



PROJECT MANUAL

Glorietta Elementary School Transitional Kinder/Kindergarten Play Yard

Orinda Union School District

February 12, 2026

Orinda Union School District

Glorietta ES TK/K

Play Yard

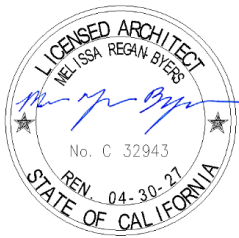
DSA File No: 07-33

DSA Application No: 01-122865

PTN: 61770-46

Orinda, CALIFORNIA

ARCHITECT:

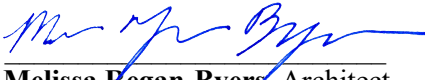


HKIT ARCHITECTS

538 Ninth Street, Suite 240

Oakland, California 94607

Telephone: (510) 625-9800

By: 
Melissa Regan-Byers, Architect

Orinda Union School District

Glorietta ES TK/K

Play Yard

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Orinda, CALIFORNIA

LANDSCAPE ARCHITECT

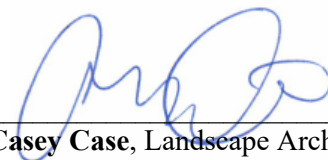


Gates Studio

1655 Main Street, Suite 365

Walnut Creek, California 94596

Telephone: (925) 736-8176

By: 

Casey Case, Landscape Architect

Orinda Union School District

Glorietta ES TK/K
Play Yard

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Orinda, CALIFORNIA

CIVIL ENGINEER:

Sanbell
1390 Willow Pass Rd., #300
Concord, California 94520
Telephone: (925) 685-4569

By: 
Robert E. Broestl, Civil Engineer
01-07-2026



DOCUMENT 00 01 10

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END OF DOCUMENT

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TOTAL SHEET COUNT:24

END OF DOCUMENT

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NOTICE TO BIDDERS / INVITATION TO BID

1. Notice is hereby given that the governing board ("Board") of the **Orinda Union School District** ("District") will receive sealed bids to construct the following project:

Glorietta Elementary School Transitional Kinder/Kindergarten Play Yard (DSA#01-122865) ("Project" or "Contract")

2. Contractors must submit sealed bids on or before **2p.m., March 26, 2026** at the District Office, located at **8 Altarinda Drive, Orinda, California** at or after which time the District will open the bids and publicly read them aloud. Any claim by a Bidder of error in its bid must be made in compliance with Public Contract Code § 5100, et seq. Any bid that is submitted after this time shall be non-responsive and returned to the Bidder. The District is not responsible for Bids that are received after the deadline noted above.

3. The Project consists of:

Transitional and Kinder Play Yard Replacement including: Replacement of flatwork including Asphalt, Rubber surfacing and Sandbox in Play Area. Install of two new play structure (OFCL-owner furnished, contractor installed) over poured-in-place safety surfacing, Replacement of fences and gates, Addition of wood fence at the toe of the hill, The addition of Trees, Plants and associated irrigations, 18" concrete Seat walls, Installation of Site Furniture and Alternates maybe selected by District.

The contractor will be responsible for receiving, as well as staging and safe keeping of OFCL items until installation.

4. All bids shall be on the form provided by the District. Each bid must conform and be responsive to all pertinent Contract Documents, including, but not limited to, the Instructions to Bidders.
5. To bid on this Project, the Bidder is required to possess one or more of the following State of California Contractor Licenses: **B**

The Bidder's license(s) must be active and in good standing at the time of the bid opening and must remain so throughout the term of the Contract.

6. As security for its Bid, each Bidder shall provide with its Bid form
 - a bid bond issued by an admitted surety insurer on the form provided by the District,
 - cash, or
 - a cashier's check or a certified check, drawn to the order of the **Orinda Union School District**, in the amount of ten percent (10%) of the total bid price. This bid security shall be a guarantee that the Bidder shall, within seven (7) calendar days after the date of the Notice of Award, enter into a contract with the District for the performance of the services as stipulated in the bid.
7. The successful Bidder shall be required to furnish a 100% Performance Bond and a 100% Payment Bond if it is awarded the contract for the Project.
8. The successful Bidder may substitute securities for any monies withheld by the District to ensure performance under the Contract, in accordance with the provisions of Public Contract Code § 22300.
9. The successful Bidder and its subcontractors shall pay all workers on the Project not less than the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work as determined by the Director of the Department of Industrial Relations, State of California, for the type of work performed and the locality in which the work is to be performed within the boundaries of the District, pursuant to Labor Code § 1770 et seq. Prevailing wage rates are on file with the District and are available to any interested party

on request or at www.dir.ca.gov/oprl/statistics_and_databases.html. Bidders and Bidders' subcontractors shall comply with the registration and qualification requirements pursuant to Labor Code §§ 1725.5 & 1771.1

10. Two (2) mandatory pre-bid conferences and site visits will be held on the following dates:

- **Mandatory Site Walk # 1: Thursday, February 19, 2026 @ 9:00AM**
- **Mandatory Site Walk # 2: Thursday, February 26, 2026 @ 9:00AM**

All prospective Bidders are required to sign in with the Construction Manager. The Site Visit is expected to take approximately 1 hour. Failure to attend or tardiness will render bid ineligible.

