method.
a. Do not displace or extrude pavement from position.
b. Hand compact in areas inaccessible to rolling equipment.
c. A "pass" shall be one movement of a roller in either direction.
d. A "coverage" shall be as many passes as are necessary to cover the entire width being paved.
e. Overlap between passes during a coverage, made to ensure compaction without displacement of material in accordance with good rolling practice, shall be considered to be part of the coverage being made and not part of a subsequent coverage.
f. Each coverage shall be completed before subsequent coverages are started.
g. Rolling shall commence at the lower edge and shall progress toward the highest portion.
h. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.
i. In-place density of asphalt concrete will be determined prior to opening the pavement to public use.
j. Relative compaction will be determined by California Test 375.
k. Laboratory specimens will be prepared in conformance with California Test 304.

H. The completed surfacing shall be thoroughly compacted, smooth, and free from routes, humps, depressions, or irregularities. Ridges, indentations, or other objectionable marks left in the surface of the asphalt paving by blading or other equipment shall be eliminated by rolling or other means. The use of any equipment that leaves ridges, indentations, or other objectionable marks in the asphalt paving shall be discontinued, and other acceptable equipment shall be furnished by the Contractor.

3.06 TOLERANCES

A. Surface Tolerance:
1. The Contractor shall have on site a 12-foot straightedge for testing the asphalt paving surface when said straightedge is laid on the finished surface and parallel with the center line, the surface shall not vary more than 0.01-foot from the lower edge of the straightedge.
2. The transverse slope of the finished surface shall be uniform to a degree that no depressions greater than 0.02-foot are present when tested with a straightedge 12 feet long.
3. Skin patching will not be allowed to correct depressions.

B. Thickness Tolerance:

1. The pavement thickness shall be determined by measuring the average thickness of core samples taken from the pavement for density determination.
2. Thickness will be determined from the cores and shall be based upon the average of the cores.
3. The asphalt thickness indicated on the cross sections shall be maintained.
4. Thickness deficiencies in excess of 3/8-inch shall be corrected by removal and replacement of overlay at the discretion of the Owner's Representative.
5. Skin patches and overlays less than 1-1/2 inches will not be allowed.

C. Adjustments to Contract Sum:
1. The Contract will be reduced for thickness deficiencies equal to or less than 3/8-inch in proportion to 2 times the percent of thickness deficiencies to the specified pavement thickness (i.e., a 1/4-inch thickness deficiency in a pavement with a 2-inch specified thickness would result in a reduction of the unit price of (2 x 0.25)/2.0 = 25 percent) for the lot containing a thickness deficiency.
2. No Contract Sum adjustment will be made for thickness in excess of those specified or shown.

3.07 FIELD QUALITY CONTROL

A. Take samples and perform tests in accordance with Caltrans Test Methods.

B. Upon completion of the work, Contractor shall provide a water drainage test for paved areas.
1. Areas that fail to drain properly, as determined by the Owner's Representative, shall be corrected and repaired at no additional cost.
2. If repaired, the entire surface shall have a seal coat applied at Contractor's cost.
   a. Type of seal coat will be determined by the Owner's Representative.
   b. Repairs shall be made within 15 calendar days of notification at the expense of the Contractor.

3.08 PROTECTION

A. After final rolling, do not permit vehicular traffic on pavement until it has cooled to not less than temperature noted in the "Standard Specifications" and hardened and in no case sooner than 6 hours.

B. Contractor shall be responsible for erecting barricades to protect paving from traffic until mixture has cooled and attained its maximum degree of hardness.

C. Ample time shall be allowed for drying before traffic, vehicular and pedestrian, is allowed on the pavement.

END OF SECTION

SECTION 32 12 17

ASPHALT TRACK PAVING

PART 1 - GENERAL

1.01 SUMMARY

A. Sections Includes: Asphalt paving and related work as a base for the outdoor installation of the rubber track surfacing.

B. Related Requirements:
1. Section 31 20 00 - Earth Moving
2. Section 32 11 00 - Base Courses
3. Section 32 13 13 - Concrete Paving
4. Section 32 18 24 – Polyurethane Track Surfacing
5. Geotechnical investigation

1.02 REFERENCES

A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

B. Sequencing and Scheduling:
1. Time delay between placement and compaction of base material and installation of asphaltic shall not be more than 5 calendar days. Base material left unpaved longer than this time period shall be subject to testing and re-compaction at the expense of the contractor.

1.04 ACTION SUBMITTALS

A. Product Data: Descriptive literature for primer and other materials proposed for use if requested by the District's Representative.

B. Certificates, signed by asphaltic producer and Contractor, stating that materials comply with specification requirements. Minimum information submitted shall include a manufacturer's certification for asphalt products and an asphalt mix design by an independent, qualified laboratory.

C. The Contractor shall furnish vendor's certified test reports for each carload, or equivalent of bituminous material shipped to the project, signed by asphaltic producer and Contractor stating that materials comply with specification requirements.
1. Minimum information submitted shall include a manufacturer's certification for asphalt products and an asphalt mix design by an independent, qualified laboratory.
2. The report shall be submitted and approved before material is used on the Project. The furnishing of the vendor's certified test report for the bituminous material shall not be interpreted as basis for final acceptance.
3. Test reports shall be subject to verification by testing samples of materials received for use on the project.

1.05 CLOSEOUT SUBMITTALS

A. Warranty as specified.

1.06 QUALITY ASSURANCE

A. Work shall conform to the appropriate portion of the referenced “Standard Specifications” except references to "measurement" and "payment" are not applicable.

B. Control of Work: Conform to Section 5 of Standard Specifications.

C. Control of Materials: Conform to Section 6 of Standard Specifications.

D. Asphalt paving surfaces shall have positive drainage as indicated on the Drawings.

1.07 PROTECTION OF WORK

A. Curbs and other work shall be covered with suitable material and protected from staining or injury by equipment and contact with oil, emulsion, and asphalt.

B. Manholes, catch basins, and other gratings shall be covered with suitable material so that no asphalt or emulsion will come in contact with the inside walls or floors of the structures.

C. Damage to adjacent improvements shall be repaired or replaced at the Contractor's expense and to satisfaction of the District’s Representative.

1.08 FIELD CONDITIONS

A. Grade Control:
   1. Establish and maintain required lines and grades, including crown and cross slope.
   2. The final grades and elevations of the ground paving shall be a consistent depth below adjacent concrete work.

B. Ambient Conditions:
   1. Apply bituminous prime and tack coats only when ambient temperature in shade is at least 50 degrees F and when temperature has not been below 35 degrees F for 12 hours immediately prior to application.
   2. Do not apply when substrate surface is wet or contains an excess of moisture.
   3. Construct asphaltic surface course only when atmospheric temperature is above 40 degrees F and underlying base is thoroughly dry.

1.09 WARRANTY

A. Contractor: Provide an extended 2-year warranty for asphalt paving.
   1. Warranty shall be limited to ordinary wear and tear by weather or defects due to faulty materials and workmanship.
   2. Make repairs at no expense to District.

1.10 SYSTEM DESCRIPTION

A. The extremely strict tolerances for gradients and flatness, which are stipulated by the Sport Federations or Associations for the synthetic surfaces, mean that the construction of an adequate base is of supreme importance. Tolerances are required to be met not only by the newly completed facility, but also over its life, which might be two or three times the expected life of the synthetic surface.

B. The finished appearance of any resilient synthetic surface will be determined in part by the base over which it is installed. Rough, uneven bases, of substandard construction, with non-recommended materials, can reduce the life and impair the appearance of the synthetic surface. Therefore, proper construction and preparation utilizing recommended materials are important for a durable, good quality flooring installation.

C. The base shall be designed to meet the following criteria:
   1. Capable of supporting and transmitting to the existing ground the loads of all vehicles, machines and materials to be used in the construction, without causing deformation of the site, or exceeding the ground-bearing capacity.
   2. Capable of supporting and transmitting all the loads on the synthetic surface from athletes and maintenance equipment, without permanent deformation of the base.
   3. Sufficiently flexible to provide protection to the synthetic surface from the effects of sub-soil movement and frost heave.
   4. Sufficiently impermeable to provide total protection to the synthetic surface from ground water.
   5. Ensure the above criteria are maintained throughout the life of the installation.

D. The procedure adopted for the construction of a new asphalt base shall consist in the following operations:
   1. Excavation to remove vegetable matter, soil, loose, or frost susceptible material down to firm, load-bearing sub-soil.
   2. Installation of a sub-drain system to provide adequate surface and subsurface drainage and assure a stable base.
   3. Compaction of the sub-soil, graded to falls within the tolerances specified for accuracy of finished level.
   4. Laying and compacting of ordinary fill to create the sub-base layer graded to falls within the tolerances specified for accuracy of finished level and thickness. The minimum thickness of the layer shall be as shown or, if not shown, in accordance with recommendations of the Geotechnical Engineer based on characteristics of the sub-soil and on the expected loads.
   5. Laying and compacting of 4 inches to 8 inches of thick crushed stone to create the base under layer, graded to falls within the tolerances specified for accuracy of finished level, straightness and thickness. Final thickness shall be in accordance with the recommendations of the Geotechnical Engineer.
   6. Laying and compacting of 3 or 3-1/2-inch-thick hot mix asphalt pavement in two layers.
      a. The bottom layer, Asphalt Binder Course, shall be a minimum of 2 inches thick, graded to falls and checked for accuracy of finished level, straightness and thickness within the tolerances specified.
      b. A Tack Coat shall be applied just prior to placing subsequent pavement layers.
      c. The top layer, Asphalt Top Coat, shall be a minimum of 1 or 1-1/2 inches thick as indicated on Drawings, graded to falls and checked for accuracy of finished level, straightness and thickness within the tolerances specified.

1.11 QUALITY ASSURANCE

A. Samples of the job mix from the asphalt plant shall be laboratory tested per Section 39 of the Standard Specifications. A compacted specimen shall be retained for density (ASTM D2726) comparison with core samples from the installed pavement.

PART 2 - PRODUCTS

2.01 FILL MATERIAL

A. Description: Natural soil, well graded and free from all organic or other weak or compressible materials complying with the recommendations of the Geotechnical Engineer for fill material and the following:

1. Fill shall contain no stone larger than 4 inches in any dimensions.
2. It shall be of such nature and character that it can be dried and compacted in a reasonable length of time which shall not unduly interfere with the progress of construction.
3. It shall be free of expansive materials such as highly plastic clays, of materials subject to decay, decomposition or dissolution, and of cinders or other unsuitable material.
4. It shall have a maximum dry density of not less than 115 pounds per cubic foot as determined by ASTM D1557, Method D.

B. Imported fill shall be approved by the Geotechnical Engineer before importation to the site.

2.02 BASE MATERIAL

A. Aggregate Base: As specified in Section 32 11 00 - Base Courses.

B. No recycled aggregate materials will be permitted.

2.03 HOT MIX ASPHALT

A. General:
1. Hot mix asphalt for surface courses shall consist of virgin coarse and fine aggregates and mineral filler plant-mixed with bitumen binder.
2. Hot mix asphalt shall be in accordance with applicable provisions of the "Standard Specifications" except as herein modified.
3. The hot mix asphalt shall be plant-mixed and the bituminous material for mixture shall be PG64-10 conforming to Section 92 of the Standard Specifications.
4. The asphalt “Binder Course” and “Top Coat” mixtures shall be Type IV as recommended by the Asphalt Institute.
5. Asphalt concrete mix shall be Hveem Method or Caltrans Mix Design meeting the requirements as specified.
6. Asphaltic concrete mixtures differing from these Specifications shall be approved by the rubber track surfacing manufacturer.

B. Coarse Aggregate - Material Retained on the 4.75mm Sieve: Sound, angular crushed stone or gravel. Shale is not recommended.

C. Fine Aggregate - Material Passing the 4.75mm Sieve and Retained on the # 200 (0.075mm) Sieve: Sand, stone sand and stone screening Class B quality or better and gradation FA - 3.

D. Mineral Filler - Material Passing the # 200 (0.075mm) Sieve): Dry limestone or dust.

E. The aggregate shall have the following maximum limits of detrimental substances:

Soft fragments, AASHO T189	2.00%
Coal and lignite, AASHO T113	0.25%
Clay lumps, GHD 1	0.25%
Flat or elongated pieces (length greater than five times average thickness)	10.00%
Sulfur content computed as sulfide sulfur, ASTM E30	0.01%
Other local detrimental Substances	2.00%

F. The gradation of the composite aggregate for the Asphalt Binder Course shall conform to or near the following:

Sieve Total	Percent Passing
3/4”	100
1/2”	90 - 100
3/8”	80
# 4	45 - 70
# 8	25 - 55
# 30	(19)
# 50	5 - 20 (12)
# 100	5 - 16 (6.5)
# 200	2 - 9 (3)
Note: The aggregate grain should be as close as possible to the figures in brackets to give maximum density to the asphalt mixture.	

G. The gradation of the composite aggregate for the Asphalt Top Coat shall conform to or near the following:

Sieve Total	% Passing
1/2”	100
3/8”	90 - 100 (100)
# 4	60 - 90 (70)
# 8	35 - 65 (49)
# 30	(22)
# 50	6 - 25 (14)
# 100	(8)
# 200	2 - 10 (3)
Notes: The aggregate grain should be as close as possible to the figures in brackets to give maximum density to the asphalt mixture. A majority of the minus 200 material should consist of mineral filler. The increase in the amount of mineral filler has, in many instances, increased the toughness of the asphalt. This can be accomplished by using a resultant mineral aggregate having a minus 200 content of about 7% - 8%	

H. Samples of the job mix from the asphalt plant shall be laboratory tested for Marshall Stability. A compacted specimen shall be retained for density (ASTM D2726) comparison with core samples from the installed pavement.

2.04 PRIME COATS AND TACK COATS

A. Tack Coat: Asphaltic emulsion to be penetration type conforming to the SS-1 requirements of Section 94 of the Standard Specifications.

PART 3 - EXECUTION

3.01 SUB-GRADE

A. The excavation levels should be determined to allow paving, pits and depressions to rest on firm, load bearing, undisturbed sub-soil capable of properly supporting the paving equipment and haul trucks.

B. The sub-soil shall be excavated and compacted to a surface parallel to the intended finished surface of the pavement and at a depth below it equal to the compacted thickness of the subsequent layers.

C. The excavation shall proceed in such a manner that disturbance of soils below the excavation level by equipment is avoided.

D. Surface shape of the sub-grade shall be such that water cannot accumulate at any point. If this is not possible, Contractor shall provide equipment, including automatically operated pumps and piping to run-off facilities, to maintain the excavations, pits, depressions free from accumulated water during the entire period of construction.

E. When soil at the excavation levels originally designed that cannot provide appropriate load bearing, additional excavation to good bearing shall be provided. Non-bearing material shall be replaced with specified fill to permit rough grades to be as specified.

F. When encountered in the work, whether or not indicated on the Drawings, existing active sewer, water, gas, electric, steam, irrigation and other utility services and structures shall be protected at all times and, if required for the proper execution of the work, shall be relocated.

G. The sub-soil shall be rolled and compacted by a roller to a minimum density at 95 percent as determined by the Modified Proctor Test (AASHO T99).

H. Should a section of the work be not acceptable on the basis of inadequate compaction, further compaction effort shall be applied until the specified standard is achieved.

I. If the moisture content varies outside the specified limits, add water or allow drying as necessary before commencing rolling. Mix mechanically for a minimum depth of 12 inches to ensure uniform distribution of moisture.

J. Surface shape of the sub-grade shall comply with the tolerances:

ITEM	CHARACTERISTIC	TOLERANCE
Sub-grade	Level	+3/4" (20mm) / -3/4" (20mm)
	Thickness	Unspecified

K. Should a section of the work be not acceptable on the basis of level, high areas shall be graded off, low areas shall be corrected by adding and compacting material similar to that already in place.

L. If the sub-grade has dried and becomes loose and dusty due to construction traffic, it shall be watered, lightly bladed and rolled prior to placement of the sub-base layer.

M. The placement of the sub-base layer shall not be commenced until the sub-grade has been approved following inspection and, if requested, testing.

3.02 SUB-BASE AND BASE UNDER LAYER

A. Each layer of the pavement shall be completed to a surface parallel to the theoretical finished surface of the pavement and at a depth below it equal to the compacted thickness of the subsequent layers.

B. Surface shape of each layer shall be such that water cannot accumulate at any point. If this is not possible, it is important to provide all necessary equipment, including automatically operated pumps and piping to run-off facilities, to maintain the excavations, pits, depressions free from accumulated water during the entire period of construction.

C. Fill material and crushed stone shall be spread evenly by direct tipping from suitable vehicles or by the use of a mechanical spreader above the approved sub-grade. Care should be taken to avoid segregation of granular material during tipping and spreading.

D. Layers of pavement material shall be not less than 4 inches in compacted thickness. Maximum layer thickness shall be limited to that which will allow compaction to specified densities by the equipment in use.

E. Fill material and crushed stone, when delivered, shall have a moisture content within plus or minus 2 percent of the modified optimum moisture content. During compaction moisture content shall be maintained in the correct range. If the fill material or crushed stone does not contain the proper moisture content for compaction, it shall be wetted or dried as required before rolling. Water spraying equipment used for this purpose shall be capable of uniformly distributing water in controlled quantities over uniform lane widths.

F. Each layer of fill material shall be disked whenever necessary to break down clods, thoroughly mix the different materials, secure a uniform moisture content and ensure uniform density and proper compaction.

G. When the moisture content and condition of each spread layer is satisfactory, the area shall be rolled by an approved type roller to a minimum density of 95 percent as determined by the Modified Proctor Test (AASHO). The final rolling shall be accomplished with a tandem steel roller. Rollers of variable mass shall receive ballast to the greatest mass that can be supported without distress to the pavement or subgrade.

H. Surfaces of fine crushed rock shall be constructed slightly higher than the specified levels and cut to profile by power grader towards the end of the compaction process. Rolling shall then continue to specified density to produce a tight, even surface without loose stones or slurry of fines.

I. Should a section of the work be unacceptable on the basis of inadequate compaction, further compaction shall be applied until the specified standard is achieved. If the moisture content varies outside the specified limits, add water or allow drying as necessary. Before commencing rolling mix mechanically for the full depth of the layer to ensure uniform distribution of moisture.

J. Pavement base under layer courses shall comply with the tolerances itemized in the following table:

ITEM	CHARACTERISTIC	TOLERANCE
Base under layer	Level	+3/16" (5mm) / -3/16" (5mm)
	Straightness	1/4" (6mm) maximum deviation from 10-foot (4m) straight-edge in all directions
	Thickness	+5/8" (15mm) / -5/8" (15mm)
Sub-base	Level	+3/8" (10mm) / -3/8" (10mm)
	Thickness	+1-3/16" (30mm) / -1-3/16" (30mm)

K. Should a section of the work not be acceptable on the basis of elevation, flatness or depth, high areas shall be graded off, low areas shall be scarified to the full layer depth, built up as necessary and re-compacted as specified.

L. Each successive layer shall not be commenced until the underlying layer has been approved following inspection and, if requested, testing.

M. The base under layer shall be firm, non-yielding and not pumping under the travel of haul trucks and other construction equipment at the time of the laying of the hot mix asphalt. Base under layers that

show movement under trucks or construction equipment shall receive additional compaction work or other remedial work to repair the substandard installation.

3.03 HOT MIX ASPHALT PAVEMENT INSTALLATION

A. Mixing of hot mix asphalt should be undertaken in a mixing plant capable of effectively drying and heating the aggregate to the specified temperature, accurately proportioning and uniformly mixing coarse and fine aggregate, filler and binder to meet the specified requirements at all times.
   1. In general, batch-mixing plants are preferable to drum mixing plants, because of their greater capability to fine-tune the aggregate gradation.
   2. For all types of Mixing Facilities:
      a. Cold aggregates must be handled and stored in a manner that avoids contamination and minimizes degradation and segregation.
      b. Filler shall be stored and handled in a separate system from that which handles aggregate
      c. The bitumen storage and handling shall be arranged so that contamination of the bitumen by flushing liquids or other materials cannot occur.
      d. The bitumen storage tanks shall be capable of holding at least sufficient bitumen for one day's production.
      e. Heating of bitumen shall be accomplished by steam coils, electricity or other means that will allow no direct flame to come into contact with the heating tank.
      f. Discharge from the plant shall be so arranged as to minimize segregation.
      g. Asphalt, which has been stored for more than twenty-four hours or produced at temperatures not in accordance with those specified, shall not be used.
      h. The mix shall leave the mixing facility at a temperature between 285 degrees F (140 degrees C) and 325 degrees F (163 degrees C).

B. The hot mix asphalt shall be kept clean during hauling and covered, if necessary, during transit with canvas or other material that will retain the desired pavement temperatures. The mixtures must not be hauled in such a manner that segregation of the ingredients takes place or that a crust is formed on the surface, or that mixture will crumble or flatten out when dumped. Trucks that transport the mixture must have metal beds, and the beds must be clean, smooth and free of holes. Before loading, the truck bed is coated with a thin film of a release agent (oil or soap solution) that assists in preventing fresh hot mix asphalt from sticking to the surface of the bed. After the bed is coated, any excess release agent must be drained from the bed.

C. The hot mix asphalt shall be spread with a self-propelled machine spreader having a floating screed assembly controlling the elevation of the strike-oft. The use of road graders or towed spreaders will not be allowed. Means shall be provided to heat the screed uniformly over its full width. The screed shall be equipped with automatic screed controls to adjust automatically to place a uniform mat of desired thickness, grade and shape.

D. Typical members of the paving crew should be: paving superintendent, paver operator, dump person, two screed people, and two people to lute and take care of joints and mat repairs. Co-ordination of the entire crew with the paving superintendent and screed people is essential to achieve all the desired goals.

E. Self-propelled rollers are required as compaction equipment. Towed-type rollers should not be used. Hand-held or vibrating plate compactors can be used in small, inaccessible areas. Steel-wheeled non-vibrating rollers shall have a mass of 10 tons (9 metric tons).
   1. Steel wheeled vibrating rollers shall have a mass of 5 tons (4.5 metric tons).
   2. Pneumatic tired multi-wheeled rollers shall not be used.

F. The hot mix asphalt shall be placed with a minimum delay after delivery. Hot mix asphalt shall not be reheated.

G. The day's work shall be organized so that each layer spread covers the full width of the pavement.

H. Hot mix asphalt shall be spread to a depth consistent with the specified compacted thickness. Each layer shall be completed to a surface parallel to the finished surface of the pavement and at a depth below it equal to the compacted thickness of the subsequent layer or layers specified.

I. Hot mix asphalt shall not be placed during rain, when the air temperature in the shade and away from artificial heat is 40 degrees F (5 degree C) or less, or while the surface is wet or when the pavement temperature does not comply with the Table below.

Pavement Surface Temperature	Minimum Laying Temperature	Minimum Laying Temperature
40°F - 50°F (5°C - 10°C)	302°F (150°C)	293°F(145°C)
50°F - 60°F (10°C - 15°C)	293°F (145°C)	284°F(140°C)
60°F - 77°F (15°C - 25°C)	284°F (140°C)	275°F (135°C)
Over 77°F (Over 25°C)	275°F (135°C)	266°F (130°C)

J. Maximum laying temperature of the mixture shall be 325 degrees F (163 degrees C).

K. The temperature of the mix shall be measured in the truck just prior to discharging into the paver hopper. A suitable stem type thermometer shall be used. The stem shall be inserted into the mix to a depth of approximately 8 inches (200mm) at a location at least 12 inches (300mm) from the side of the truck body. An average of at least two readings shall be adopted as the temperature of the mix.

L. There are three acceptable types of sensing devices used with the automatic screed control system:
1. The Wand Sensor.
2. The Ultra Sonic Sensor.
3. The Laser Sensor.

M. The grade reference used with the above listed sensing devices can be either a fixed string line tied between graded iron pins or on an existing surface, a previously placed surface, a curb line, etc. A string line can be erected that will include roll down factors for true grade. The roll down is estimated to be about 25 percent of the non-compacted mat thickness. To calculate the exact position of the string line, a survey crew is used to determine the existing grade at approximate intervals of 9 meters (30 feet). The existing grade is subtracted from the theoretical grade for calculation of lift thickness. A roll down factor of 25 percent of this thickness is added for the string line grade. Once the string line is erected, intermediate points of support may be placed under the string line, especially on curves or in sudden changes of grade. Graded iron pins and intermediate supports should be placed so that they will not interfere with the travel of the machine spreader, but close enough to each other and to the path of the machine spreader that they can hold the string in a convenient position to be reached by the electronic sensors and by a short straight edge placed on the newly laid pavement to visual check on its level.

N. The reference system that is best for the job depends on the existing pavement surface on which the mat is to be placed. If the surface on which the mat is to he placed has an appropriate longitudinal grade, so that the finished pavement is expected to have a constant thickness, then the surface on which the mat has to be placed, an adjoining existing surface, a previously placed surface, a curb line, etc. can be used as the reference system, since a constant roll down is expected. If the longitudinal grade is erratic, so that the finished pavement is expected to have a variable thickness, a string line should be used as the reference system, to take in account the variable roll down.

O. To maintain proper transverse grade, automatic screed controls use:
1. a dual sensing system on both sides of the paver, using two grade references, one on each side of the paver or
2. a single sensing system on a single side of the paver, using a single grade reference on a single side of the paver, in association with an automatic slope control system: in using the transverse slope control, no specific roll down factors can be applied to grade calculations for slope transfer.

The Control System that is best for the job depends on the existing pavement surface on which the mat is to be placed. Dual Grade Control System is preferable if the surface on which the mat has to be placed has an unsatisfactory transverse grade. Single Grade Control System transfers the roll-down factors of the grade control side to the opposite side as equal factors, which may or may not be equal. Single Grade Control System is acceptable in situations where the surface on which the mat is to be placed has an appropriate transverse grade.

P. The area to be surfaced with hot mix asphalt shall be cleared of foreign or loose material with power blowers, power brooms or hand brooms.

Q. Crushed stone or asphalt surfaces shall be primed prior to the installation of the binder course and topcoat. Prime crushed stone surfaces at the rate of 0.3 gallons per square yard. Prime asphalt surfaces at the rate of 0.05 gallons per square yard. Sprayers shall be capable of spraying the tack coat uniformly through jets in a spray bar at the desired rate of application. Each sprayer shall be fitted with a hand lance. Tack Coat shall be applied, not less than 30 minutes nor more than 2 hours before asphaltic concrete is placed. When spraying the tack coat, shields shall be used, and all necessary precautions taken to protect curbs, gutters, channels, adjoining structures, surfaces, and grassed areas. Any pools of tack coat which may form in small depressions or surface irregularities shall be brushed out over the adjacent area with brooms or rubber squeegees before the emulsion breaks. In dusty conditions, every precaution shall be taken to prevent freshly coated surfaces from being contaminated by dust or other foreign material.

R. Uniformity of operations is essential in hot mix asphalt paving. Uniform, continuous operation of the paver produces the highest quality pavement. Paving too fast can result in the paver stopping frequently to wait for trucks to bring more mix. The smoothness of the pavement will suffer when the paver stops and starts up again. The paver speed should he matched to the quantity of HMA being delivered to the project to provide a uniform paver speed. The paver must be continuously supplied with enough mix, and at the same time, trucks should not have to wait a long time to discharge their loads into the paver hopper.

S. Starting blocks equal to 1.25 times the thickness of the non-compacted mat are required to set the thickness and to null the screed. By using starting blocks the grade can be very close at the beginning of the operation.
   1. Blocks equal to 25 percent of the non-compacted thickness are used to start from a joint.
   2. The 25 percent additional thickness allows for proper roll-down or compaction while maintaining proper grade. Extended screeds will require multiple shims for each extension area.

T. The screed shall be initially heated at the start of each new paving operation. If not, the mix will tear and the texture will look open and coarse, as if the mix were too cold.

U. If the mat being placed is uniform and satisfactory in texture, and the thickness is correct, no screed adjustments are required. But when adjustments are required, they shall be made in small increments. Time shall he allowed between the adjustments to permit the paver screed to complete reaction to the adjustments sequentially.

V. The minimum non-compacted thickness of a hot mix asphalt course is equal to 1.25 times its minimum compacted thickness, which is equal to three times the nominal maximum size aggregate. When the mat falls below this thickness, it pulls, tears, cools rapidly and generally will not be able to achieve the proper density and pavement smoothness.

W. Where spreading with a paver is either impractical or impossible, use hand spreading.
   1. Placing and spreading by hand shall be done very carefully and the material distributed uniformly so there will be no segregation of the mix.
   2. When the HMA is dumped in piles, it shall be placed upon arrival on steel dump sheets outside the area in which it is to be spread and shall then be immediately laid to the required depth.
   3. The material shall be deposited from the shovels into small piles and spread with lutes.

4. In the spreading process, material should be thoroughly loosened and evenly distributed.
5. Parts of the mix that have formed into lumps and do not break down easily shall be discarded.
6. After the material has been placed and before rolling starts, the surface shall be checked with templates or straightedges and irregularities corrected.

X. Asphaltic concrete shall be spread in such a manner as to minimize the number of transverse and longitudinal joints in the pavement.

3.04 PAVEMENT JOINTS

A. Transverse joints shall be constructed where the spreading operation is stopped for longer than 20 minutes. Transverse joints in adjoining spreader runs shall be offset by not less than 8 feet (2.44m). Transverse joints shall be offset from layer to layer by not less than 8 feet (2.44m). Transverse joints shall be constructed at right angles to the direction of spreading and be cut to a straight vertical face for the full depth of the layer.

B. When the construction is ready to stop for the end of the day or for a period longer than 20 minutes, the following procedure is used to form a suitable transverse joint:
1. When the paver is placing the last load, it is shifted into low gear as it approaches the location of the proposed joint.
2. As the hopper empties and the amount of material in the screed chamber decreases below normal operating level, the paver is stopped.
3. The screed is raised and the paver moved out of the way.
4. The mix is then removed from the end of the mat to form a clean, vertical edge.
5. Heavy wrapping paper is placed on the existing surface along the edge of the joint.
6. New material is finally placed on top of the paper and used to form a ramp, from the new surface to the existing surface.

C. When construction is ready to resume, the following procedure is used to form a suitable transverse joint:
1. The ramp of material is removed along with the board or paper.
2. A straightedge is used to check the longitudinal grade of the mat. Because the paver was running out of material as it laid the last few feet of mat, it is possible that those last few feet taper slightly from the specified level of the mat. If this is the case, a new transverse edge must be cut behind the point where the taper begins.
3. The vertical face of the mat is tack-coated.
4. The paver is backed up to the edge of the mat and the screed rested on the mat surface.
5. The screed is heated while it rests on the mat. This provides some heat to the material at the edge of the mat.
6. The heated screed is raised and shims as thick as the difference between the compacted and the non-compacted mat (approximately 25 percent of the compacted thickness) are positioned under its ends.
7. The truck with the first load of HMA is backed carefully to the hopper. During discharge of the mix from the truck bed to the paver, it is essential that the truck does not bump the paver and cause it to move.
8. The paver starts forward in a low gear.
9. Once the paver has moved away, excess asphalt is cleaned off the surface of the mat and the smoothness of the joint is checked with a straightedge.
10. If the joint is satisfactory, a 6 inches (150mm) width of the fresh mix is rolled transversely and the joint checked for smoothness. If the joint is satisfactory, transverse rolling is continued in 6 to 12 inches (150 to 300mm.) increments until the entire width of the roller is on the new HMA. If straight edging shows an uneven joint, the surface of the new mat must he scarified while still warm and workable. Scarification is done with the fine side of the lute. Excess material can then be removed or additional material added, and the joint rolled. During rolling, timbers should he placed along the edges of the mat to prevent the roller from driving off the longitudinal edge and distorting it.

D. Longitudinal joints shall be offset from layer to layer by not less than 6 inches (150mm). Longitudinal joints shall be parallel to the center line of the pavement. Alignment of the mat is dependent on the

accuracy of the guideline provided for the paver operator and his alertness in following it. Attention to this detail is vital to the construction of a satisfactory longitudinal joint, since only a straight edge can be properly matched to make the joint.

E. Hot joints are formed by two payers operating in echelon. The screed of the rear paver is set to match the grade or thickness of the unrolled edge of the first mat placed. The advantages of a hot joint are that the two mats are automatically matched in thickness, the density on both sides of the joint is uniform because both sides are compacted together, and the hot mats form a solid bond. The disadvantage is that traffic cannot move in one of the lanes while the other is being paved. Both lanes are blocked simultaneously.

F. In building a cold joint, one lane is placed and compacted. At a later time, after the HMA in the first lane has cooled, the companion lane is placed against it and compacted. Special precautions must be followed to ensure a joint of good quality.

G. The following procedure is used to form a suitable longitudinal joint:
   1. The exposed edge of the first lane shall be formed while hot to a straight line with a dense face, which shall lie between vertical and 45 degrees to the vertical for the full depth of the layer.
   2. The unsupported longitudinal edges of spread material should be side tamped to raise the level of the asphaltic concrete slightly to secure maximum edge compaction from subsequent rolling
   3. While placing the companion lane, the paver screed should be set to overlap the first mat by 1 to 2 inches (25 to 50 mm).
   4. The elevation of the screed above the surface of the first mat should he equal to the amount of roll-down expected during compaction of the new mat.
   5. The coarse aggregate in the material overlapping the cold joint should be carefully removed and wasted. This leaves only the finer portion of the mixture to be pressed into the compacted lane at the time the joint is rolled.

H. The placing of hot mix asphalt against abutting structures such as curbs, gutter manhole or adjoining pavement shall be carried out in the same manner as for longitudinal and transverse joints. Any spaces left unfilled between the spreader run and abutting edges shall be filled with sufficient material to the proper height prior to compaction.

3.05 COMPACTING PAVING

A. After the paving mixture has been property spread, it shall be thoroughly and uniformly compressed by rolling with power rollers as soon as it will support rollers without undue displacement.
   1. All rolling shall be completed while the mix is at a temperature above 185 degrees F (85 degrees C).
   2. The pavement shall be compacted to 97 percent or more of the density (ASTM F2726) obtained on a retained job mix specimen, and as required in Section 39 of the Standard Specifications.
   3. The exact number of passes of a roller that will be required to obtain adequate density will be determined on a test strip using a nuclear density gauge to measure the density of the mat after each pass, until maximum achievable density is indicated by the test results. The rolling pattern used on the test strip should be the same that will be used on the remainder of the job. The number of rollers and/or the rate of production will be adjusted accordingly.
   4. The speed of rollers at all times shall be slow enough to avoid displacement of the mix and shall not be greater than 3 miles/hour (5km/hour). Steel wheel rollers shall be operated with minimum wetting of rollers.
   5. The driving roll shall be nearer the spreader.
   6. Vibratory mechanisms shall be disengaged before stopping or reversing direction.
   7. Rollers shall not remain stationary on asphaltic concrete while it is still warm. Roller wheels shall be kept free from any build-up.
   8. The roller shall pass over the unprotected end of the freshly laid mixture only when a transverse joint has to be made.

B. Initial (breakdown) rolling shall be performed with a static steel-wheeled roller. Transverse joints shall be rolled first, then the longitudinal joint and the outside edge. Breakdown rolling shall continue longitudinally, commencing on the lower side and proceeding to the higher side of the spreader run. The roller shall overhang the unsupported edges of the run by about 4-inch (100mm). Each longitudinal pass shall overlap the previous pass by about 4-inch (100mm) and adjacent passes of the roller shall be of different lengths.

C. Secondary rolling to obtain required density before the mixture cools to 185 degrees F (85 degrees C) shall be performed as soon as possible after initial rolling and shall be performed with a static or a vibratory steel wheeled roller. Rolling shall be carried out longitudinally commencing on the lower side and proceeding to the higher side of the spreader run. Each roller pass shall overlap the previous pass and adjacent passes shall be of different lengths.

D. Final rolling for the improvement of the surface while the mixture is still warm enough to permit removal of any roller marks shall be performed with static steel wheeled roller.

E. When paving in echelon, the edge of the run common to adjacent spreaders shall be left unrolled for a width of 8 inch (200mm) until the longitudinal joint has been constructed. This strip shall be rolled together with the edge of the adjacent spreader run. Rolling shall commence before the temperature of the material along the edge of the first spreader run has fallen below 203 degrees F (95 degrees C).

3.06 ACCEPTANCE OF PAVING WORK

A. Each successive layer shall not be commenced until the underlying layer has been approved following inspection and, if requested, testing.

B. Verification of compliance with compaction per Section 39 of the Standard Specifications will be based on tests to be performed on core samples taken from each layer shortly after application. Test results shall be submitted to the rubber track surfacing manufacturer.

C. Should a section of the work be not acceptable on the basis of inadequate compaction and/or the mixture became loose and broken, mixed with dirt or in any way defective, it shall be removed and replaced with fresh mixture which shall be immediately compacted to conform with the surrounding area.

D. On completion of placement and compaction, pavement courses shall comply with the tolerances itemized in the following table.

ITEM	CHARACTERISTIC	TOLERANCE
Top Coat	Level	+3/32” (2mm) / -3/32” (2mm) from design levels
	Thickness	+3/16” (5mm)/ -0” (0 mm) from design thickness
	Flatness	1/8” (3mm) maximum departure from a 10’ (3m) straight-edge in all directions
Binder Course	Level	+3/32” (4mm) / -3/32” (4mm) from design levels
	Thickness	+3/16” (5mm) / -0” (0mm) from design thickness
	Flatness	3/32” (4mm) maximum departure from a 10’ (3m) straight-edge in all directions

E. Surface shape of each layer of pavement shall be such that water cannot accumulate at any point and the surface shall free drain to drainage channels.

F. The whole surface of each layer of pavement should be checked for levels by a licensed surveyor, and for flatness with a 10-foot straightedge in all directions. The surface shall also be flooded and inspected for ponding, “bird baths”, ridges, etc. After testing, all high and low areas shall be marked on the leveling course surface.

G. Areas of 1 square inch or more showing excess of bitumen shall be removed and replaced.

3.07 REMEDIAL WORK

A. Asphalt infrared repair techniques: high and low asphalt sections can be remedied using infrared asphalt heaters that allow continuous, uniform re-heating of the asphalt to the same temperature that new asphalt is manufactured at the plant. The softened asphalt can be scarified to mix in fresh hot mixture, or to remove and dispose the excess. The repaired area shall be thoroughly compacted to the specified tolerance. Infrared repair techniques are typically 25 percent faster than conventional remove and replace repair techniques since they eliminate saw cutting, jack hammering, removal, loading, and trucking and they do not leave a joint around the perimeter of a repair.

B. Asphalt removal and replacement: high and low asphalt sections, sections that became loose and broken because of localized cohesive failure, or mixed with dirt or mud, or showing excess of bitumen, or contaminated by oil spills that penetrated deep into the asphalt can be remedied by cutting out the top course to full depth - or to a minimum depth of 1 inch - and replacing with new hot mixture at the correct elevation. First the area must be tack coated. The repaired area shall be thoroughly compacted to the specified tolerance. Areas affected by cracks and fissures generated by instability of the subbase shall be cut out to the full depth of the stone base and replaced. First the defective subbase shall be remedied or replaced.

C. Additional finish rolling of asphalt in warm weather, when pavement temperature is equal to or above 185 degrees F (85 degrees C), can be performed to remedy minor profile deficiencies and to remove tire marks and roller marks. Additional finish rolling shall be immediately interrupted in the event of over-compaction.

D. Asphalt Leveling with Polyurethane Adhesive:
   1. Shallow, low asphalt sections can be leveled using 2-component polyurethane adhesive as a leveling compound. The depth of the leveling layer shall be limited to 1/4 inch or less.
   2. No urethane products other than polyurethane adhesive approved by surfacing manufacturer shall be used as a leveling compound.
   3. Extensive use of polyurethane adhesive as leveling compound shall not be a substitute for proper installation and repair of the base.
   4. The 2-component polyurethane adhesive shall be applied on fully oxidized asphalt (minimum 30-day curing time).
   5. Leveling with adhesive shall only be performed by the surfacing manufacturer's certified outdoor installers.
   6. If leveling is performed to correct drainage problems, the Contractor shall supply adequate means to flood the track throughout the duration of the installation.

E. Contaminants shall be removed from the base using mechanical abatement such as power washing, sanding, wet grinding, scarifying, or shot-blasting.
   1. The degree of aggressivity required will vary with the type and depth of penetration of the compound on the surface.
   2. Do not use chemical abatement methods as residual chemicals on or penetrating the surface of the base can lead to failures.

F. The following remedial methods are not permitted:
   1. Open flames to soften the asphalt since open flames would burn bitumen and reduce the internal cohesion of the mixture.
   2. Filling of low spots with sand mixes. Sand mixes lack sufficient internal cohesion.
   3. Tar emulsions or other type at asphalt or tar leveling or sealing product applied to the surface, either hot or cold, be coated on the surface.
   4. Milling of completed asphalt to remedy profile deficiencies is not permitted since the texture resulting from milling is too rough to be leveled using a 2-component polyurethane adhesive as a leveling compound.

3.08 CURING OF HOT MIX ASPHALT

A. The asphalt leveling course shall cure a minimum of 30 days prior to installation of the rubber track surface in order to allow the escape of surface volatiles and oils and to maximize resin adhesion of the rubber surfacing to the asphalt pavement.

END OF SECTION

SECTION 32 13 13

CONCRETE PAVING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Concrete flatwork as shown on the Drawings including, but is not necessarily limited to, the following
   1. Curbs and gutters.
   2. Valley gutters and concrete swales.
   3. Mowbands and edge bands.
   4. Accessible ramps.
   5. Walkways.
   6. Expansion and control joints.
   7. Reinforcement.
   8. Finishing.

B. Related Requirements:
   1. Section 01 33 00 - Submittal Procedures
   2. Section 01 71 23 - Field Engineering
   3. Section 32 12 16 - Asphalt Paving
   4. Section 31 20 00 - Earth Moving
   5. Section 32 11 00 - Base Courses
   6. Section 32 33 00 - Site Furnishings

1.02 REFERENCES

A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

B. Pre-Installation Meeting: Conduct meeting at Project site to review scope of concrete paving work and expectations.
   1. Meeting shall be scheduled after approval of mockups and sufficiently in advance of commencement of concrete paving.
   2. Attendees shall include:
      a. Contractor.
      b. Concrete subcontractor.
      c. Owner’s Representatives.

1.04 ACTION SUBMITTALS

A. Product Data: Manufacturers' current catalog cuts and specifications for the following:
   1. Expansion joint filler materials.
   2. Color admixtures.
   3. Curing compounds.
   4. Other items as requested by Owner’s Representative.

B. Samples:
   1. Concrete materials as required for testing and inspection.

C. Concrete Mix Design: Submit mix designs and certified compressive strength test reports for each concrete strength, type, additives, and maximum aggregate size required, prepared, and certified by the ready-mix concrete supplier.

1.05 INFORMATIONAL SUBMITTALS

A. Statement of installer/finisher qualifications if requested by Owner's Representative.

B. Mill Certificates and Certifications for reinforcing bars, if used.

C. Delivery tickets for each load of concrete delivered to the site.

D. Results of slip-resistance testing.

1.06 QUALITY ASSURANCE

A. Construction of concrete flatwork, including curbs and gutters, shall conform to Section 73 of the Standard Specifications.

B. Codes and Standards: Comply with the applicable provisions of the following codes, specifications, and standards, except where more stringent requirements are shown or specified:
   1. California Building Code, Title 24, Part 2, Chapter 19A - Concrete
   2. ACI 301 Specifications for Structural Concrete for Buildings
   3. ACI 318 Building Code Requirements for Reinforced Concrete
   4. ACI 614 Recommended Practice for Measuring, Mixing, and Placing Concrete
   5. Concrete Reinforcing Steel Institute, Manual of Standard Practice

C. Contractor shall be responsible for quality of concrete in place and shall bear burden of proof that concrete as placed meets minimum requirements.

D. Concrete Testing:
   1. The Owner may retain, at its expense, a testing laboratory to perform material evaluation tests in accordance with Section 01 45 00 - Quality Control.
   2. Testing may include slump tests and securing samples of concrete, cement, aggregates, or other materials for testing. Applicable materials shall be provided by the Contractor at no additional cost to the Owner.

E. When review or observation is required of the Owner's Representative of the concrete work, Contractor shall notify the Owner's Representative not less than 2 working days prior to date when the review or observation is required.

F. Pre-Pouring Review:
   1. Formwork, joint patterns, base material, reinforcement, "dobies," ties, and other installation accessories shall be reviewed and accepted by the Owner's Representative prior to pouring concrete.
   2. Forms, reinforcing, and accessories shall be in place and Contractor shall give a minimum of 5 working day lead-time notice to Owner's Representative when scheduling the review request.
   3. Contractor shall allow a minimum of 2 working days after pre-pour review in Construction Schedule for possible modifications to concrete preparation work, at no cost or delay to the project.

G. The Owner's Representative shall have access to any off-site batch plant or quarry supplying materials at all times for subject project and trucks in route to the project site.

H. Mockups:
   1. General:
      a. Mix design shall match that used on accepted sample panels and proposed for use in final construction including cement and color additive.
      b. Prepare at least one month before start of final concrete work to allow concrete to cure before observation.
      c. Concrete color and finish for mockup appearance shall match color and finish of accepted sample.
      d. Build mockups at the location indicated or, if not indicated, as selected by the Owner's Representative
      e. Notify Owner's Representative 5 working days in advance of dates and times when mockups will be constructed and layouts will be ready for review.
      f. Color and texture shall be approved before starting construction.
      g. Perform specified slip-resistance testing on mockups.
      h. Maintain final accepted mockups in an undisturbed condition as a standard for judging the completed Work.
      i. Retain samples of sands, aggregates, and color additive used in the mockups for comparison with materials used in final work.
      j. Demolish and remove mockups when directed if not incorporated into the final work.
   2. Flat Paving Mockups:
      a. 4-feet x 4-feet sample panels of colored concrete flatwork for each required color and texture shall be poured by the Contractor at the site for review and acceptance by the Owner's Representative.
      b. Quantity:
         1) Contractor shall allow for preparation of up to 2 flat paving mockups for evaluation and final approval of each concrete.
         2) For mockups demonstrating appearance using specified surface retarder, Contractor shall prepare a mockup using specified retardant level plus additional samples one level higher and one level lower, of applicable, for review by Owner's Representative.
      c. Samples shall include each type and profile of joint, surface texture, and tooled conditions for approval. Contractor shall schedule review well in advance of concrete operations to allow for modifications and preparing an additional mockup panel if necessary.

1.07 DELIVERY AND STORAGE

A. Deliver concrete reinforcement to job site properly tagged and ready to set. Store above ground surface on platforms, skids, or other supports. Coordinate delivery and storage of all other materials as appropriate.

B. Coordinate delivery so that mixes may be immediately poured upon arrival at site.

1.08 FIELD CONDITIONS

A. Maintain control of concrete dust and water. Do not permit adjacent areas to be contaminated.

PART 2 - PRODUCTS

2.01 BASE MATERIALS

A. Aggregate: As specified in Section 32 11 00 - Base Courses.

2.02 FORMS

A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.

1. Use flexible or uniformly curved forms for curves with a radius of 100 feet or less.
2. Do not use notched and bent forms.

B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

2.03 REINFORCING

A. General:
1. Reinforcing steel shall be cut and bent cold to exact lengths and shapes to comply with Drawings, reviewed shop drawings, and referenced codes and standards.
2. Comply with the additional requirement shown on the Drawings.

B. Reinforcing Steel: Deformed billet steel bars complying with Section 52-1.02B of Standard Specifications, Section 1907 of CBC and ASTM A615.
1. Provide Grade 60 for No. 4 and larger, Grade 40 for No. 3 and smaller.
2. Bars shall be in a new, "first-class" condition.

C. Smooth Dowel Steel Bars for Expansion Joints: ASTM A29, Grade 40, No. 3 smooth.
1. Dowels shall be shop painted with iron-oxide zinc-chromate primer.
2. Where shown, provide metal dowel sleeve or other approved break-bond method at one end of dowel to permit lateral movement at dowel within concrete section.
3. Provide for movement which equals joint width plus 1/2 inch.
4. Bars shall be in a new, "first-class" condition.

D. Dowel Insert System: Single component dowel sleeve with self-locking design; Greenstreak "Speed Dowel" by Sika, or equal selected for dowel profile and diameter indicated on the Drawings.

E. Tie Wire: ASTM A82, black annealed, minimum 16 gage.

F. Supports for Reinforcement: Provide bolsters, chairs, spacers, and other devices for spacing, support and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI specifications, unless otherwise acceptable.

2.04 CONCRETE MATERIALS

A. Cement: ASTM C150, Type II, and shall be provided by one manufacturer.

B. Pozzolan: Class F Fly Ash per ASTM C618 comprising 15-20% of total cementitious materials. Fly Ash may be added to a maximum ratio of 35% of total cementitious materials where testing reports are provided for the mix design review.

C. Coarse Aggregates: Coarse aggregates shall conform to ASTM C33, sizes 57, 67 or 7. Pea gravel aggregate shall not be used.

D. Fine aggregates: Fine Aggregates shall conform to ASTM C33.

E. Water: Clean and not detrimental to concrete.

2.05 CONCRETE ADDITIVES

A. Pigment for Concrete: Synthetic mineral-oxide pigments or colored water-reducing admixtures, color stable, nonfading, and resistant to lime and other alkalis, and complying with ASTM C979; Davis Colors Inc., 800-800-6856, as specified and noted on the Drawings, or equal.
1. If added to mix at Project site, additive shall be furnished in manufacturer's "Mix-Ready" disintegrating bags.

2. Dosage Rate: As required to achieve color of approved sample but not exceeding 10 percent of weight of cementitious materials in mix.
3. Colors:
   a. Darkening Agent: Davis Colors Inc. colorant #8084 Black, or acceptable equal.
      1) Dosage: 1/4-pound per sack of concrete.
   b. Other Colors: As noted on the Drawings.

B. No admixtures shall be allowed without written acceptance by the Engineer of Record. Admixtures that have a negative impact on concrete finish shall not be used. When more than one admixture is used, admixtures shall be compatible.

2.06 ACCESSORIES

A. Non-Shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2,400 psi in 48 hours and 7,000 psi in 28 days. SIKAGrout 212 or equal.

B. Curing Materials:
1. Liquid Curing Compounds: ASTM C309, Type 1.
2. Sheet Material: Waterproofed Kraft paper, ASTM C17, regular type.

C. Joint primer: One component, solvent based; Sonneborn horizontal paving joint primer No. 733, or No. 766, or equal.

D. Fiber Expansion Joint Material: Preformed cellular fiber complying with ASTM D1751; 1/2 inch thick unless otherwise indicated.
1. Expansion joint material shall be variety with “zip-strip” H-channel joint sealant receptacles. If proposed joint material is not installed with sealant receptacles then, the expansion joint material shall be completely covered with a Sonneborn “Sonofoam” closed cell backer rod or acceptable equal prior to application of joint sealant.
2. Provide 3/8-inch tooled edges each side of joint material. Refer to Drawings for additional information.

E. Paving Expansion Joint Sealant: One-part, self-leveling polyurethane conforming to ASTM C920, Class 25, Type S, Grade P; Sonneborn “Sonolastic SL 2,” or equal.
1. Color: As selected by Owner’s Representative.

2.07 CONCRETE MIXING

A. General:
1. Mix and deliver concrete in accordance with ASTM C94.
2. Addition of water to the mix after leaving the plant is not permitted.
3. No admixtures will be allowed without prior acceptance by the Owner’s Representative. If accepted, use admixtures according to manufacturer's written instructions.
4. Ensure equipment and plant will afford accurate weighing, minimize segregation, and will efficiently handle materials.
5. Deposit concrete into final position within 90 minutes of introduction of cement.

B. Pigments:
1. Darkening Agent: Add 1/4 pound of specified black colorant per 94 lb. sack of cement to all concrete which will be exposed to view when cured except for drain rims and concrete receiving other colorants.
2. Other Colors: Add color pigment to concrete mixture according to manufacturer's written instructions and to result in hardened concrete color consistent with approved mockup.

C. Minimum ultimate compression strength of concrete at 28 days is as follows:

Item	Strength (psi)	Maximum slump	Size of aggregate	Cement (min # of 94 lb. sacks per yard)	W/C Ratio (max)
Slab-On-Grade	3,000	4"	3/4"-1"	5	0.60
Curbs / Edgebands	3,000	4“	3/4"-1"	5	0.60
Tall Curbs and Footings	3,000	4”	¾”-1”	5	.6

D. Drying Shrinkage Limit at 21 Days: 0.40 percent.

E. Adjustment to Concrete Mixes:
   1. Mix design adjustments may be requested by Contractor when job conditions, weather, test results warrant, or to meet appearance of accepted samples or mockup.
   2. Test data for revised mix design shall be submitted to and accepted by Owner’s Representative before using in work.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify requirements for concrete cover over reinforcement.

B. Verify that anchors, seats, plates, reinforcement, and other items to be cast into concrete are accurately placed, positioned securely, and will not cause hardship in placing concrete.

3.02 PREPARATION

A. Prepare joints in previously placed concrete by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.

B. Coordinate the placement of joint devices with erection of concrete formwork and placement of form accessories.

3.03 EXCAVATION

A. In addition to the general grading excavation required, the Contractor shall excavate to the required depths in the locations shown for flatwork and curbs. Excess excavation shall be replaced with concrete poured monolithically with the wall or pavement, at no additional cost to the Owner.

3.04 INSTALLATION OF FORMWORK

A. Formwork shall conform to Section 51 of the Standard Specifications and as follows:
   1. The Contractor shall build forms with a high degree of care and shall select from materials of adequate strength and smoothness to produce smooth, even surfaces of uniform texture and

appearance, free of bulges, depressions, or other imperfections per the discretion of the Owner's Representative. Remove any residue remaining on concrete after forms are removed.

2. Transition of curves to straight lines and of curves to curves shall be formed as smooth, continuous, and uninterrupted with typical 90-degree radius alignment at the points of tangency.

3.05 PLACING REINFORCEMENT

A. General:
   1. When there has been a delay in placing concrete, reinforcement shall be inspected and, if necessary, cleaned, relocated, and tied at no additional cost to Owner.
   2. Wherever conduits, piping, inserts, sleeves, and similar item interfere with placing of reinforcing steel, obtain approval of Owner's Representative of method of procedure before concrete is placed.

B. Reinforcement installation shall conform to the provisions of the Standard Specifications as follows:
   1. Cleaning Section 52-1.03B
   2. Bending Section 52-1.03C
   3. Placing Section 52-1.03D
   4. Splicing Section 52-6
   5. Lapped Splices Section 52-6.03B

3.06 PLACING CONCRETE

A. Place concrete in accordance with ACI 301.

B. Notify Engineer of Record and Special Inspector minimum 48 hours prior to commencement of operations. Do not place concrete until forms and reinforcements, as well as other required inspections, have occurred and the Special Inspector is present to perform observations and testing during placement.

C. Ensure reinforcement, inserts, embedded parts, formed expansion and contraction joints are not disturbed during concrete placement.

D. Separate slabs on grade from vertical surfaces with 1/2-inch-thick joint filler. Place joint filler to required elevations. Secure to resist movement by wet concrete.

E. Extend joint filler from bottom of slab to within 1/8 inch of finished slab surface.

F. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.

G. Place concrete continuously between predetermined contraction joints.

H. Do not interrupt successive placement; do not permit cold joints to occur.

I. Screed slabs on grades shown, maintaining surface to tolerance of 1/4 inch maximum in 10 feet.

3.07 CONCRETE JOINTS

A. General:
   1. Joints shall be constructed as detailed in the Drawings.
   2. Refer to layouts on the Drawings for location of each joint type.

B. Expansion Joints: Install to full depth of slab.
   1. Fiber Expansion Joints: After allowing concrete to fully cure, remove zip strips and install expansion joint sealant as shown and in accordance with manufacturer's instructions.
   2. Install specified dowel sleeves in accordance with manufacturer's instructions and as shown.

C. Score Joints: Tool to a 3/8-inch radius and to a 1-inch depth.

D. Form contraction joints as detailed on plans. Joints shall be formed immediately after final finishing with an approved concrete-sawing machine; "SOFF-Cut" as manufactured by SOFF-Cut International: Corona, California (909) 272-2330, or equal.
   1. Avoid dislodging aggregates.
   2. Unless otherwise indicated or directed, the joints shall be 1/8-inch-wide and 1-inch deep. Do not use zip-strips.
   3. Saw contraction joints to true alignment with "SOFF-Cut" concrete-sawing machines adequate in number and power and with sufficient replacement blades to complete the sawing at the required rate.
   4. Joints shall be cut as the concrete has hardened sufficiently to permit walking on the slab, and as recommended by the saw manufacturer.
   5. Unless otherwise approved, saw joints in the sequence of concrete placement. Remove cutting debris.
   6. Saw cuts shall be made in accordance with manufacturer's instructions.

E. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
   1. Cut depth shall be 25 percent of slab depth unless otherwise shown or required to comply with accepted mockup.
   2. Layout: As shown on the Drawings.

F. Curb and Edge Band Joint: Locate as follows, unless otherwise noted on the Drawings.
   1. Every 5 feet for score joints.
   2. Install fiber expansion joints maximum 15 feet on center.
   3. Install fiber expansion joints at corners, and beginnings and endings of radii.
   4. Align score and fiber expansion joints with existing fence posts and proposed light post.

3.08 EDGING

A. Edges of slabs, curbs, and other paving shall be tooled with a 1/2-inch radius edging tool, unless otherwise indicated or specified in the Drawings.

B. Trowel marks resulting from tooling of edges shall be carefully troweled out.

3.09 PLACING OF CONCRETE

A. Notify Owner's Representative minimum 5 working days prior to pour.

B. Preparation:
   1. Protect finished surfaces adjacent to areas to receive concrete.
   2. Valve boxes, electric boxes, drainage inlet structures, manholes, lids, and other similar items shall be covered and protected prior to and during concrete pour. Concrete staining to these items will not be accepted.
   3. Verify that the Owner's Representative, if required, has inspected reinforcement.
   4. Notify the Owner's testing laboratory at least 2 working days before placing concrete.

C. Placing:
   1. Concrete placement shall conform to Section 40-103H of the Standard Specifications.
   2. Moisten earth, and spray forms and reinforcement with water before placing concrete.
   3. Place concrete in continuous operation to permit proper and thorough integration and to complete scheduled placement.

D. Concrete shall not be dropped freely where reinforcing bars will cause segregation, nor shall it be dropped freely more than six feet. Spouts, elephant trunks, or other acceptable means shall be used to prevent segregation.

3.10 CONCRETE FINISHING - GENERAL

A. Provide formed concrete surfaces to be left exposed with a medium sand-blast finish. Coordinate with Landscape Architect prior to placing concrete.

B. Finish concrete floor surfaces in accordance with ACI 301. Provide non-slip surface where concrete floor surfaces are left exposed, unless noted otherwise.

C. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains as indicated on drawings.

3.11 FLATWORK FINISHING

A. General:
1. Provide each concrete finish where shown in the Drawings.
2. Provide samples and mockups as specified of all concrete finishes for review and acceptance prior to pouring concrete.

B. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats.

C. Trowel Finish: After applying float finish, apply first trowel finish and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance.

D. Broom Finish:
1. Broom with medium bristled broom to a uniformly roughened surface. Finished surface shall be clean with uniform and straight lines.
2. Paving with a slope greater than 6 percent shall be heavy broom finish and paving less than 6 percent shall be a medium broom finish.

E. Areas to Receive Surface Retarder:
1. Apply specified surface retarder uniformly to wet concrete after the initial bleed water rises to the surface using low pressure spray equipment in accordance with manufacturer's recommendations.
2. Remove retarded cement matrix with water.
3. Exercise care, and install protective procedures, to prevent rinse water from damaging adjacent materials or entering adjacent soil and planting areas. Should rinse water contaminate soil of planting areas, affected soil shall be removed and replaced with new soil complying with Section 32 90 00 - Planting at no additional cost to Owner.

3.12 FIELD QUALITY CONTROL

A. Provide free access to Work and cooperate with Owner's Representatives.

B. Tests of cement and aggregates may be performed to ensure conformance with specified requirements.

C. One additional test cylinder will be taken during cold weather concreting, cured on job site under same conditions as concrete it represents.

D. At a minimum one slump test will be taken for each set of test cylinders taken.

E. Tolerances:

1. Vertical deviation from specified grades shall not exceed 0.02 foot.
2. Surface smoothness deviations shall not exceed 1/8 inch in 8 feet, in any direction.
3. Thickness shall not be more than 0.01 foot less than planned thickness at any point.

3.13 CURING AND PROTECTION

A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

C. Cure floor surfaces in accordance with ACI 308.

D. Spraying: Spray water over floor slab areas and maintain wet for 7 days.

E. Provide necessary security to protect the concrete from vandalism. Concrete which is defaced or damaged during the course of this Contract shall be replaced by the Contractor at no additional cost to the Owner.

3.14 PATCHING

A. Allow Engineer to inspect concrete surfaces immediately upon removal of forms.

B. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Engineer upon discovery.

C. Patch imperfections in accordance with ACI 301.

3.15 DEFECTIVE CONCRETE

A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances, or specified requirements; concrete with excessive honeycombs or other surface or finish defects.

B. Repair or replacement of defective concrete will be determined by the Engineer of Record.

C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Engineer for each individual area.

D. No additional compensation will be allowed for repair of defective concrete.

3.16 CLEANING

A. Remove excess base material, concrete spills, cement stains and all other excess materials from all project areas prior to Final Acceptance.

END OF SECTION

SECTION 32 17 23

PAVEMENT MARKINGS

PART 1 - GENERAL

1.01 SUMMARY

A. Furnish all labor, materials, equipment, facilities, transportation and services to complete all striping and related work shown on the Drawings and/or specified herein.

B. Scope of Work: The general extent of the striping work is shown on the Drawings and can include, but is not necessarily limited to the following:
   1. Curb painting
   2. Accessible parking striping, lettering, and symbols
   3. Parking lot striping

C. Related sections can include, but may not be limited to the following:
   1. Section 32 12 16 - Asphalt Paving
   2. Section 32 13 13 – Concrete Paving

1.02 REFERENCES AND REGULATORY REQUIREMENTS

A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 SUBMITTALS

A. Conform to requirements of Section 01 33 00 Submittals and/or applicable Division One and Division Two specifications, General Conditions and Special Provisions.

1.04 PROJECT/SITE CONDITIONS

A. Work shall not be performed during wet, or other adverse conditions as determined by the Owner's Representative and/or paint manufacturer's instructions.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Unless otherwise specified, all striping shall be two coats of solvent borne, rapid dry paint (of the colors indicated in the Drawings) in conformance with Section 84 of the Standard Specifications.

B. Colors shall be as follows:
   1. Parking stalls – white
   2. Student activities striping - white
   3. Accessible parking – blue.
   4. No parking and emergency access – red.

PART 3 - EXECUTION

3.01 PREPARATION

A. Contractor shall make provisions and take all necessary precautions to protect existing improvements and surrounding property from overspray or damage due to pavement marking work.

B. Contractor shall layout all striping (with chalk-lines or other acceptable method) prior to start of work for review and acceptance by the Owner's Representative. Adjust layout as directed by the Owner's Representative.

3.02 APPLICATION

A. No striping shall be installed until the pavement surface has fully cured and/or has been properly stripped, cleaned and prepped per the paint manufacturers' instructions.

B. Paint shall be applied at rates approximately as follows:
   1. First Coat: 360 square feet per gallon of paint
   2. Second Coat: 150 square feet per gallon of paint

3.03 PROTECTION

A. The contractor shall provide appropriate barriers, warning signs, and/or other acceptable arrangements to protect all painted surfaces until project Final Acceptance.

END OF SECTION

SECTION 32 18 13

SYNTHETIC TURF PLAYING FIELD

PART 1 - GENERAL

1.01 SUMMARY

A. Section Included: Synthetic grass playing field system consisting of, but not necessarily be limited to, the following:
   1. Synthetic grass system consisting of 2-inch-tall hybrid of monofilament and slit-film polyethylene fiber.
   2. A resilient infill system consisting of rubber and graded sand.

B. Related Requirements:
   1. Section 32 18 14 - Synthetic Turf Base

1.02 REFERENCES

A. ASTM Standard Test Methods:
   1. D1335: "Standard Test Method for Tuft Bind of Pile Yarn Floor Coverings."
   2. D5848: "Standard Test Method for Mass Per Unit Area of Pile Yarn Floor Covering."
   3. F355: "Standard Test Method for Shock-Absorbing Properties of Playing Surfaces."
   4. F1936: "Standard Test Method for Shock-Absorbing Properties of North American Football Field Playing Systems as Measured in the Field."

B. NFHS Rules, as applicable.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

1.04 ACTION SUBMITTALS

A. Submit Drawings: Prepare and submit the following.
   1. Seaming plan.
   2. Installation details; edge detail, utility box detail, and other conditions of the installation.
   3. Field layout and striping plan including field colors, including field line layouts and colors.
   4. Final electronic versions of artwork.

B. Samples:
   1. Turf, 4" x 4" in size, illustrating details of finished product.
   2. Loose samples, 1-foot square, of the turf backing and tufted fibers.
   3. Color samples of color and logo work including final electronic versions of artwork.
   4. One-quart samples of the following:
      a. Specified primary infill.
      b. Specified secondary (sand) infill.

1.05 INFORMATIONAL SUBMITTALS

A. Manufacturer's installation instructions.

B. Certifications:

1. Project specific letter from turf manufacturer on the company letterhead certifying that the products to be provided meet or exceed all specified requirements, and state that the installer meets the specified qualifications above and is certified by the manufacturer to install the synthetic turf specified and to be provided.
2. Verification of recycled content of SBR infill as specified.

C. Certified copies from an independent third-party laboratory reports for results of the following tests:
1. Pile Height, face width & total fabric weight, ASTM D5823 and D5848.
2. Primary and secondary backing weights, ASTM D5848.
3. Tuft bind, ASTM D1335.
4. Grab tear strength, ASTM D5034.
5. Water permeability, ASTM F1551.
6. Flame resistance, ASTM D2859.
7. Tuft yarn tensile strength and elongation, ASTM D2256.

D. Copy of the manufacturers' minimum 8-year prepaid, non-prorated, third-party insured warranty and insurance policy information.

E. Qualifications: A list providing project name, date the field installation was approved, contact names and telephone numbers for each project that meets the experience and qualification requirements specified.

1.06 CLOSEOUT SUBMITTALS

A. The Contractor shall provide the following prior to Final Acceptance and the Owner filing the Project Notice of Completion:
1. Written warranty as specified with forms completed in Owner's name and registered with manufacturer and insurance carrier.
2. Information confirming that the third-party insurance policy, non-cancelable and pre-paid, is in effect covering this installation, and underwritten by a Best "A" Rated Insurance Carrier. Insurance carrier shall confirm that the policy is in force and premiums paid.
3. Three copies of Maintenance Manuals, which will include all necessary instructions for the proper care and preventive maintenance of the turf system, including painting and markings.
4. Project Record Documents, in accordance with Section 01 78 39 – Project Record Documents with plans showing actual locations of seams and other pertinent information.

B. Field groomer and/or sweeper as specified.

1.07 QUALITY ASSURANCE

A. The manufacturer shall have a representative on site to certify the installation and warranty compliance.

B. Designs, markings, layouts, and materials shall conform to all current NFHS standards as specified that may apply to this type of synthetic turf installation.

C. Quality Assurance Testing: Prior to shipment of the synthetic turf and components to the job site, the synthetic turf rolls should be randomly sampled and tested by the manufacturer who will certify that they meet the specification.
1. Testing shall be conducted and may include pile composition, pile weight, total weight, pile height, tuft bind, and grab/tear strength.
2. Test results of the relevant characteristics and certification turf meets or exceeds the specified requirements shall be submitted as specified.

1.08 TURF COMPANY QUALIFICATIONS

A. The Turf company shall be experienced in both the manufacturing and installation of the specified type of synthetic infilled turf system.
   1. Use of outside, independent contractors for the installation is to be reviewed by the Owner's Representative prior to the Bid of Contract.
   2. The Turf Company shall identify and provide the name of a single point of contact for their company for this project beginning with the bid process through construction administration and project close-out.
   3. The Turf Company shall coordinate all bid documents, submittals, shop drawings, schedules, warranty and close-out efforts internally and shall not rely on Owner's Representative to coordinate with multiple parties. Failure to do so could result in a time and materials charge from the Owner or Owner's Representative for additional coordination.

   4. Have a NFHS soccer field in play for at least 3 seasons with the specific infill system, backing and sewn seams that is being proposed for this project.
   5. For the purpose of meeting these qualifications, the type of fiber and infill rubber and sand are not determining factors in meeting these installation qualifications.

B. Installer:
   1. Capable of providing competent workers skilled in this specific type of in-filled synthetic grass installation.
   2. Designated supervisory personnel on the project shall be certified as competent in the installation of this material including sewing seams and proper installation of the infill mixture.
   3. The foreman for the installation shall have installed at least 20 fields in the last 3 years of the specified material.
   4. Possess an active California D-12 Synthetic Products license in good standing and have never had a license revoked.
   5. Shall not have had a Surety or Bonding Company finish work on any contract within the last 5 years.
   6. Shall not have been disqualified or barred from performing work for any public owner or other contracting entity in the U.S.
   7. For the purpose of meeting these qualifications, the type of rubber and sand are not determining factors in meeting these installation qualifications.

1.09 FIELD CONDITIONS

A. Contractor shall be responsible for reviewing the base and ensuring it conforms to the project requirements prior to placement of the synthetic turf.

B. Playing field subgrade preparation shall be completed and accepted by the Owner Representative prior to commencement of Work under this Section.

C. Ambient Conditions: Care should be taken during installation to account for rapid fluctuations in temperature to avoid expansion and contraction which can affect the final installation. Temperature extremes shall be carefully monitored. The carpet should never be rolled or unrolled when frozen, which can cause cracking and irreparable damage to the secondary backing.

1.10 WARRANTY

A. Manufacturer: Provide Owner with turf manufacturer's warranty which guarantees the usability and playability of the synthetic turf system for its intended uses for a minimum 8year period. The warranty coverage shall not be prorated nor limited to the amount of the usage. The warranty submitted must have the following characteristics:
   1. A non-prorated, non-cancellable up-front pre-paid, third-party insured warranty. Warranty shall be covered by a third party insurance policy, non-cancelable and pre-paid, and is in effect

covering this installation, and underwritten by a Best "A" Rated (or better) Insurance Carrier listed in the A.M. Best Key Rating Guide.

2. Insurance carrier shall confirm that the policy is in force and premiums prepaid for entire warranty duration in full.
3. The policy shall include a minimum annual aggregate of $5,000,000 per year and be based on claims arising from fields installed and completed only during the policy year.
4. The policy shall provide full coverage for a minimum of 8 years from the date of Notice of Completion.
5. The policy shall cover all costs associated with full field replacement with new equal or better turf material, including labor, materials and any other costs to repair or replace the field.
6. Owner shall not be responsible for any deductible.
7. Warranty shall have no restrictions on amount of use provided type of use is in accordance with the approved warranty language.
8. Shall warrant materials and workmanship, and that the materials installed meet or exceed the product specifications, including general wear and damage caused from UV degradation.
9. Shall have a provision to either make a cash refund or repair or replace such portions of the installed materials that are no longer serviceable to maintain a serviceable and playable surface.
10. Shall be a warranty from a single source covering workmanship and all self-manufactured or procured materials.
11. Guarantee the availability of replacement material for the synthetic turf system installed for the full warranty period.
12. The name on the warranty shall be made out to District/Owner.
13. Turf contractor shall include in the warranty the cost to replace high use areas such as but not limited to goal mouth of soccer pitch's, corner kick areas, goal kick areas, base paths, etc. Replacement shall be one time for each area during the warranty period at a time of the warranty holder's discretion. The replacement area shall include the required square footage needed to replace the damaged areas up to the closest field line or change in turf color. Contractor shall provide 2 replacement panels for each batter's box per field (8 total), 2 replacement catcher boxes per field (4 total) and 2 replacement strips for the pitcher's stride area per field (4 total) from the top of the pitching plate to the change of color in the home plate direction.
14. Turf system of 2" hybrid/monofilament turf with sand/rubber infill over a manufactured porous closed-cell composite shall not exceed a field average Gmax of 120, as tested according to the ASTM 1936 Standard Specifications, for the life of the system.
15. Turf shall maintain an ASTM F355 G-Max of less than 120 for the life of the warranty.

PART 2 - PRODUCTS

2.01 DESIGN AND PERFORMANCE CRITERIA

A. General:
   1. Synthetic turf construction and components shall be non-toxic and not cause commonly known allergic reactions. Each synthetic turf system should be constructed to provide dimensional stability and resist damage from wear and tear during athletic and recreational usage.
   2. System shall be permeable by design with adequate perforations through all of the backing coatings.
   3. The bonding or fastening of system material components shall provide a permanent, tight, secure, and hazard-free athletic playing surface.
   4. Seams shall be sewn with high strength sewing thread. Gluing of rolls is permitted if warrantied by the turf company and shall be glued with the specified glue.

B. Product Specifications:
   1. Monofilament/Slit-Film Fiber: 9,000 denier, low friction, eight-strand monofilament fiber, measuring not less than 2-1/2 inches high and not less than 125 microns in thickness.
      a. The low friction fiber shall be custom blended polyethylene, treated with UV inhibitors.
      b. Fibers shall have been extruded individually through a spinerette, stretched and twisted.
      c. Low friction fiber shall be specifically designed to virtually eliminate abrasion.

2. The tufted fiber weight shall not be less than 36 ounces per square yard. The low friction fiber shall be custom blended polyethylene, treated with UV inhibitors.
3. The maximum gauge of the tufted fiber rows shall be 3/4 inch.
4. The turf product shall have an infiltration rate not less than 40" per hour as tested by ASTM D1551.
5. Backing: Not less than 2 components consisting of a primary and secondary backing system of woven polypropylene or urethane.
   a. Backing system shall be treated with UV inhibitors.
   b. The backing shall receive polyurethane and acrylic applications during the manufacturing process.
   c. The backing weight of all backing material shall be a minimum of 20 ounces per square yard.
6. The minimum tuft binding tensile strength shall be 10 pounds without infill, as determined by ASTM D1335.
7. Turf product shall be Legion 2.0 by Shawturf or approved equal.

C. The synthetic turf shall be delivered in 15-foot wide rolls and of sufficient length to extend from sideline to sideline. Head seams, between the sidelines, will not be acceptable.

D. Markings:
   1. The perimeter white and yellow lines can be tufted into the individual sideline rolls.
   2. Field of play lines for soccer, including soccer penalty kick circle, shall be inlaid or tufted. The lines for soccer including soccer penalty kick circle shall be white.

2.02 INFILL SYNTHETIC TURF

A. Manufacturer and System: SBR Rubber and Sand as specified and the basis of design has been pre-approved by the Owner.

2.03 MATERIALS

A. Synthetic Turf Infill system shall consist of two components, a Primary and Secondary Infill:
   1. Primary Infill: SBR rubber complying with the product specification and sourced from recycled tires. Submit documentation on approved form certifying SBR source and number of tires recycled. Rubber shall be a homogeneous black color and uniform size and shall be clean of any impurities or material other than approved rubber.
   2. Secondary Infill: Sand shall be rounded silica sand and dust free. Coarse jagged sand will not be accepted. Sand shall consist of 50-60 percent of the total infill material as defined by weight. The sand shall have the following gradation:

Sieves (US Mesh Size)	% Retained
16	0
25	10-30
30	30-50
35	15-35
40	5-15
50	<5
70	<1

   3. At the end of installation, and prior to acceptance, the top of the infill shall not be more than a uniform 3/4 inch below the top of fibers. If additional infill is required to meet with requirement, it shall be furnished and installed by the Turf Company at no additional charge.

B. Thread for sewing seams of turf shall be as recommended by the synthetic turf manufacturer.

C. Synthetic Turf Glue
   1. Glue for inlaying lines and markings shall Nordot 34G, Mapei 2K, Turf Claw, hot melt technology or equivalent, as recommended by the synthetic turf manufacturer.
   2. Any adhesive products required for the installation of the proposed turf system shall be purpose-suited to the system. The material and application methods shall be as recommended by the adhesive manufacturer.
   3. Disposal of adhesive containers and unused adhesives as well as any fees resulting from such disposal shall be the responsibility of the Contractor.

2.04 SYNTHETIC TURF MAINTENANCE EQUIPMENT (GROOMER AND SWEEPER)

A. Contractor shall supply one field groomer and one sweeper. Sweeper shall have a debris collection attachment that shall pick up 1/4-inch diameter and larger material, but leave sand and rubber infill material. The groomer shall have plastic brushes and metal tines that are adjustable.

B. Grooming Product: "Synthetic Turf Sports Turf Groomer – model 920SDE" groomer with STR- Rear-Mounted Spring Tine Rake and 924SD- Extension Wings by GreensGroomer, including base unit with 164 linear inches of brushes, electric lift for raising and lowering, with powder coated frame, super duty synthetic bristle brushes, integrated pneumatic wheels, adjustable spring steel de-thatching tines, and detachable/foldable brush extension wings, as manufactured by GreensGroomer, 888-298-8852, or acceptable equivalent product.

C. Field Sweeper: "LitterKat - model 760 SFM" sweeper with magnet by GreensGroomer. 888-298-8852. This is a sweeper with basket attachment and tow-behind magnet.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify the base, as specified in Section 32 18 14 - Synthetic Turf Base, has been installed and approved by Owner's Representative and turf manufacturer.

B. Use a 2-5-ton static roller or other acceptable compactor to repair and properly compact any disturbed areas of the prepared base.

C. Do not proceed with installation of turf until unacceptable base conditions have been corrected.

3.02 INSTALLING THE SYNTHETIC TURF

A. The installation shall be performed in full compliance with the reviewed and accepted product submittal.

B. Only trained technicians, skilled in the installation of athletic caliber synthetic turf systems working under the direct supervision of the approved installer's supervisor, shall undertake cutting, sewing, gluing, shearing, topdressing or brushing operations.

C. Strictly adhere to the installation procedures specified. Variance from these requirements shall be submitted to and accepted in writing, by the manufacturer's onsite representative, and submitted to the Owner, verifying that the changes do not, in any way, affect the warranty.

D. The turf manufacturer and installation subcontractor shall inspect and accept the field base, and provide documentation to that effect, prior to the installation of the synthetic grass system. The surface must be perfectly clean as installation commences and shall be maintained in that condition throughout the process.

E. The turf rolls are to be installed directly over the properly installed manufactured base material.
   1. No equipment with loads greater than 35 pounds per square inch shall be allowed on the field. Contractor is responsible for altering operations in order to adhere to this requirement.
   2. Contractor and synthetic turf installer shall strictly adhere to the written instructions provided by the manufactured base manufacturer for installing turf on top of their product.
   3. Contractor is responsible to assure vehicles being used on the manufactured base are equipped with pneumatic (air-filled) tires, preferably turf tires, designed to spread loads and minimize damage to surface. Foam filled or solid tires and tires with aggressive lug patterns shall not be used on the manufactured base without synthetic turf installed.
   4. Use of an A-frame for unrolling of the synthetic turf as recommended by the base manufacturer.

F. Cutouts in the synthetic turf shall be in accordance with the Drawings and approved submittals. Coordinate cutouts in turf with Owner's Representative before cutting turf for utility boxes and other structures.

G. The turf rolls shall be installed directly over the properly prepared base. Extreme care shall be taken to avoid disturbing the base, both in regard to compaction and planarity.

H. The full width rolls shall be laid out across the width of the field.

I. Utilizing standard state of the art sewing procedures each roll shall be attached to the next. After all of the rolls of the playing surface have been installed, the sideline areas shall be installed at right angles to the playing field turf.

J. The synthetic turf field shall utilize sewn seams. Minimum gluing will only be permitted to repair problem areas, corner completions, and to cut in any logos or inlaid lines as required by the Specifications.
   1. Seams between turf panels shall be sewn. Seams shall be sewn using double bagger stitches and polyester thread. Seams shall be flat, tight, and permanent with no separation or fraying.
   2. Inlaid markings that cannot be tufted into the fabric shall be installed by means of shearing out the existing green fiber and laying in a new piece of colored fabric into a bed of suitable "hot melt" adhesive placed directly on the original turf backing material.
      a. Inlaid markings shall not be installed by means of cutting through the fabric and adhering the colored turf to a separate reinforcing tape or cloth.

K. Connections of the perimeter synthetic turf edges shall be completed by one of the following two methods and as shown on the Drawings:
   1. Connection to perimeter concrete edges with the specified adhesive.
   2. Connection to the recycled plastic header boards shall be done with industrial staples. Minimum embedment depth of fasteners shall be 1 inch with spacing a maximum 2 inches on center.

L. The infill materials shall be installed to fill the voids between the fibers and allow the fibers to remain vertical and non-directional.
   1. Apply in thin lifts to depth specified. The turf shall be brushed as the mixture is applied.
   2. The mix shall be uniform and even in thickness to assure proper playing characteristics.
   3. The infill shall be placed with a void of 3/4 inch to the top of the fibers.

3.03 FIELD QUALITY CONTROL

A. After completion of the synthetic turf installation, and prior to Substantial Completion of the project, the Contractor shall have installation tested for shock absorbency.
   1. Site testing shall be at ambient shaded air temperature of 40–100 degrees F.
   2. Field test measurements shall be made at a minimum of 6 locations and shall avoid areas where 2 seams cross.
   3. Testing shall be made, at the Contractor's expense, by an independent testing laboratory accredited for such tests and pre-approved by the Owner.

4. Testing and analysis by the testing laboratory shall provide the necessary data to the Owner that verifies the finished field does not exceed shock attenuation of 120 as determined by the ASTM F355A and F1936 test procedures.

B. Test results that do not meet the specified shock attenuation, or if any one test value is 10 percent greater in variance than the specified values, then the Contractor's field installer shall address the failed test area, be required to retest the entire field as stated above, and conform to these requirements prior to acceptance by the Owner.

C. The Contractor shall provide the following prior to Final Acceptance and the Owner filing the Project Notice of Completion:
1. Written warranty as specified with forms completed in Owner's name and registered with manufacturer and insurance carrier.
2. Information confirming that the third-party insurance policy, non-cancelable and pre-paid, is in effect covering this installation, and underwritten by a Best "A" Rated Insurance Carrier. Insurance carrier shall confirm that the policy is in force and premiums paid.
3. Three copies of Maintenance Manuals, which will include all necessary instructions for the proper care and preventive maintenance of the turf system, including painting and markings.
4. Project Record Documents, in accordance with Section 01 78 39 with plans showing actual locations of seams and other pertinent information.

3.04 DEMONSTRATION AND TRAINING:

A. Upon completion of the field installation, Contractor shall have a supervisory person provide a minimum 3-hour field training seminar with the Owner's personnel on how to care for the field.

B. At a minimum, seminar shall include a demonstration of how use of the sweeper and groomer, how to care for the field with the groomer and sweeper, review the entire provided maintenance manual including the proper procedure for removal of gum and other debris, and answer any questions.

3.05 MAINTENANCE

A. Manufacturer shall be responsible for the testing of the G-max levels of the installed synthetic turf at the completion of years 2, 4, 6, and 6 months prior to the completion of year eight of the warranty period.

B. Testing shall be completed by an independent testing laboratory accredited for such tests and shall be pre-approved by the Owner. Testing and analysis of findings shall be completed by testing laboratory's qualified persons utilizing the required techniques outlined in the ASTM F355 test standard.

C. If tests results indicated turf playing field does not fall within the G-max range specified, the manufacturer will be required under terms of its warranty to modify the field composition to the sole satisfaction of the Owner so that it falls within the target G-max range. A failed test shall be retested to verify that the field meets the specifications.

D. Costs associated with testing and corrective work shall be at no cost to the Owner.

3.06 MAINTENANCE CONTRACT

A. If the proposed regular maintenance contract cost for the duration of the warranty is selected by the District, the Turf contractor shall provide one maintenance service visit per year for the first three years of the 8 year warranty, then semi-annual visits (i.e. twice a year) for the remaining five/ years of the warranty period. Each maintenance service visit shall include the following:

1. One (1) Turf Contractor/Maintenance Contractor grooming session including:

a. A general sweeping to remove foreign objects such as dirt, leaves, bird droppings, chewing gum and other debris that may collect on the field surface.
b. A deep groom sweep and rejuvenation to de-compact infill and in an effort to maintain appropriate G-Max levels, as well as clean the infill from deleterious matter contaminating the infill material.
c. All accumulated debris and contaminating material shall be off-hauled and disposed of in a legal manner by the Turf Company.

2. Overall analysis and inspection of the field and its applicable systems, including fiber wear analysis, ultraviolet degradation, infill depth and consistency, infill migration, field edging attachments, sewn and glued seams, line verification and field inserts (inlays).

3. Minor repairs (sewing/adhesive failures, inlay separation, and general workmanship) as needed, of items found relating to the synthetic surface.

END OF SECTION

SECTION 32 18 14

SYNTHETIC TURF BASE

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Base for the synthetic turf consisting of, but is necessarily limited to, the following:
   1. Vertical draining, porous stone aggregate base consisting of a uniform single stone base.
   2. Stone aggregate base for stability and leveling purposes, and substrate for porous drainage composite.
   3. Shock/drain pad.
      1. Schmitz PP23D or approved Equal

B. Related Requirements:
   1. Section 01 78 29 – Conformance Survey
   2. Section 31 20 00 – Earth Moving
   3. Section 31 23 00 – Excavation and Fill
   4. Section 32 18 13 – Synthetic Turf Playing Field

1.02 REFERENCES

A. California Building Code (CBC):
   1. Chapter 33 – Site Work, Demolition, and Construction.

B. American Society for Testing and Materials (ASTM):
   1. ASTM D1557-12: “Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.”
   2. ASTM F2898-11: “Standard Test Method for Permeability of Synthetic Turf Sports Field Base Stone and Surface System by Non-confined Area Flood Test Method”
   3. ASTM D2434-22: “Standard Test Methods for Measurement of Hydraulic Conductivity of Coarse-Grained Soils.”
   4. ASTM C88-13: “Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.”
   5. ASTM C136-06: “Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.”
   6. ASTM D75-03: “Standard Practice for Sampling Aggregates.”
   7. ASTM F1936-19: “Standard Specification for Impact Attenuation of Turf Playing Systems as Measured in the Field.”

C. California Occupational Safety and Health Standards (OSHA):
   1. Article 6 - Excavations and Shoring.

D. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:
   1. Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.
   2. Closeout Submittals shall be submitted in accordance with Section 01 78 39 - Project Record Documents.

1.04 ACTION SUBMITTALS

A. Product Data: Manufacturer's descriptive literature for filter fabric and shock/drain pad as applicable. Descriptive literature and product cut sheets for each rock material from quarries, including initial sieve analyses per Part 2 Materials Section, shall be provided with the initial action submittals and shall be certified as current data (within 60 days from date of submission) from the quarries. Once initial submittals and samples are authorized from the Owner's representative, the Contractor may proceed with the additional testing as outlined in Part 1 Section "Material Testing".

B. Samples: Two 1-quart samples of each rock material and additional samples of each rock material to the Owner's testing agent as specified under Article "Material Testing," and Two 1-quart samples of Subdrain Trench Leveling Rock, as required.

C. Refer to Section 01 78 29 – Conformance Survey for Action Submittals relative to Synthetic Turf Base.

1.05 INFORMATIONAL SUBMITTALS

A. Manufacturer's installation instructions.

B. Certification: Certification signed by Contractor and drainage system (piping, structures, and fittings) Installer that installed materials conform to specified requirements and system was successfully checked and tested prior to covering with engineered permeable rock base, trench drain rock, and/or subdrain trench leveling rock.

1.06 CLOSEOUT SUBMITTALS

A. Project Record Drawings.

1.07 QUALITY ASSURANCE

A. Control of Work: Conform to Section 5 of the Standard Specifications.

B. Control of Materials: Conform to Section 6 of the Standard Specifications.

C. Single-Source Responsibility: Crushed stone shall come from only one supplier.

D. Material delivered to the site not meeting the Specifications will be rejected by the Owner. Material rejected by the Owner shall be removed from the site at the Contractor's expense.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Prior to trucking of material to project sites, crushed rock shall be washed so it is clean of impurities and fines created during rock crushing operations.

B. Store products to be installed as part of the field base neatly and orderly, stacked and blocked to prevent damage and contamination.

1.09 FIELD CONDITIONS

A. Protection of Project Site: Make provisions, and take the necessary precautions, for protect existing and completed work from damage during turf installation.

B. Contractor shall be responsible for stabilizing top of subgrade elevations for the synthetic turf areas prior to receiving the stone aggregate base and for executing fine grading as may be necessary or incidental to placement of the synthetic turf.

C. Contractor shall prevent surface water and subsurface or groundwater from flowing into excavations and flooding area to receive turf base. Contractor shall not allow water to accumulate in excavations. Contractor shall remove water to prevent softening of sub grades.

1.10 MATERIAL TESTING

A. General:
   1. The summary of Synthetic Turf Base Material Testing includes the following:
      a. Initial Action Submittal and samples for Owner Representative authorization to proceed.
      b. Pre-construction testing procedures described in Section 1.10.B.
      c. Testing procedures during construction described in Section 1.10.C and Section 3.03.
      d. In-situ permeability of Engineered Permeable Base Rock as described in Section 1.10.D.
   2. The Owner will employ and pay for the services of an Independent Testing Agency as specified in Section 01 45 00 – Quality Control.
   3. Payment for initial material testing is the responsibility of the Owner.
   4. Employment by the Owner of the Testing Agency shall in no way relieve Contractor's obligations to perform the Work of the Contract.
   5. The Owner reserves the right to change its testing laboratory if the need arises.
   6. Cost of testing which are repeated on materials that have failed to meet specifications or are as a result of shortages shall be borne by the Contractor.
   7. The Contractor shall include the following with its sample submittals:
      a. Identification of proposed source and supplier.
      b. Current lab mechanical analysis (within the last 60 calendar days) of the proposed stone using ASTM standards for sieve analysis.
      c. Sample sizes as specified.
      d. Certification that the supplier can deliver the total quantity of material needed to complete the project in a timely manner.

B. Pre-Construction Testing Procedures: The following tests will be performed by the Owner's Testing Agent prior to acceptance of rock provided under this Section, after authorization/review from the Owner's Representative of the initial Action Submittal and samples provided. Testing will be performed in the following steps:
   1. Engineered Permeable Base Rock and Subgrade Trench Drain Rock:
      a. Contractor shall submit a 5-gallon separate composite to the Owner's Testing Agency, unless the Owner's Testing Agent elects to pull the sample directly at the quarry and/or requests test samples of varying quantities based on the testing labs' needs, for each porous base rock material. The Owner's testing agent will evaluate these materials as specified using ASTM C136-06 and ASTM D75-03 testing protocol as a guideline.
      b. The submitted samples will be used for comparison with all subsequent samples submitted for acceptance during construction.
      c. Material shall not be delivered to the project site until tests show it complies with the accepted material.

      d. Engineered Permeable Rock Base and Subdrain Trench Drain Rock shall be tested to show that both materials meet the following stability requirements:

Test Method	Criteria
LA Abrasion (California Test 211)	Not to exceed 35
Durability Index (California Test 229)	Not less than 40
Aggregate Soundness (ASTM C88-13)	Not to exceed 12% loss for coarse aggregate, 10% for fine aggregate (based on a sulfate solution)

e. If Contractor provides current certification (within last four months) that a Permeable Rock Base and Subdrain Trench Drain rock are from the same quarry and vein of rock, only one set of stability testing requirements are required.

2. Engineered Permeable Base Rock Testing ONLY:

a. To ensure structural stability: $D_{60}/D_{10} > 5$ and $1 < \frac{D^2_{30}}{D_{10} * D_{60}} < 3$

Fragmentation shall be 100%.

$D_{"}x_{"}$ is the size of the sieve (in millimeters) that lets pass "x" percent of the stone. For example, D_{60} is the size of the sieve that lets 60 percent of the stone pass. For calculation purposes, these sizes may be obtained by interpolation on a semi-log graph of the sieve analysis.

b. To ensure proper drainage: Porosity of Engineered Permeable Rock Base > 25% (when stone is saturated and compacted to 92% Modified Proctor)

Permeability of stone base > 30 in/hr (Tested through ASTM D2434-22 with rock saturated and compacted to 92% Modified Proctor)

Depending on the type of rock present in the crushed stone mix, other mechanical characteristics might be necessary for approval.

C. Testing During Construction:

1. During construction, samples will be taken and analyzed periodically by the Owner's representative/Testing Agent to assure strict compliance with the Specifications. The Owner may sample and test the rock material either at the source or at the project site upon delivery from incoming transfer trucks. Frequency of sampling for gradation testing would be to sample every 500 tons of Engineered Permeable Base Rock delivered to the site. Rock not meeting Specifications will be rejected by the Owner's representative. Materials rejected by the Owner's representative shall be removed from the site at the Contractor's expense.
2. It is the Contractor's responsibility to ensure that all permeable stone for the synthetic turf base meet the above requirements throughout the installation process, including transfer and delivery to the site, placement, spreading, compaction, and installation of synthetic turf material. Proper investigation into rock sources may be required by the Contractor to ensure that the rock that was bid will meet the project specifications.
3. Refer to Section 3.03 Placing the Engineered Permeable Rock Base for additional testing required during construction.
4. Subdrain Trench Leveling Rock: The leveling rock shall comply with section 2.04 A and be submitted to the Owner's Testing Agent for gradation testing. No additional tests are required for the leveling stone.

D. Permeability of placed engineered permeable rock base shall not be less than 10 in/hr (Tested per ASTM F2898-11)

1.11 PROJECT RECORD DOCUMENTS

A. Accurately record location of pipe runs, connections, cleanouts and invert elevations. Include locations of utilities remaining, re-routed utilities, new utilities, and newly discovered utilities as applicable by horizontal dimensions, elevations, inverts, and slope gradients.

1.12 SHOCK/DRAIN PAD GUARANTY

A. The manufacturer of the shock/drain pad shall provide a guaranty, in writing, that for a period of twenty five (25) years, the shock/drain pad shall be a part of a turf system that will not exceed a field average G-max of 120 g's as tested according to the ASTM F1936-19 Standard Specification.

PART 2 - MATERIALS

2.01 DESIGN AND PERFORMANCE CRITERIA

A. The finished crushed stone or aggregate base supplied shall be stable, unyielding, and permeable.

2.02 ENGINEERED PERMEABLE ROCK BASE

A. Engineered Permeable Rock Base: Virgin, un-recycled, crushed stone meeting the gradation criteria for the California Department of Transportation 3/4-inch Permeable Class II (Section 68) and the following gradation.

Mesh size	Percent Passing
1"	100
3/4"	90-100
3/8"	40-100
#4	25-40
#8	18-33
#30	5-15
#50	0-7
#200	0-3

B. The above rock gradation range is a general recipe for the Contractor to use in order to meet the product performance requirements of the built stone base. The Contractor is responsible for ensuring that the type of rock and blend they submit and install will meet all the specified requirements, including those outlined in item 1.10 of this specification section.

C. Soft rock materials, including sandstone, limestone, and shale, are not suitable. Rock supplier shall certify that all supplied rock will be void of this type of rock.

2.03 SUBDRAIN TRENCH DRAIN ROCK

A. Shall be 3/4-inch x 1/2-inch crushed virgin, un-recycled, washed rock, meeting the following general gradation requirements:

Sieve Size	Percent Passing
1"	100

Sieve Size	Percent Passing
3/4”	90-100
1/2”	10-40
3/8”	0-15
#4	0-5

B. The rock profile will extend from the bottom of the trench to the top of both sides of the subdrain trench, and to the top of rock elevation. The Engineered Permeable Base Rock shall not be installed over the subdrain trench drain rock.

C. Soft rock materials, including sandstone, limestone, and shale, are not suitable. Rock supplier shall certify that all supplied rock will be void of this type of rock.

D. The Contractor is responsible for ensuring the type of rock and blend they submit and install will meet all the specified requirements, including those outlined in item 1.10 of this specification section.

2.04 SUBDRAIN TRENCH LEVELING ROCK

A. For planarity purposes, a clean, washed, uniform 3/8-inch crushed stone material, of the same source as the subdrain trench drain rock or Engineered Permeable Rock Base may be installed over the subdrain trench profile upon approval of Owner’s representative. Maximum thickness for this stone layer is 1/2 inch.

2.05 ROCK BASE AND SUBDRAIN TRENCH DRAIN ROCK SUPPLIERS

A. The following suppliers are recommended. Recommendations do not preclude suppliers from meeting all rock requirements specified herein:

RIVERSIDE OFFICE

Region	**Supplier**	**Address**	**Phone Number**
Los Angeles	Vulcan Materials /Durbin Sand & Gravel	13000 E Los Angeles St. Irwindale, CA 91706	(626)-221-4293
Inland Empire	Granite Co. – Big Rock Aggregate Plant	34809 155th St. East Llano, CA 93544	1 (805) 879-0061
Orange County			
Ventura			

2.06 SHOCK/DRAIN PAD

A. Manufactured Porous Close-Cell Composite Base: Resilient, interlocking, polypropylene panels specifically engineered for sports fields; “Schmitz PP23D” by Schmitz Foam, 517-781-6620, or equal.
   1. Panel Size: Approximately 7.51’ x 3.08’.
   2. Thickness: .91 inches, (23 mm).
   3. Weight: 0.9 lbs per SF

2.07 PERMEABLE GEOTEXTILE FILTER FABRIC

A. Geotextile Filter Fabric: Mirafi 140 N, or accepted equal, conforming to the following minimum specifications, unless otherwise recommended by the Geotechnical Engineer:

Property	Test Method	Typical Values
Grab Strength	ASTM D4632	80 lb.
Puncture Strength	ASTM D4833	25 lb.
Burst Strength	ASTM D3786	130 lb.
Trapezoid Tear	ASTM D4533	25 lb.
Permeability	ASTM D4491	0.1 cm/sec
Apparent Opening Size	ASTM D4751	#50 Sieve size
Permittivity	ASTM D4491	

2.08 DRAINAGE ELEMENTS

A. Refer to Storm Drainage Specification Section for in-field drainage elements.

PART 3 - EXECUTION

3.01 SUBGRADE PREPARATION

A. Contractor shall verify that subgrade has been prepared according to specification Section 31 20 00 – Earth Moving with regard to compaction, grade tolerances in accordance with Section 01 71 23 – Field Engineering and is free of debris, non-compactable material, topsoil, or organics prior to beginning work.

B. Top of subgrade elevations shall be verified using laser-operation survey instruments. Refer to Conformance Surveying specifications for requirements.

C. Once the subgrade conformance has been accepted and compaction has been properly achieved, the geotextile filter fabric shall be installed over the compacted and prepared subgrade, as shown on the plans, without disturbing grades.

D. Geotextile fabric shall be laid in shingle fashion overlapping 12 inches minimum following direction of slope with upslope fabric laying atop the down slope fabric and stapled 6' on-center along seams. Staples to be 6" staples.

3.02 INSTALLATION OF THE SUBDRAIN TRENCH AND IN-FIELD DRAINAGE

A. Contractor to install piping in strict compliance with the manufacturer's written instructions and as indicated in the Drawings. Contractor to exercise caution and the appropriate sequencing of work, so as not to damage any drainage piping during the base rock installation.

B. Contractor to protect drain trenches to ensure that pipe is not damaged in any way by construction operations and that the rock is not contaminated with native soils, unintended construction material, or deleterious materials during subsequent construction operations.

C. NO VIBRATORY COMPACTION OF THE SUBDRAIN TRENCHES SHALL BE PERMITTED.

D. Contractor shall protect the installed subdrain trenches with fabric until ready for installation of turf. If rain is imminent, add straw waddles and silt fencing to prevent contamination of the subdrain trench rock.

3.03 PLACING THE ENGINEERED PERMEABLE ROCK BASE

A. The stone shall be laid without damaging the soil subgrade and the in-field drainage system. Do not create depressions in subgrade with heavy equipment. If damage to subgrade occurs, correct as specified for subgrade preparation.

B. The crushed stone shall be carefully and evenly spread over the subgrade and up both sides of the subdrain trenches to the depth shown on the Drawings.

C. Excess water shall not be applied during installation of rock base and rough grading due to the potential of softening the subgrade and altering the grading.

D. Crushed stone shall be smoothed and compacted uniformly to design grades by alternating raking, water settling, and rolling operations. Minimal rolling is advisable to achieve design grades and compaction. Only static rolling is allowed, and max 3-5-ton rollers should be used on the permeable stone base. Vibratory rolling of the permeable stone is not permitted. Contractor shall roll field ridges so as to provide a rounded ridge and not a harsh break.

E. If the required compacted depth of the base course exceeds 6 inches, the base stone course shall be constructed in 2 or more layers or lifts of approximate equal thickness. Each layer shall achieve a uniform 90 percent relative compaction.

F. Top of porous rock elevations shall be verified using laser-operation survey instruments. Refer to Conformance Surveying specifications for requirements.

G. The final grade shall be ideally compacted to a uniform 90 – 92 percent relative compaction.

H. Contractor shall not overwork the stone material and consequently modify its gradation characteristics. Minimal moving of the stone upon placement of the material on the subgrade and rolling is advisable to achieve design grades and compaction. Do not compact greater than 93 percent relative compaction.

I. Contractor shall prepare an initial 50’ X 50’ area of compacted, placed permeable base during the start of base import for initial permeability testing per ASTM 2898-11. Notify the Owner’s Representative three (3) days prior to completion of the test area being ready for testing. Testing Shall be completed by The Owner’s Representative Testing Agency.

J. Contractor shall manually screed the top stone surface to ensure tolerances are met.

K. Top of rock elevations shall be verified using laser-operation survey instruments. Refer to Conformance Surveying specifications for requirements.

L. Finish surface planarity shall be verified, and if necessary adjusted, by the Contractor using string line method.
   1. Entire finished surface shall be “walked” with mason’s line in increments of approximately 3 feet.
   2. A mason’s line shall be held taught between two workers separated by a distance of approximately 40 feet then placed directly on the finished surface parallel to the direction of greatest slope.
   3. A third worker shall check for separations between the mason’s line and the finished surface that are equal to or greater than the specified tolerances.
   4. Areas of separation shall be outlined with marking paint and the depth of separation indicated.
   5. Areas outlined with marking paint shall be filled with top rock to the depth indicated and raked by hand. Filled areas shall be compacted to provide a non-yielding, smooth, flat surface.
   6. Final finished surface planarity shall be approved by the Owner and the synthetic turf installer.

M. Once the top of the Engineered Permeable Rock Base is fully installed and compacted, the Contractor shall notify the Owner Testing Agent that it is ready for the field permeability test.
   1. The Agent shall be given 2 working days' notice and have 2 days to complete the in-field test which will consist of a minimum of 4 controlled field permeability tests per synthetic turf field.
   2. Tests shall be by the following test method: ASTM F2898-11: "Standard Test Method for Permeability of Synthetic Turf Sports Field Base Stone and Surface System by Non-confined Area Flood Test Method"
   3. Permeability of placed Engineered Permeable Rock Base shall comply with specified requirements.
   4. If the test does not comply with section 1.10, the Contractor shall provide within 48 hours a written repair procedure to correct the permeability deficiency.
   5. Repair work, including associated delays, shall be the Contractor's sole responsibility. Fine tuning of the field base due to the testing operations is the responsibility of the Contractor.

3.04 INSTALLATION OF MANUFACTURED DRAINAGE MATERIAL

A. Upon successful completion of installing the base, the porous drainage composite shall be installed in accordance with the Drawings and in strict compliance with the manufacturer installation instructions. Contractor to exercise extreme care in order to avoid disturbing the crushed stone base.

B. Contractor to take measures to ensure that the product is not exposed to the outdoor elements longer than the manufacturer's recommendations. Product that exceeds this exposure time duration shall be removed from the project site immediately and not used on the project.

C. Sections of the material shall be interlocked and/or connected to adjacent pieces of the drainage material in strict conformance with the manufacturer's written installation instructions.

D. Provide geotextile filter fabric in the areas designated on the Drawings. Fabric shall be laid in shingle fashion overlapping 12 inches minimum following direction of slope with upslope fabric laying atop the down slope fabric.

END OF SECTION

SECTION 32 18 24

POLYURETHANE TRACK SURFACING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Include: Surfacing as shown on the Drawings including, but not limited to:
   1. All weather polyurethane bound track surface.

B. Related Requirements:
   1. Section 31 20 00 - Earth Moving
   2. Section 32 11 00 - Base Courses
   3. Section 32 12 17 - Asphalt Track Paving
   4. Section 32 13 13 - Concrete Paving

1.02 REFERENCES

A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

B. Coordinate applicable subgrade preparations, installations of base course materials, and all other work with work of the track surfacing to insure a proper, timely installation.

1.04 ACTION SUBMITTALS

A. Diagrams: Prepare a set of computerized and scaled drawings that verify and show the accurate distance around the track for each lane.
   1. Striping plan to be reviewed and approved by the District/Owner's Representative.
   2. Diagrams and scaled drawing shall be submitted for approval prior to start of construction.
   3. School name and school mascot lettering on track straightaways.

B. Product Data: Manufacturer's descriptive product literature and specifications for the track surfacing system.

C. Samples:
   1. Synthetic track surfacing product to be provided in specified color.
      a. Size: 4 inches by 6 inches.
      b. Quantity: 4, unless otherwise requested by Owner's Representative.

1.05 INFORMATIONAL SUBMITTALS

A. Installer qualifications as specified including proof of insurance and performance and payment bonds.

B. Affidavit attesting that the surfacing material to be installed meets the requirements defined in the manufacturers currently published specifications and any modifications outlined in these technical specifications.

C. A letter signed by an authorized representative surfacing installer that the track and field surfacing has no measurable traces of heavy metals, leachable mercury, and other hazardous materials identified by the EPA.

D. Material Safety Data Sheets (MSDS) for products brought to the site.

E. Verification of ISO 9001 and ISO 14001 compliance from the manufacturing facility where the synthetic surface is manufactured.

1.06 CLOSEOUT SUBMITTALS

A. Warranty as specified.

B. Upon completion of line markings, submit to the Owner a certification of accuracy prepared by a Registered Engineer or Surveyor. This document shall state that the track markings and layout plan meet the requirements of the project's appropriate governing body and the requirements of the Contract.

C. The approved scaled drawing submittal shall be provided to the Owner as part of the closeout documents.

1.07 QUALITY ASSURANCE

A. Installer Qualifications:
   1. Insured firm with a current California Contractor's license, valid and current DIR number, and bond number and which has successfully installed at least 15 polyurethane-surfaced track systems as specified during the past 3 years in the State of California.
   2. Capable of providing references for a minimum of 10 similar, successfully executed, projects including current appropriate Owner contact name and phone number.
   3. Installers' supervisor shall have at least 10 years' experience installing specified track system.

B. Regulatory Requirements: The track surfacing shall be installed in conformance with the standards for track construction as described in the following track design and construction guidelines:
   1. The American Sports Builders Association *Track Construction Manual*. (ASBA)
   2. Current material testing guidelines as published by the American Society of Testing and Materials (ASTM).

C. Machinery and materials used for installing the track surfacing shall be only those approved by the Owner and the approved manufacturer of the selected synthetic surfacing material. System components shall be processed and installed by specially designed machinery with automatic electronic portioning, which provides continuous mixing, feeding and finishing for accurate quality controlled installation. No hand mixing will be allowed.

1.08 FIELD CONDITIONS

A. Ambient Conditions:
   1. Surfacing shall not be done when the threat of freezing exists for the following 24 hours, track substrate has visible moisture, rain is imminent or gusting winds are occurring.
   2. Do not apply rubberized topping when product material or base surface temperature is less than 50 degrees F.

B. While surfacing and striping are being installed, sprinkler systems shall be curtailed, shut off, or controlled so that no water falls on the track or event area surfaces. Other trades and Owner's personnel shall stay off the wet or curing surfaces.

C. Provide temporary barriers as required to prevent public entry to construction area and to protect adjacent properties from damage during construction operation. Security is responsibility of the Contractor. Damage that occurs after or before normal work hours is the responsibility of the Contractor.

1.09 WARRANTY

A. Manufacturer: Provide Owner with manufacturer's third party insured 5-year warranty against workmanship, installation and materials on the synthetic surface.
   1. The warranty is to be provided directly by the track-surfacing contractor to the Owner.
   2. Material shall be guaranteed to the extent that the surfacing:
      a. Has been manufactured and applied in accordance with the Contract and the manufacturer's specifications.
      b. Will hold fast and adhere to its' substrate, edging, filler and patches or overlay materials.
      c. Will perform as specified in these Specifications and the specifications of the product manufacturer in the current standard product information literature and specification sheets.
      d. Is Ultra-Violet resistant and will not de-laminate, bubble, blister, fade, crack or wear excessively during the guarantee period.

PART 2 - PRODUCTS

2.01 GENERAL

A. Products shall adhere to the specified material requirements. Alternate product brand names that meet or exceed the properties and components of the specified product shall be submitted by the Contractor in accordance with Section 01 25 00 – Substitution Procedures and will be reviewed by the Owner.

B. It is the responsibility of the Contractor to prove the product meets or exceeds the quality of the product specified, and the Owner may accept the product if such proof is provided and supported by applicable literature.

2.02 IMPERMEABLE EMBEDDED SANDWICH POLYURETHANE RUNNING TRACK SURFACE

A. System Description: An impermeable polyurethane synthetic track system consisting of a mechanically paved and sealed SBR Rubber and single-component polyurethane binder base mat and a poured-in-place, two-component U.V. stabilized elastomeric polyurethane wear layer with an embedded EPDM textured finish.
   1. The average finished product thickness shall be 13mm.
   2. The polyurethanes shall be ISO 9001 approved and certified.
   3. No black rubber is allowed in the wear course.
   4. Color shall be as below:
      a. Track Lanes: red
   5. Computer electronic proportioning machines shall be used when mixing components.

B. System Materials:
   1. Mechanically Paved In Place Base Mat
      a. Styrene Butadiene Rubber (SBR) processed ground to a graded size of 1-3mm.
      b. A maximum of 82%, by weight of the paved-in-place base layer, of SBR will be allowed.
      c. a single-component polyurethane binder with a long cure time for use in paved mat specifications. A minimum of 18%, by weight of the paved-in-place base layer. Shall be BEYPUR 300, or equal.
   2. Seal Coat
      a. The granular SBR and binder layer (base mat) shall be sealed with a two-component polyurethane pore sealer used with paved rubber granule mats. Shall be BEYPUR 200, or equal. The application of EPDM dust is not allowed.
   3. Elastomeric Polyurethane
      a. two-component U.V. stabilized elastomeric polyurethane compounded from polyol and isocyanate components, based on one hundred percent (100%) Methylene Diphenyl Isocyanate (MDI). Shall be BEYPUR 250 or equal. No Toluene Diisocyanate Isocyanate (TDI) will be

allowed. The elastomeric polyurethane shall be red in color unless otherwise noted. Mix ratio shall not exceed 3 to 1.

4. EPDM Granulate
   a. The EPDM granulates shall be approximately 1 to 3mm in size.
   b. EPDM granulates and the U.V. stabilized elastomeric polyurethane shall be color matched.

C. Performance Standards: The synthetic track surfacing system shall exhibit the following minimum performance standards as required by World Athletics (W.A.):
   a. Thickness: (12-13mm) or as specified
   b. Force Reduction 35-50%
   c. Vertical Deformation: 0.6mm-2.5mm
   d. Coefficient of Friction: ≥0.5 (47 TRRL Scale)
   e. Tensile Strength: ≥ 0.5 Mpa
   f. Elongation: ≥ 40%

D. Acceptable Products:
   1. Beynon "BSS 300" by Beynon Sports, a Tarkett Sports Company, or equal. Contact: Jason Paul, 1 559. 521. 0910.

2.03 ADDITIONAL MATERIALS AND ACCESSORIES

A. Track Striping: Lines, and other required markings shall be sprayed using a specially formulated two part polyurethane paint approved by the track surface manufacturer.

B. be provided by Owner based on events listed above, and approved by Owner's Representative.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to the start of installation, verify asphalt concrete paving for dimensional accuracy, strength, surface preparation and planarity. Notify Owner of any deficiencies.

B. Entire surface shall be clean and free of all dirt, oil, grease or any other foreign matter. It is the responsibility of the surfacing Contractor to thoroughly wash and/or pressure wash all area of the new /and existing asphalt base to ensure adhesion of the track surface.

3.02 PREPARATION

A. Contractor shall to water flood the track asphalt substrate with the use of a water truck. If after 30 minutes on a 70-degree F day, 'bird baths" are evident in a depth more than 1/8", Contractor shall submit in writing within two working days to the Owner's representative the appropriate method of correction.

B. Minimum curing time for base prior to beginning of surfacing is 28 days for new asphalt paving (no fog or slurry seals are allowed) and 28 days for new concrete (No concrete curing compounds are allowed).

C. Beginning installation stipulates track installer "accepts" existing conditions. Adhesion to the existing asphalt is the Contractor's responsibility.

D. Keep all personnel, other than employees of track installer, 300 feet from equipment and workers.

3.03 APPLICATION PROCEDURES

A. Prime areas that are to be surfaced that day with a compatible polyurethane primer at a minimum rate of 0.27 pounds per square yard.

B. The base mat shall be applied at a rate of 13.0 pounds of SBR rubber mixed with 3.0 pounds of polyurethane binder per square yard to provide a base mat with a total weight 16 pounds per square yard and a 10mm minimum thickness before application of seal coat and wearing layer. The installation of the base mat shall be in one lift with the use of a paving machine that is specifically designed for this type of project.

C. The seal coat of two-component polyurethane shall be applied to the base mat at a rate of 2.2 pounds per square yard and spread with a rubber squeegee. The two components of this material shall be mixed by a computerized electronic proportioning machine that constantly monitors the mix ratio. Hand mixing of components is not permitted.

D. The wearing coat shall consist of a flow-applied layer of the same two-component polyurethane as the seal coat with the addition of embedded EPDM granules.
   1. The polyurethane coat shall be applied at a minimum rate of 4.5 pounds per square yard to achieve a minimum depth of 3mm onto which pigmented EPDM rubber granules are broadcast into it at a rate of approximately 7.5 pounds per square yard prior to initial cure.
   2. After the cure is complete, excess rubber granules shall be removed by means of a mechanical sweeper. The remaining EPDM granulate in the surface shall measure at a rate of 5 pounds per square yard.
   3. The depth of the wearing coat shall be a minimum of 4mm with the total system average thickness a minimum of 13mm.

3.04 STRIPING AND PLACING RACE MONUMENTS

A. Installation shall conform to the approved scaled drawings and diagrams.

B. Angles shall be set by using a transit or theodolite capable of reading direct to 20 seconds.

C. Measurement shall be made with a steel tape in engineering scale.

D. Markings shall be clearly identified and color-coded.

E. Contractor shall paint school name on one straightaway and the school mascot name on the opposite straightaway. The letters shall be 32 inches tall. Coordinate with Owner's Representative for exact wording to be used. Contractor to submit shop drawings for approval.

3.05 TRACK TOLERANCES AND CONFORMANCE SURVEYING REQUIREMENTS

A. Refer to Specification Section 01 78 29 - Conformance Survey for grade conformance requirements.

3.06 FINAL CLEANUP

A. Contractor shall be responsible for removing discarded product containers, and unused and excess material.

B. Paint over spray onto adjacent surfaces outside the track dimensions shall be removed by the Contractor.

C. Where impacted by the surfacing work, existing surfaces to remain shall be returned to a condition equal to or better than their condition prior to commencement of work under this Contractor.

END OF SECTION

SECTION 32 33 00

SITE FURNISHINGS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Site furnishings and installation accessories as shown on the Drawings including, but not necessarily limited to, the following:
      a. Soccer goals.
      b. Soccer corner flags.
      c. Soccer goal net.
      d. Truncated domes.
   2. Site Furnishings Product Matrix

B. Related Requirements:
   1. Section 32 12 16 - Asphalt Paving
   2. Section 32 13 13 – Concrete Paving
   3. Section 32 18 13 – Synthetic Turf Playing Field

1.02 REFERENCES

A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

B. Scheduling and Sequencing:
   1. Do not install site furnishings prior to acceptance by Owner's Representative of area to receive items.
   2. Coordinate construction timing of installation of site furnishings in conformance with other work interfacing with installation of the site furnishing items.

1.04 ACTION SUBMITTALS

A. Shop Drawings: Submit complete shop drawings for all materials or furnishings requiring field or shop fabrication.

B. Product Data: Manufacturer's catalog cut sheets of materials and equipment to be provided.
   1. Include the manufacturer and distributor name, and subcontractor as applicable.
   2. Cut sheets clearly describe the specific product by catalog number and that additional non-specified products that may appear on the same cut sheet are crossed out where applicable.

C. Samples: Colors and finishes for products and furnishings requiring selection by the Owner's Representative.

1.05 INFORMATIONAL SUBMITTALS

A. Statement of qualifications for manufacturers and installer if requested by the Owner's Representative.

1.06 CLOSEOUT SUBMITTALS

A. Provide operation and maintenance data for items with operable, movable, or replaceable parts, for items with mechanical connections, and for other items as applicable.

B. Extended warranties as specified.

1.07 QUALITY ASSURANCE

A. Furnishings shall be reviewed for conformance with the intent of the Contract Documents and accepted by the Contractor prior to installation.

B. Site furnishings shall be in a new, "first-class" condition as determined by the Owner's Representative at the time of Final Acceptance.

C. Field Samples and Mockups: As requested by the Owner's Representative.

1.08 DELIVERY, STORAGE AND HANDLING

A. General:
1. The Contractor is responsible for coordination of the delivery, acceptance, handling, and storage of site furnishings.
2. Store and handle site furnishings as acceptable to the Owner's Representative and so that work or access of others is not impeded.
3. Protect site furnishings from theft or damage until such items have been accepted by the Owner.

B. Packaging and Labeling: Furnish materials in manufacturer's unopened, original packaging, bearing original labels showing quantity, description, and name of manufacturer. Verify that materials and components are adequately padded and securely bound in such a manner that no damage occurs to the product during delivery and unloading at the site.

C. Storage: Damaged materials will be rejected. Remove damaged materials from job site immediately and pay cost of replacement. Determination of damage shall be the sole authority of the Owner's Representative.

D. Painted Finishes: Provide non-scratching, non-staining, firmly bound covering for shop-painted finishes until installed and accepted.

E. Protect wood materials from stains.

1.09 WARRANTY

A. Manufacturers: Provide Owner with manufacturer's written extended product warranties as available for the specified products.

PART 2 - PRODUCTS

2.01 SITE FURNISHINGS - GENERAL

A. In addition to those described in the following Articles, refer to the Site Furnishing Matrix included at the end of this Section for complete list of items to be provided.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to commencement of work described in this Section, carefully inspect installed work, and verify all such work is correct and complete. Immediately notify the Owner's Representative of any discrepancy before proceeding with work.

3.02 INSTALLATION - GENERAL

A. Conform to layout shown on Drawings. Final placement shall be field verified with the Owner's Representative.

B. Installation of products shall be as shown in the Drawings, or according to manufacturer's instructions. If discrepancies are found, or if information is lacking, consult with the Owner's Representative prior to beginning the work.

C. Concrete footings shall conform to requirements of Section 32 32 15 – Landscape Concrete unless noted otherwise.

D. Furnish anchorage and fastening required for installation to ensure proper fit and accurate placements. Bolts, where exposed, shall be cut back to within three threads of the nut.

3.03 CLEANING AND ADJUSTMENT

A. Protect furnishings from damage until acceptance of work. Do not remove protective wrappings from furnishings until so instructed by the Owner's Representative.

B. Clean soiled site furnishings prior to acceptance by Owner.

C. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by the Owner's Representative.

D. Replace damaged items to the satisfaction of the Owner's Representative. Replace missing accessories at no cost to Owner.

3.04 SITE FURNISHINGS MATRIX

ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.	QTY.	FINISH/COLOR	DISTRIBUTOR/CONTACT
A.	Round Faced Soccer Goal (Youth)	Sportsfield Specialties	SG721R	2	White Frame with Black Netting and 1 Extra Net Provided for Each Goal	Sportsfield Specialties Dan DeVantier (607) 437-7301
B.	Truncated Domes	Engineered Plastics – Armor Tile	ADA-C-Series Cast-in-place tiles	Per plan	Federal Yellow	Gerard Angeles, Engineered Plastics (916) 844-4132
C.	Football Goal Post Pad	Sportsfield Specialties	GPPR	1	To be determined by the school district	Sportsfield Specialties Dan DeVantier (607) 437-7301

END OF SECTION

SECTION 32 36 00

LANDSCAPE DECORATIVE METAL

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. The following exterior ornamental metal work:
      a. handrails including:
         1) Ramp railings.
      b. Fences and gates including:
         1) Custom decorative ironwork fence components for gates.
         2) Perimeter fencing rails.
   2. Finish hardware for gates.
   3. Shop applied coatings for decorative metal items.

B. Related Requirements:
   1. Concrete Paving: Section 32 13 13
   2. Chain Link Fencing: Section 32 31 13.
   3. Exterior Site Painting: Section 09 91 15.

1.02 REFERENCES

A. American Institute of Steel Construction (AISC):
   1. "Specifications for the Design, Fabrication, and Erection of Structural Steel for Buildings," including "Commentary on the AISC Specification."

B. American Society for Testing and Materials (ASTM):
   1. A36/A36M: "Specification for Carbon Structural Steel."
   2. A47/A47M-: "Specification for Ferritic Malleable Iron Castings."
   3. A48/A48M: "Specification for Gray Iron Castings."
   4. A53/A53M: "Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless."
   5. A167: "Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate Sheet and Strip."
   6. A176: "Specification for Stainless and Heat-Resisting Chromium Steel Plate, Sheet and Strip."
   7. A240/A240M: “Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.”
   8. A276: "Specification for Stainless Steel Bars and Shapes."
   9. A307: "Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength."
   10. A492: "Specification for Stainless and Heat-Resisting Steel Rope Wire."
   11. A500/A500M: "Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes."
   12. B26/B26M: “Standard Specification for Aluminum-Alloy Sand Castings.”
   13. B247: “Standard Specification for Aluminum and Aluminum-Alloy Die Forgings, Hand Forgings, and Rolled Ring Forgings.”
   14. C864: "Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers."
   15. A1008/A1008M-09: “Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable.”
   16. C1107/C1107M: "Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)."

17. D6386-10: “Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting.”
18. D7396-08: “Standard Guide for Preparation of New, Continuous Zinc-Coated (Galvanized) Steel Surfaces for Painting.”
19. E350-95(2005)e1: “Standard Test Methods for Chemical Analysis of Carbon Steel, Low-Alloy Steel, Silicon Electrical Steel, Ingot Iron, and Wrought Iron.”

C. American Architectural Manufacturers Associates (AAMA):
1. CW-12: Structural Properties of Glass.”
2. 2605: “Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.”

D. American National Standards Institute (ANSI) /American Welding Society (AWS):
1. ANSI/AWS D1.1/D1.1M: "Structural Welding Code."
2. ANSI/AWS D1.3/D1.3M: "Structural Welding Code - Sheet Steel."

E. Industrial Perforators Association (IPA):
1. “Designers, Specifiers and Buyers Handbook for Perforated Metals”

F. National Association of Architectural Metal Manufacturers (NAAMM)
1. Architectural Metal Products Division (AMP): AMP 500-06, “Metal Finishes Manual for Architectural and Metal Products.”

G. SSPC: The Society for Protective Coatings (SSPC) "Painting Manual":
1. Surface Preparation Specifications:
   a. SSPC-SP 3: "Power Tool Cleaning."
   b. SSPC-SP 6: "Commercial Blast Cleaning."

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

B. Coordination:
1. Coordinate installation of anchorages. Furnish setting drawings, diagrams, templates, and directions for installing anchorages, including sleeves, inserts, anchor bolts, and items with integral anchors, to be embedded in concrete and masonry.
2. Coordinate with other Sections to ensure proper drainage and watertight interface with adjacent construction.
3. Coordinate sequence of installation with Sections whose work adjoins decorative metalwork.

1.04 DESIGN AND PERFORMANCE REQUIREMENTS

A. Industry Standards:
1. General: Decorative metal shall conform to the recommended practices of the Architectural Products Division (AMP) of the National Association of Architectural Metal Manufacturers (NAAMM), Section 10 of the AISC Code of Standard Practice, and the additional requirements of this Section.
2. Railings and guardrails shall comply with the "Metal Rail Manual" of National Ornamental and Miscellaneous Metals Association (NOMMA).

B. If modifications to designs indicated are proposed in order to meet code requirements, indicate them as such on shop drawing submittals. Work with Architect to arrive at an acceptable design that is sufficiently similar to the design indicated.

C. Design exterior decorative metal items to drain properly, to be watertight where appropriate, and for watertight connection to adjacent construction.

D. Structural Performance of Railing Assemblies, Handrails, and Guardrails:
   1. General:
   2. Handrails and Top Rails of Guardrails:
      a. Uniform load of 50 lbf/ft applied in any direction.
      b. Concentrated load of 200 lbf applied in any direction.
      c. Uniform and concentrated loads need not be assumed to act concurrently.
   3. Infill of Guardrails:
      a. Concentrated load of 50 lbf applied horizontally on an area of 1 square foot.
      b. Infill load and other loads need not be assumed to act concurrently.

E. Regulatory Requirements:
   1. Comply with the Americans with Disabilities Act (ADA) Design Guidelines.
   2. Comply with the CBC and other applicable State and local codes and regulations.

F. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

G. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.05 ACTION SUBMITTALS

A. Shop Drawings:
   1. Prepare and submit large-scale drawings for fabrication and erection of assemblies not completely shown by manufacturer's product data.
      a. Shop drawings are specifically required for the following:
         1) Handrails.
      b. Include, as appropriate, plans, elevations, complete details, thicknesses, sizes, types, grades, classes of metal, connecting and joining methods, anchorages.
      c. Show required field measurements and interface with work of other Sections.
      d. Welds, both shop and field, shall be indicated by AWS "Symbols for Welding, Brazing and Nondestructive Examination," A2.4.
      e. Indicate all required field measurements.
   2. Provide setting drawings, templates, instructions, and directions for installation of base plates and anchorage devices.
   3. Coordinate with shop drawing requirements of other Sections whose work adjoins exterior decorative metalwork.

B. Product Data: Manufacturer's specifications and installation instructions for manufactured products to be used in the fabrication of work, including gate operators, manufactured railings, shop-applied paint products, and hardware.

1.06 INFORMATIONAL SUBMITTALS

A. Qualifications as specified.

B. Welding:
   1. Statement of qualifications for fabricator, installer, and welders.
   2. Completed “Procedure Qualification Record” (PQR) and “Welding Procedures Specification” (WPS) forms for the welds to be performed under this Section.

C. Delegated-Design: Prepare and submit shop drawings and engineering calculations for railings, guardrails, to verify compliance with performance and design criteria, and acceptance by the authorities having jurisdiction.
   1. Indicate dimensions, profiles and framing member sizes, anchorage, size and type of fasteners.

D. Galvanizing: Proposed methods of cleaning and profiling surfaces. Include methods for each decorative item.

1.07 QUALITY ASSURANCE

A. Fabricator/Installer Qualifications: Documented experience in fabrication and installation of decorative metal similar to that indicated for this Project, and with a record of successful in-service performance.

B. Organic-Coating Applicator Qualifications: A firm experienced in successfully applying coatings of type indicated and employing competent control personnel to conduct continuing, effective quality-control program to ensure compliance with requirements.

C. Welder Qualifications: Certified and qualified in accordance with procedures specified in American Welding Society Standard in accordance with AWS D1.1, using procedures, materials, and equipment of the type required for the work.

D. Welding procedures and operations shall comply with AWS B2.1, "Standard for Welding Procedure and Performance Qualifications." Comply with AWS publication "Welding Zinc Coated Steel" for galvanized products.

E. Mockups: As requested by Owner's Representative Owner's Representative.
1. Provide a full-size mockup of each type or installation condition of the following items for review and approval by Owner's Representative:
   a. Handrails: Assembled section of central and end post to include 12 inches of top rail and 12 inches of post.
2. Include all required anchorages and fasteners.
3. Mockups shall not be fabricated until submittals, including metal samples, have been submitted and approved.
4. Each mockup shall consist of a typical assembly in specified finish, complete with mounting devices.
5. Specified sizes shall be increased if necessary to demonstrate workmanship, welding, and visual effect of completed assembly.
6. If requested by Owner's Representative, make modifications to mockups without additional charge to Owner.
7. If approved by Owner's Representative, install or leave mockup on Project as directed.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Store decorative metal in a protected location on site until ready for installation. Protect from uncured concrete and from soiling and abrasion.

1.09 FIELD CONDITIONS

A. Where decorative metal is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on shop drawings.

PART 2 - PRODUCTS

2.01 METAL MATERIALS

A. General: Provide metals free from surface blemishes where exposed to view in finished unit. Exposed-to-view surfaces exhibiting pitting, seam marks, roller marks, stains, discolorations, or other imperfections on finished units are not acceptable.

B. Steel: Provide in form indicated, to comply with the following requirements:
1. Plate, Shapes, and Bars: ASTM A36.

2. Sheet: Commercial-quality, cold-rolled, stretcher-leveled, carbon-steel sheet complying with ASTM A1008, Class I, matte finish.
3. Tubing: Cold formed, ASTM A500.
4. Pipe: ASTM A53, Grade B Schedule 40.
5. Gray-Iron Castings: ASTM A48, Class 30.
6. Malleable-Iron Castings: ASTM A47, grade as recommended by fabricator for type of use indicated.
7. Wrought Iron: Low carbon alloy (less than 0.035 percent), malleable iron with good tensile strength and suitable for shaping and hammering as required by fabricator for use indicated.

C. Weathering Steel: ASTM A588; USS "Cor-Ten" or equal.

D. Galvanized-Steel Sheet: Commercial Quality, ASTM A653.
1. Coating Designation: G90
2. Thickness: As required by SMACNA for specific conditions and as indicated.

2.02 GATE HARDWARE

A. Swing Gates:
1. General:
a. Hardware shall be of adequate size and strength to provide proper operation of gates.
b. Provide hinges, latching and locking devices, and other hardware as shown on the Drawings or required for a complete operable installation.
2. Hinges: Master Halco heavy duty, or acceptable equal.
3. Self-closing Hinges:
a. For gates up to 330 lbs and 5-feet wide: Heavy-duty self-closing hinge with hydraulic damping, ADA compliant (requiring maximum 5 lbs of operating force per CBC 11B-309.4); Locinox Mammoth Heavy Duty "Mammoth180" or accepted equal.
b. For gates up to 440 lbs and 6 and ½ -feet wide: Heavy-duty self-closing hinge with hydraulic damping, ADA compliant (requiring maximum 5 lbs of operating force per CBC 11B-309.4); Locinox Mammoth Ultra Heavy Duty "Mammoth-HD" or accepted equal.
4. Panic Hardware:
a. Panic bar requiring maximum 5 lbs of operating force per CBC 11B-309.4; "Von Duprin 98/99 – AX series" push pads, strike plates, and receiver brackets" or accepted equal.
b. Pull Handle, Strike Plate, Guard Plate, and Mounting Plate shall be compatible with panic bar system, and be provided by Von Duprin, or accepted equal.
5. Accessible Pull Handle:
a. Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist, requiring maximum 5 lbs of operating force per CBC 11B-309.4.
b. One of the following to be selected by District Representative:
1) Standard Operation: Von Duprin 996L
2)

2.03 ADDITIONAL MATERIALS AND COMPONENTS

A. Fasteners: As shown and as selected by fabricator. Indicate exposed fasteners on shop drawings.
1. Use fasteners of same basic metal as fastened metal, except as otherwise indicated or specified.
2. Do not use metals that are corrosive or incompatible with materials joined.

B. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, non-staining, noncorrosive, nongaseous; Sonneborn "Sonogrout 10K" or equal complying with ASTM C1107.

2.04 FABRICATION - GENERAL

A. Comply with AWS for recommended practices in shop welding and brazing.

B. Mill joints to a tight, hairline fit. Cope or miter corner joints. Form joints exposed to weather to exclude water penetration.

C. Mechanical field connections for railings, gates, and fencing shall be with countersunk screws, sleeves, or routed lapped members. Applied clips, angles, and non-flush fasteners are not acceptable.

D. Provide weep holes where water may accumulate. Locate weep holes in inconspicuous locations.

E. Finish exposed surfaces to smooth, sharp, well-defined lines and arris.

F. Welding and Brazing: Comply with AWS-recommended practices.
   1. Exposed welds shall be continuous.
   2. Welds, burrs, roller marks, seams, and rough surfaces shall be ground neat and smooth. Mill markings shall be completely removed.
   3. Gouges, dents, and other surface abuse shall be filled and ground smooth.
   4. Weld and braze behind finished surfaces without distorting or discoloring exposed side.
   5. Remove flux from exposed welded and brazed joints. Dress exposed and contact surfaces.

2.05 GALVANIZING

A. Provide zinc coating for ferrous steel by the hot-dip process after fabrication.
   1. Comply with ASTM A153 for galvanizing of iron and steel hardware.
   2. Comply with ASTM A123 for galvanizing of assembled steel products and rolled, pressed, and forged-steel shapes, plates, bars, and strips 1/8 inch thick and heavier.

B. Minimum Cleaning Requirements Prior to Galvanizing: In accordance with SSPC Specification SP-10, "Near White Blast Cleaning."

C. Newly galvanized items shall not be water quenched or chromate quenched after galvanizing.

2.06 PROTECTIVE PAINT COATINGS

A. General:
   1. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
   2. Corrosion Control: Prevent galvanic action and other forms of corrosion by insulating metals from direct contact with incompatible materials.
   3. Decorative metals shall be spray finished in shop to the greatest extent possible. Where not shop finished, field finish painting shall conform to requirements of Section 09 90 00, “Painting and Coating.”
   4. Finish exposed fasteners to match adjacent metal.

B. Products:
   1. Shop Primers and Finish Paints: As specified under each coating system.
   2. Galvanizing-Repair Paint: Minimum 82 percent zinc-dust-content paint for regalvanizing welds in galvanized steel, complying with FS DOD-P-21035a; Z.R.C. Cold Galvanizing Compound by ZRC Worldwide, International Protective Coatings, or approved equal.

C. Galvanized Surfaces:
   1. Surfaces shall be cleaned and profiled prior to receiving applied coatings.
      a. Methods shall be selected based on age of galvanized coating, condition of surface and intended paint coating.
      b. High spots and rough edges shall be smoothed out.
      c. Care shall be taken not to damage the zinc coating.
   2. Repair galvanized coating damaged after fabrication during handling, installation, or welding. Use specified repair paint in accordance with ASTM A780, AGA publication, "Recommended

Practice for Touch-up of Damaged Galvanized Coatings," and manufacturer's recommendations for application of repair paint.

3. Comply with the additional recommendations included in the AGA document "Duplex Systems: Painting Over Hot Dip Galvanized Steel," and ASTM D6386.

D. Shop-prime work to the greatest extent possible, except surfaces and edges to be field welded.

E. Field-Applied Finish Coatings: As specified in Section 09 91 15 – Exterior Site Painting.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install metal work as shown on the Drawings in accordance with reviewed submittals.

B. Perform cutting, drilling, and fitting required for installation.

C. Set work accurately in location, alignment, and elevation; plumb, level, true, and free of rack; measured from established lines and levels.

D. Field Welding: Comply with applicable AWS specification for procedures of manual shielded metal arc welding, for appearance and quality of welds, and for methods used in correcting welding work. Grind exposed welded joints smooth.

E. Erection Tolerances:
1. Maximum Variation from Plumb: 1/4 inch.
2. Maximum Misalignment from True Position: 1/4 inch.

F. Repair galvanizing and shop-applied coatings to match finish of adjacent surfaces.

END OF SECTION

SECTION 32 80 00

IRRIGATION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Landscape irrigation system work is shown on the Drawings including, but not necessarily limited to, the following:
   1. Water supply to irrigation system.

B. Work Included Under Other Sections:
   1. Irrigation water stub-out.
   2. Irrigation sleeves.

C. Related Requirements:
   1. Section 31 01 90 - Landscape and Site Maintenance
   2. Section 31 23 00 - Excavation and Fill
   3. Section 32 90 00 - Planting

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. D1785 - Standard Specifications Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40 and 80.
   2. D2241 - Standard Specifications for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).
   3. D2464 – Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
   4. D2466 - Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
   5. D2467 – Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
   6. D2564 - Standard Specifications for Solvent Cements for (PVC) Plastic Pipe and Fittings.
   7. D2855 - Standard Practice for the Two-Step (Primer and Solvent Cement) Method of Joining Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Piping Components with Tapered Sockets.
   8. F512 - Standard Specification for Smooth-Wall Poly (Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation.
   9. D2672 - Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement.

B. National Sanitation Foundation (NSF), requirements for Seal of Approval.

C. Plastics Pipe Institute (PPI), recommendations for hydrostatic design stresses for PVC pipe.

D. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

E. Permits and Fees: Contractor is responsible to obtain all required permits and pay all associated fees unless otherwise noted.

F. Irrigation Association/American Society of Irrigation Consultants, Landscape Irrigation Best Management Practices, 2014 edition.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Substitutions for specified products shall be submitted for approval in accordance with Section 01 25 00 – Substitution Procedures.

B. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

C. Coordination, Sequencing, and Scheduling:
   1. Contractor shall be solely responsible for coordinating, sequencing and scheduling work with applicable trades and subcontractors so as to ensure proper and timely installation of the irrigation system.
   2. The entire irrigation system shall be under full automatic operations for a period of two days prior to beginning of planting. Coordinate with Section 32 90 00 – Planting.

D. Permits and Fees: Contractor is responsible to obtain all required permits and pay all associated fees unless otherwise noted.

1.04 ACTION SUBMITTALS

A. Shop Drawings: A diagrammatic drawing of proposed mainline route and equipment locations for approval by the Owner's Representative. The Drawings may be marked and used for marking layout and equipment locations.

B. Product Data: Manufacturer's literature or cut sheets of products specified and to be incorporated into the irrigation system. Specific products being submitted shall be highlighted or shown on boxes on cut sheets to designate which items are being submitted. Submittals not marked appropriately will be rejected.

C. Materials List: Prior to installation, submit a materials list. Include manufacturer, model number, and description of all materials and equipment. List shall also include sealants, cements, lubricants and other proprietary items.

1.05 CLOSEOUT SUBMITTALS

A. Record Drawings as specified.

B. Maintenance equipment as specified.

C. Warranties and Guarantees

1.06 RECORD DOCUMENTS

A. Comply with Section 01 78 39 – Project Record Documents.

B. Accurately record locations of all piping and equipment that varies from what is shown on the Drawings. Locations are to be clearly dimensioned horizontally to within 1 foot and vertically to within 0.5 feet from a hardscape edge or permanent site feature.
   1. The valve size, station number and gallons per minute shall be legible at each valve and shall match how the controller is wired.
   2. Additionally, each valve shall be annotated to describe which type of irrigation it is whether it be rotor, rotator, spray, bubbler, drip tubing or other.
   3. Symbols for valves shall be annotated as: meter (M), backflow preventer device (BFP), master valve (MV), flow sensor (FS), hydrometer (H), quick coupler valve (QCV).

C. Contractor shall record and scan and submit PDF files of full size plan set of Record Drawings (As-builts Drawings) to the Owner's representative, and two sets of color coded plans shall be produced, one for placement at or within the irrigation controller cabinet reduced to 11" x 17", and one full size set for submittal to the Owner or stored at another location selected by the Owner's Representative.
   1. Both sets shall have all the irrigation valve zone lateral lines color-coded so as to readily distinguish between adjacent zones.
   2. The color-coded copies shall then be professionally laminated in minimum 5 mil clear plastic.

1.07 QUALITY ASSURANCE

A. Unless otherwise specified, install all materials in accordance with manufacturer's details, specifications and recommendations.

B. The Contractor shall be responsible to assure the irrigation installer personally or through an authorized and competent representative, supervises the work and retains the same supervisor on the job from commencement to completion.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Store PVC pipe in a neat and orderly manner fully supported and protected from sunlight.

B. Equipment and materials shall be delivered, unloaded, and handled so as to protect from damage at all times.

1.09 FIELD CONDITIONS

A. PVC shall not be cemented during wet conditions at the discretion of the Owner's Representative.

B. Trench excavation and backfilling shall not be performed during excessively wet conditions at the discretion of the Owner's Representative.

C. Water Supply: Connections to, or the installation of, the water supply shall be at the locations shown on the Drawings. Minor changes caused by actual site conditions shall be made at no additional expense to Owner.

D. Discrepancies: In the event of discrepancy, immediately notify the Owner's Representative. Do not proceed with installation or irrigation components or system in areas of discrepancy until discrepancies have been resolved.

1.10 MAINTENANCE EQUIPMENT

A. Turn-over Materials: Provide 1 each of the following to the Owner's Representative:
   1. One quick coupler attachment key equipped with standard thread hose bib for each 5 quick couplers installed on the project.
   2. One key for locking quick coupler covers for each 5 quick coupler valves installed on the project.
   3. One key for hose bib operation for each 5 hose bibs installed on the project.
   4. One set of keys to irrigation controller and other installed locking cabinets or pedestals.

B. Full set of remaining nozzles for each rotor sprinkler.

1.11 GUARANTY

A. Contractor: Provide Owner with a separate written guaranty for the entire irrigation system against defects in installation, workmanship and equipment, for a period of 1 year from the date of Final Acceptance.

B. Contractor shall make necessary repairs to the system as well as to other work affected by defects in the system during guaranty period. Repairs shall be made at the Contractor's sole expense.

PART 2 - PRODUCTS

2.01 GENERAL

A. Use only new materials of brands shown on Drawings, specified herein or as acceptable to the Owner's Representative.

2.02 PIPE

A. General:
   1. Plastic pipe shall be extruded of an improved PVC virgin pipe compound in accordance with ASTM D2672, ASTM D2241 or ASTM D1785.
   2. Pipe shall be marked continuously with manufacturer's name, nominal pipe size, schedule or class, PVC type and grade, National Sanitation Foundation approval, Commercial Standards designation, and date of extrusion.

B. Plastic Pipe: Polyvinyl chloride PVC (Type I) 1120.
   1. Intermittent-Pressure Lateral Piping: 1120-Schedule 40 PVC plastic pipe with Schedule 40, Type 1, Grade 1, PVC solvent weld fittings.
   2. Constant-Pressure Mainline Piping 2 inches and Smaller: Schedule 40 with solvent weld fittings.
   3. Constant-Pressure Mainline Piping 2-1/2 Inches and larger: Class 200 SDR-21 or 2-1/2" to 3" Class 315 SDR-13.5, if requested by Owner, or C900 Class 200 DR-21, if the system is using recycled or well water.
   4. Constant-pressure mainline piping 4 inches and larger shall be Class 200 PVC ring-tite with IPS ductile iron fittings and mechanical restraints at all bell fittings and fittings at changes in direction.
   5. Constant-pressure mainline piping 3 inches and larger on systems with booster pumps shall be Class 200 PVC ring-tite with IPS ductile iron fittings and mechanical restraints at all bell fittings and fittings at changes in direction.
   6. If the system is operated with recycled water, PVC pipe shall be "Purple Pipe.". If specified pipe type is not manufactured in purple color, Contractor shall clearly paint/mark pipe with purple paint regularly, along with purple marking tape to indicate recycled water system.

C. Recycled water piping, other than PVC piping with solvent welded joints, shall be protected against movement with thrust blocks or mechanical restraints.

2.03 FITTINGS

A. PVC Fittings: Polyvinyl chloride (Type I) plastic 1120, Schedule 40 or Schedule 80 where noted on the Drawings.

B. PVC Nipples: Polyvinyl chloride (Type I) plastic 1120, Schedule 80.

C. Joint Restraint for Ductile Iron Fittings: Shall be manufactured of ductile iron per ASTM A536. Gripping surfaces shall be machined serrations. As cast gripping surfaces are not permitted.
   1. Sizes 1 ½" to 4": Joint Restraint shall be Knuckle Restraint by The Harrington Corporation or approved equal. Grip Ring shall be one piece residing within a housing that engages the fitting lugs. Grip Ring shall be activated by one bolt.
   2. Flange Bolts are to be 316 Stainless Steel.

D. PVC fittings used with UVR pipe shall be Schedule 40 UVR PVC type.

2.04 SWING JOINTS

A. Swing Joints for shall be by LASCO Fittings, Inc. with ASTM F2768 Standard for Swing Joint ACME Threads, or equal.

2.05 VALVES AND SENSORS

A. General:
   1. Each valve shall be installed with unions before and after the valve.
   2. Gate Valves and Ball Valves:
      a. Valves shall have a minimum working pressure of not less than 150 psi and shall conform to AWWA standards.
      b. Provide purple tags on all valves if system is designed for recycled water.

B. Gate Valves and Ball Valves: As specified on Drawings.

C. Quick Coupling Valves: As specified on Drawings. Provide purple lid if system is designed for recycled water.

2.06 VALVE BOXES

A. Quic Coupling Valve and Gate or Ball Valves:
   1. Shall be stainless steel boxes by sportsfield specialties for installation in synthetic turf as noted on drawings.

2.07 CONCRETE VALVE BOXES

A. General:
   1. Manufacturer: Christy if existing boxes on site become damaged or need to be replaced, or equal.
   2. Valve Boxes shall have bolt down type lids with locking where specified.

2.08 CONNECTING COMPOUNDS

A. Primer: I Weld-On “P-70” Primer by IPS Corporation.

B. Cement: Solvent cementing shall be in conformance with ASTM D2564 and ASTM D2855.
   1. Pipe Diameter up to 6 Inches: Weld-On #705 by IPS Corporation, Low VOC PVC solvent cement for Class 200 PVC or schedule 40 PVC.
   2. Pipe Diameter Larger than 6 Inches and Schedule 80 PVC: Weld-On #711 by IPS Corporation, Low VOC PVC solvent cement.
   3. Flexible PVC to Rigid PVC Connections: Weld-On #795 by IPS Corporation, Low VOC PVC solvent cement.

2.09 ADDITIONAL MATERIALS

A. Tape:
   1. General:
      a. On-site buried recycled water piping shall be identified by warning tape with a minimum width of 3 inches reading “caution – recycled water” (in black or white lettering on purple background). Tape shall run continuously on top of main line piping and shall be attached to piping with plastic tape banded around the warning tape and the pipe every 5 feet on center.
   2. Pipe Detection Tape: 3-inch-wide, detectable type; “Terra Tape” "Sentry Line Detectable” from Reef Industries, Inc., 713.507.4251; or equal.
      a. Text: "Caution Water Line Buried Below."

B. Tracer Wire: Polyethylene insulated, copperclad steel; “SoloShot XTreme Tracer Wire” by Copperhead Industries, LLC. 877-726-5644, or equal.

C. Sleeves: Class 200 PVC. Install sleeves in locations and at the depths shown on the Drawings. Sleeves shall extend a minimum of 6 inches past the edge of the above hard surface for ease of location.

D. Teflon Tape: Variety commonly used for wrapping threaded connections.

E. Valve Tags: Plastic pre-labeled station tags.

F. Drain Rock: 3/4-inch wash drain rock complying with requirement specified in Section 32 11 00 – Base Courses.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to starting work, test and verify that water pressure levels meet the requirements specified on the Drawings. Notify the Owner's Representative immediately of any discrepancies.

B. Irrigation Drawings are diagrammatic. Main lines and lateral lines shown parallel in the Drawings may be placed in a common trench, provided that a minimum horizontal distance of 3 inches is maintained between buried lines, as per Drawings.

3.02 PREPARATION

A. Contractor shall make provisions and take necessary precautions to protect existing and completed work or features.

B. Layout:
1. Prior to installation, the Contractor shall stake out all pressure supply lines, routing and location of backflow preventer, all valves, sprinkler heads, bubblers, drip tubing, and automatic controller for review by the Owner's Representative.
2. Layout irrigation system and make minor adjustments required due to differences between site and Drawings. Where piping is shown on Drawings under paved areas, but running parallel and adjacent to planted areas, install the piping in the planted areas.

3.03 TRENCHING

A. Conform to Section 31 23 00 – Excavation and Fill.

B. Excavate trenches with vertical walls, uniform bottom, free of deleterious materials, and wide enough for pipes to lay side by side, fully supported on trench bedding. There shall be a minimum 3-inch clearance between all pipes.
1. No lines shall be installed parallel to and directly over another line.
2. When lines must cross, the angle shall be forty-five to ninety degrees, and a minimum of three inch (3") vertical clearance shall be maintained.

C. Provide minimum coverage depths as follows:
1. Mainline: 24 inches in landscape areas, 30 inches in sleeves under paving.
2. Lateral Lines: 18 inches in landscape areas, 30 inches in sleeves under paving.

D. Hydraulic driving methods shall not be used under paved surfaces.

3.04 PIPE INSTALLATION

A. Comply with manufacturer's instructions as applicable.

B. Rubber Ring Seal Joint:

1. Use factory-made male end or prepare field-cut male end to exact specifications of factory-made end.
2. Carefully clean bell or coupling and insert rubber ring without lubricant. Position ring carefully according to manufacturer's specifications.
3. Lubricate male end according to manufacturer's instructions and insert male end to specified depth. Use hands only when inserting PVC pipe.

C. Thrust Blocks:
1. Thrust blocks shall be provided on 3 inch and 4-inch main lines where specified and as necessary to resist system pressure on, and pipe movement of, pressurized lines and fittings. Thrust blocks shall be concrete and the size shall be based on an average soil safe bearing load of 3,000 pounds per square foot.
2. Form thrust blocks in such a manner such that concrete comes in contact only with the fittings, not over the fitting joint. Thrust blocks shall be between solid soil undisturbed and the fitting.
3. Install thrust blocks as shown in Drawings and as described above.
4. Main lines of 3 inches and 4 inches with operating pressures of 85 psi or more, and systems with a booster pump, shall have mechanical restraints at all fittings and changes of flow direction.

D. Solvent Welded Joints:
1. Assemble above ground where possible.
2. Cut square, ream, and thoroughly clean shavings and burs from pipe ends.
3. Make joint using specified primer and cement, continuously wiping off excess.
4. Allow 60 minutes of set-up time before handling and 24 hours curing before applying water pressure.

E. Threaded Joints:
1. Use Teflon tape on all pressurized, threaded plastic to plastic and plastic to metal joints.
2. Hand tighten and use only light strap-type friction wrench pressure to complete.

F. Snake pipe to provide a minimum of 1 additional foot for each 100 feet of pipe to allow for expansion and contraction.

G. Pipe shall be installed as specified and generally as shown in Drawings.

H. On-site buried recycled water piping shall be identified by using purple-colored PVC pipe with continuous wording: "caution – recycled water" printed on opposite sides of the pipe; pipe shall be laid with wording facing upwards.

I. Maintain a 10-foot horizontal separation between buried pressurized recycled water irrigation piping and buried potable water piping unless otherwise noted. At pipe crossings, buried pressurized recycled water irrigation piping must be 12 inches below potable water lines. Pressurized recycled water pipelines are allowed over potable water pipelines with a minimum of 12 inches vertical separation if a full standard pipe length is centered over the crossing, or the recycled water pipeline is installed in a pipe sleeve which extends a minimum of 10 feet on either side of the potable water piping. Intermittently pressurized irrigation laterals may be located a minimum of 12 inches above potable water pipelines without sleeving.

J. Cap or plug pipe openings as soon as pipes have been installed to prevent intrusions of debris.

K. Sleeves:
1. Install pipe sleeves where necessary, where shown and at all points where pipes pass through concrete or masonry. In footings, install sleeving that allows 1-inch minimum clearance around pipes.
2. Each end of sleeve shall extend a minimum of 6 inches beyond edge of paving or structure above. Provide removable non-decaying plug or cap at each end of sleeve, to prevent earth from entering pipe.

L. Thoroughly flush system prior to installing valves, screens and nozzles.

M. Install pipe detection tape and tracer wire above mainline.

3.05 EQUIPMENT AND INSTALLATION

A. Gate Valves and Ball Valves:
1. Install as shown on the Drawings.
2. Valves shall be installed in valve boxes to provide a minimum of 2-inch clearance between the highest point of the valve and the bottom of the valve box lid.
3. Valves shall not be installed in any area that is within the athletic field of play. All valves shall be located within valve boxes set 12 inches from fencing or edge bands as shown.
4. Locate all boxes a minimum of 10 feet from striping of any field of play.

B. Quick Coupler Valves:
1. Install as shown on the Drawings.
2. Quick coupling valves shall be installed in valve boxes to provide 2-inch clearance between the highest point of the valve cover and the bottom of the valve box lid.
3. Locate all boxes a minimum of 10 feet from striping of any field of play.
4. Quick couplers in synthetic fields shall be located against synthetic turf edgeband and curbs.

3.06 FIELD QUALITY CONTROL

A. General:
1. Notify Owner's Representative for the following reviews, with minimum 2 working days' notice:
a. Pressure testing mains prior to installing heads.
b. Coverage test prior to planting turf shrubs and or groundcover.
c. Pre-maintenance observation prior to acceptance of installed irrigation system.
d. Final observation prior to release of project to Owner.
2. Contractor shall provide all equipment and personnel required to conduct tests.
3. Provide up-to-date Project Record Drawings at each review.
4. If Owner's Representative is called out for review prior to the system being ready as specified, the contractor shall be back charged for the full cost of the review time, report, and travel.

B. Pressure Tests:
1. Testing shall occur with trenches open. Small amounts of backfill between fittings shall be allowed to prevent pipe displacement. All fittings shall be visible prior to testing.
2. Test all pressure supply lines under a minimum hydrostatic pressure of 125 psi. Pipe shall hold pressure for a period of 6 consecutive hours with no more than 5 psi loss in order to pass test.
3. Lateral lines shall be tested under full line pressure for a period of 1 hour prior to backfilling. Cap all heads and center load pipe between fittings prior to testing.
4. Correct all deficiencies revealed by tests to the satisfaction of the Owner's Representative.

C. System Flushing:
1. After lateral lines, swing joints and sprinkler heads are in place and connected, and prior to installation of sprinkler nozzles, thoroughly flush all lines with water to completely clean lines of debris.
2. Install sprinkler filters and nozzles only after lines have been flushed to the satisfaction of the Owner's Representative.

D. Coverage Tests:
1. Perform coverage tests after systems are completed and operational, after finish grading as specified in Section 32 90 00 - Planting has been completed, but prior to any planting, in the presence of the Owner's Representative.
2. Correct all deficiencies to the satisfaction of the Owner's Representative prior to planting.
3. No overspray or runoff of recycled water is allowed on any non-approved use area.

3.07 BACKFILLING

A. General:
1. Backfill only after specified tests have been performed and accepted.
2. Clean trenches of debris and deleterious material before backfilling.
3. Backfill as shown on the Drawings with native material granular in nature and free from deleterious material rocks and clods 2" or larger.
4. Install pipe detection tape over entire run of mainline as shown in Drawings.
5. Compact trenching to 95 percent relative density under pavement and 85 percent relative density within planting areas.
6. Dress off and compact trench surfaces with finish grade in a manner to ensure no settling of trenches will occur. If settling occurs, contractor is to bring in additional topsoil, recompact and grade to be flush with adjacent finish grade.
7. Comply with additional requirements specified in Section 31 23 00 – Excavation and Fill.

3.08 ADJUSTING

A. Adjust and balance system to eliminate overspray, fogging or misting and as directed by Owner's Representative.

3.09 DEMONSTRATION

A. Instruct Owner's personnel in complete and proper operation and maintenance of system prior to Final Acceptance.

3.10 MAINTENANCE

A. Contractor shall service and maintain irrigation system during specified Landscape Maintenance Period as specified in Section 31 01 90 - Landscape and Site Maintenance.

B. The entire irrigation system shall be under fully accepted automatic operations for a period of 2 days prior to commencement of planting.

C. Final Acceptance and start of guaranty period shall occur no later than the end of the specified Landscape Maintenance Period.

3.11 FINAL REVIEW

A. Provide Owner's Representative with Record Documents and other specified closeout submittals prior to Final Review.

END OF SECTION

SECTION 33 40 00

STORM DRAINAGE UTILITIES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Storm drainage system improvements and related work as shown on the Drawings and specified including, but is necessarily limited to, the following:
   1. Pipe and fittings.
   2. Nonpressure transition couplings.
   3. Expansion joints and deflection fittings.
   4. Cleanouts.
   5. Drains.
   6. Channel drainage systems.
   7. Catch basins.

B. Related Requirements:
   1. Section 31 20 00 - Earth Moving
   2. Section 31 23 00 - Excavation and Fill
   3. Section 32 11 00 - Base Courses
   4. Section 32 13 13 - Concrete Paving

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. C478: Standard Specification for Circular Precast Reinforced Concrete Manhole Sections.
   2. C923: Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals.
   3. D2321-20: Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
   4. D2412-21: Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading.
   5. D2729-21: Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
   6. D3034-21: Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
   7. D3350-21: Standard Specification for Polyethylene Plastics Pipe and Fittings Materials.
   8. D4101-11: Standard Specification for Polypropylene Injection and Extrusion Materials.

B. California Building Code, Current Edition.

C. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

B. Coordinate work of this section with all other work contained in the Contract Documents.

1.04 ACTION SUBMITTALS

A. Shop Drawings:

1. Catch basins. Include plans, elevations, sections, details, frames, covers, and grates.

B. Product Data: Manufacturer's cut-sheets of products to be used.

1.05 INFORMATIONAL SUBMITTALS

A. Field Test Reports indicating and interpreting test results for compliance with performance.

1.06 CLOSEOUT SUBMITTALS

A. Record Drawings:
1. Accurately record location of new piping, drain structures, and connections to existing systems using horizontal dimensions, elevations, inverts, and slope gradients as applicable.
2. Comply with the additional requirements of Section 01 78 39 – Project Record Documents.

1.07 QUALITY ASSURANCE

A. Control of Work: Conform to Section 5 of the Standard Specifications.

B. Control of Materials: Conform to Section 6 of the Standard Specifications.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Store pipe neatly and orderly, stacked and blocked to prevent damage. Cracked, checked, spalled, or otherwise damaged pipe and precast concrete units shall be removed from site.

B. Use of chain slings shall not be permitted.

C. Piping, fittings, and related materials shall be carefully handled. Comply with manufacturer's rigging instructions for precast items. Use of chain slings is not be permitted.

D. All pipelines, fittings and drainage structures shall be kept clean and closed during construction.

1.09 FIELD CONDITIONS

A. Make provisions for, and take the necessary precautions to, protect existing and new work from damage during entire life of project.

B. Work of this Section shall not be executed when site conditions are detrimental to quality of work as determined by the Owner's Representative.

C. Do not interrupt service to facilities occupied or used by Owner without the Owner's written permission.

PART 2 - PRODUCTS

2.01 PIPE AND FITTINGS

A. General:
1. Pipe and fittings shall be clearly and permanently marked to identify manufacturer, type, class, or schedule and NSF approval as applicable.
2. Unless otherwise noted, Contractor has option of using either CHDPE or PVC pipe as specified.

B. Corrugated High Density Polyethylene (CHDPE) Pipe: Dual wall, perforated and solid with an integrally formed smooth waterway; "N-12 "drainage pipe by Advanced Drainage Systems, Inc., 510-913-2211, or equal.
   1. Nominal sizes shall have a full circular cross-section, with an outer corrugated pipe wall and an essentially smooth inner wall (waterway).
   2. Corrugations may be either annular or spiral.
   3. Sizes shall conform to the AASHTO classification "Type S."
   4. Pipe manufacturer for this specification shall comply with the requirements for test methods, dimensions, and markings found in AASHTO Designations M252 and M294.
   5. The minimum parallel plate stiffness values when tested in accordance with ASTM D2412 shall be as follows:

Diameter	Pipe Stiffness
4 inch (100 mm)	50 psi (340 kPa)
6 inch (150 mm)	50 psi (340 kPa)
8 inch (200 mm)	50 psi (340 kPa)
10 inch (250 mm)	50 psi (340 kPa)
12 inch (300 mm)	50 psi (340 kPa)
15 inch (375 mm)	42 psi (290 kPa)

   6. Fittings: Virgin PE compounds conforming with the requirements of ASTM D3350, cell class 324420C, and supplied or recommended by the pipe manufacturer.
      a. The fittings shall not reduce or impair the overall integrity or function of the pipeline.
      b. Common Corrugated Fittings:
         1) Couplers, reducers, and other in-line joint fittings.
         2) "Tees", "wyes", end caps, and other branch or complimentary assembly fittings.
      c. Acceptable Installation Methods: Snap-on, screw-on, bell and spigot, and wrap around.
      d. Couplings shall provide sufficient longitudinal strength to preserve pipe alignment and prevent separation at the joints.
      e. Where designated on the Drawings and as required by the manufacturer, a neoprene or rubber gasket shall be supplied.

C. Smooth Polyvinyl Chloride Pipe (PVC) and Fittings: SDR 26, spigot end, Type I PVC 1120, NSF approved, and complying with ASTM D3034.

D. Smooth Polyvinyl Chloride (PVC) Perforated Drain Pipe and Fittings: Bell and non-pressure rated PVC SDR 35 pipe with two rows of perforations 120 degrees apart on bottom of pipe 5 inches on center, conforming with ASTM D2729 or ASTM D3034 and Section 68 of the Standard Specifications.

2.02 DRAINAGE STRUCTURES

A. Precast Catch Basins/Drain Inlets/Overflow Basins:
   1. General:
      a. Grates in paved areas shall conform to ADA Standards for Accessible Design.
      b. All catch basins to have locking mechanism or screw down grate to frame.
      c. Provide two grade rings at each catch basin.
   2. Square Basin Product Matrix:

ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.	GRATE INFORMATION

ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.	GRATE INFORMATION
A.	12" Concrete Basin	Oldcastle Precast, or equal. (Contact Number: 888-965-3220)	1212CB	Galvanized Steel cross bars, ADA compliant (pedestrian applications), meeting AASHTO H-20 loading (vehicular applications), locking bolts included
B.	18" Concrete Drain Inlet	Oldcastle Precast, or equal. (Contact Number: 888-965-3220)	DI-1818	Hot-dipped galvanized, ADA compliant (pedestrian applications), ADA compliant meeting AASHTO H-20 loading (vehicular applications), bicycle-proof grates for all applications, locking bolts included.
C.	24" Concrete Drain Inlet	Oldcastle Precast, or equal. (Contact Number: 888-965-3220)	DI-2424	Hot-dipped galvanized, ADA compliant (pedestrian applications), ADA compliant meeting AASHTO H-20 loading (vehicular applications), bicycle-proof grates for all applications, locking bolts included.
D.	36" Concrete Drain Inlet	Oldcastle Precast, or equal. (Contact Number: 888-965-3220)	DI-3636	Hot-dipped galvanized, ADA compliant (pedestrian applications), ADA compliant meeting AASHTO H-20 loading (vehicular applications), bicycle-proof grates for all applications, locking bolts included.
E.	48" Concrete Drain Inlet	Oldcastle Precast, or equal. (Contact Number: 888-965-3220)	DI-4848	Hot-dipped galvanized, ADA compliant (pedestrian applications), ADA compliant meeting AASHTO H-20 loading (vehicular applications), bicycle-proof grates for all applications, locking bolts included.

B. Extensions: Provide box extensions, junction boxes and grade rings compatible with structures as necessary to finish at the proper elevation and to facilitate future elevation adjustments as noted below.

C. Clean Outs: As shown or noted in the Drawings.

D. French Drain: As shown or noted in the Drawings.

E. Drop Inlet: 12 inches, Model #1240 by NDS, Inc., 888-825-4716, or equal.
   1. Provide appropriate end connections and 600 series catch basin with in-line trash bucket and outlet connections.
   2. Grates:
      a. Pedestrian Locations: No. 494Q with quick lock locking device and complying ADA Standards for Accessible Design.
      b. Vehicular Traffic Locations: Galvanized, No. 411Q

F. Precast Highway Drainage Inlet: Standard precast drop inlet type; Model CDOT Type G-O as supplied by Central Precast Products, 408-262-1091, or equal.
   1. Size: 36 inches by 36 inches.
   2. Inlets: Square grates with locking mechanism or screw down to secure grate to frame.
   3. Grates in paved areas shall comply with ADA Standards for Accessible Design.

2.03 ADDITIONAL MATERIALS

A. Permeable Rock Beneath Synthetic Turf Area: As specified in Section 32 18 14 – Synthetic Turf Base.

B. Drain Rock:

   1. Drain Rock shall conform to requirements of Subdrain Trench Drain Rock beneath Synthetic Turf Area: As specified in Section 32 18 14 – Synthetic Turf Base
   2. Shall be 3/4-inch x 1/2-inch crushed virgin, un-recycled, washed rock, meeting the following general gradation requirements:

Sieve Size	Percent Passing
1”	100
3/4”	90-100
1/2”	10-40
3/8”	0-15
#4	0-5

3. Soft rock materials, including sandstone, limestone, and shale, are not suitable. Rock supplier shall certify that all supplied rock will be void of this type of rock.
4. Supplier: Stevens Creek Quarry, Inc., Cupertino, or TMT Enterprises, Inc., San Jose, or equal.]

C. Pea Gravel:
1. Pea gravel shall conform to the following gradation requirements:

U.S. Standard Sieve Mesh	Allowable Range Percent Retained on Sieve
1/2 inch (12.5 mm)	95% passing
1/4 inch (6.3 mm)	45% passing
10 mesh (2.0 mm)	No more than 10% passing
18 mesh (1.0 mm)	No more than 5% passing

D. Sand Bedding for Storm Drain Piping: Sand conforming to Section 19-3.02F(2) of the Standard Specifications.

E. Permeable Filter Fabric : Mirafi 140N, or equal.

F. Filter Fabric Fasteners: Metal clip type staple.

G. Mortar: A 1:2 Portland cement to sand mixture with a minimum of water conform to the applicable sections of the Standard Specifications.

H. Structural Adhesives for Manholes, Catch Basins, and Junction Boxes: “Ram-Nek” by Henry Company, 800-523-0268, or equal as available.

I. Reinforcing Bars: As specified in Section 32 32 15 – Landscape Concrete.

J. Minor Concrete: Comply with requirements of Section 32 32 15 – Landscape Concrete.

K. French drains at softscape shall have a backfill with following general characteristics:
1. USGA Root Zone Sand,
a. 65 percent USGA Root Zone sand conforming to the following sieve range:

Sieve Size	USGA Spec
	Individual % Retained
#4 (4.75mm)	0
#10 (2mm)	0-10% Combined
#18 (1mm)	
#35 (0.5mm)	Minimum 60% Combined

Sieve Size	USGA Spec
	Individual % Retained
#60 (.25mm)	
#100 (.15mm)	20% Maximum
#140 (.1mm)	5% Maximum Combined
#270 (.05mm)	
Silt (.05-.002mm)	5% Maximum
Clay (<.002mm)	3% Maximum

b. 15 percent Coconut Coir Fiber.
c. 15 percent AXIS Calcined Diatomaceous Earth.
d. 5 percent Worm Castings.

PART 3 - EXECUTION

3.01 EARTHWORK

A. Excavation, trenching, and backfilling are specified in Section 31 20 00 - Earth Moving.

3.02 PIPING INSTALLATION

A. General:
1. Pipe shall be installed per manufacturers' instructions and in conformance with the Contracts Documents.
2. Installation of thermoplastic pipe shall be in accordance with ASTM D2321.

B. CHDPE Pipe:
1. Pipe shall be installed with a minimum cover under the H-20 live load equal to 12 inches to the top of subgrade elevation.
2. Minimum compaction for pipe subject to H-20 live load is 90 percent in accordance with Section 19, Standard Specifications.
3. CHDPE pipe shall be laid and jointed in accordance with generally accepted practice and the following provisions to provide the required work.

3.03 INSTALLATION OF DRAINAGE STRUCTURES

A. General: Set rim or cover elevations to specified grades utilizing a minimum of two grade rings (or extensions) at top of drainage structure to facilitate potential elevation adjustments in the future.

B. Catch Basins: Install as shown in the Drawings and as follows:
1. Excavate as required.
2. Set on firm, unyielding base. Set on compacted select backfill material if directed by Owner's Representative.
3. Prefabricated units not having a bottom shall be set on a poured-in-place concrete slab with smooth trowel finish. Mortar and properly seal unit to slab, making a watertight connection.
4. Install pipe inlets and outlets to specified elevations. Grout and/or seal all joints to a watertight condition with material per manufacturer's recommendation.

C. Cleanouts: Install as shown in the Drawings.

D. Nyloplast Basins:
   1. For at-grade or raised conditions (in biotreatment areas or similar), Nyloplast risers shall be painted from rim down to 6" below finish grade with UV resistant exterior paint suitable for PVC applications. Contractor shall submit product for approval.
   2. For buried applications in softscape, Nyloplast basin rims/covers shall be minimum 12" below finish grade to allow for proper plant growth.
   3. For buried applications in synthetic turf, install as shown in the Drawings.

3.04 IDENTIFICATION

A. Materials and their installation are specified in Section 31 20 00 - Earth Moving. Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.

B. Use detectable warning tape over nonferrous piping and over edges of underground structures.

3.05 FIELD QUALITY CONTROL

A. The Owner's Representative shall review and accept work at the following stages:
   1. Excavated trench with bedding in place prior to any pipe being laid.
   2. Pipe laid prior to backfilling. Pipe covered prior to review and acceptance shall be uncovered and re-backfilled at Contractor's expense.
   3. Drainage device location and pipe connection.
   4. New drainage system shall be flood tested and clean of debris.

END OF SECTION