- ***Note: Potential bidders only need to attend one (1) of the Mandatory Site Walks to meet the requirement.***

11. Contract Documents will be available on **February 12, 2026** from BPXpress. Contract Documents will be for purchase from BPXpress, Richmond Office, (510) 559-8299.

In addition, Contract Documents will be available for review at Bay Area builders' exchanges.

12. The District's Board reserves the right to reject any and all bids and/or waive any irregularity in any bid received. If the District awards the Contract, the security of unsuccessful Bidder(s) shall be returned within sixty (60) days from the time the award is made. Unless otherwise required by law, no Bidder may withdraw its bid for ninety (90) days after the date of the bid opening.

13. The District shall award the Contract, if it awards it at all, to the lowest responsive responsible Bidder based on:

The Base bid amount plus the following alternates:

- Additive alternate no. 1 -Furniture Such as Pebble Seat, Picnic Tables, Twig Bench, S.L.D for complete List
- Additive alternate no. 2 -Additional Play Structures, S.L.D -Additional Structures will be contractor furnished and contractor installed.
- Additive alternate no. 3 -Landscape Wall, S.L.D
- Additive alternate no. 4-Asphalt Paint, S.L.D

END OF DOCUMENT

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INSTRUCTIONS TO BIDDERS

Bidders shall follow the instructions in this document, and shall submit all documents, forms, and information required for consideration of a Bid.

Orinda Union School District ("District") will evaluate information submitted by the apparent low Bidder and, if incomplete or unsatisfactory to District, Bidder's bid may be rejected at the sole discretion of District.

1. **Project.** Bids are requested for a general construction contract, or work described in general, for the following project:

Glorietta Elementary School Transitional Kinder/Kindergarten Play Yard (DSA#01-122865) ("Project" or "Contract")

2. **Submittal of Bids.** District will receive sealed Bids from Bidders as indicated in the Invitation to Bid and each Bidder shall ensure that its Bid contains all documents as required herein and is submitted by date and time shown in the Invitation to Bid.

- a. Contractors must ensure the District receives its bid, sealed and marked with name and address of the Bidder, the Project name and number, the bid number and bid package (if applicable), and the date for opening bids.

1. **Bid Opening.** Bids will be opened at or after the time indicated for receipt of bids.

2. **Complete Bids.** Bidders must supply all information required by each Bid Document. Bids must be full and complete. District reserves the right in its sole discretion to reject any Bid as non-responsive as a result of any error or omission in the Bid. Each Bidder must complete and submit all of the following documents as its Bid:

- Bid Form
- Bid Bond or other security
- Designated Subcontractors List
- Noncollusion Declaration
- Iran Contracting Act Certification

- a. **Bid Form.** Bidders must submit Bids on the Bid Form and all other required District forms. Bids not submitted on the District's required forms shall be deemed non-responsive and shall not be considered. Additional sheets required to fully respond to requested information are permissible. Bidders shall not modify the Bid Form or qualify their Bids. Bidders shall not submit scanned, re-typed, word-processed, or otherwise recreated versions of the Bid Form or other District-provided documents.
- b. **Bid Bond or Other Security.** Bidders must submit their Bid Form with cash, a cashier's check or a certified check payable to District, or a bid bond by an admitted surety insurer of not less than ten percent (10%) of their base Bid amount, including all additive alternates. Required form of corporate surety, Bid Bond, is provided by District and must be used and fully completed by Bidders choosing to provide a Bid Bond as security. The Surety on Bidders' Bid Bond must be an insurer admitted in the State of California and authorized to issue surety bonds in the State of California. Bids submitted without necessary bid security will be deemed non-responsive and will not be considered.
- c. **Designated Subcontractors List.** Bidders must submit with the Bid the Designated Subcontractors List for those subcontractors who will perform any portion of Work, including labor, rendering of service, or specially fabricating and installing a portion of the Work or improvement according to detailed drawings contained in the plans and specifications, in excess of one half of one percent (0.5%) of the Bidder's total

Bid. Failure to fully complete and submit this list when required by law shall result in Bid being deemed non-responsive and the Bid will not be considered.

- d. **Noncollusion Declaration.** Bidders shall submit the Noncollusion Declaration with their Bids. Bids submitted without the Noncollusion Declaration shall be deemed non-responsive and will not be considered.
 - e. **Iran Contracting Act Certification.** Bidders shall submit the Iran Contracting Act Certification with their Bids. Bids submitted without the Iran Contracting Act Certification shall be deemed non-responsive and will not be considered.
3. **Erasures.** Bids shall be clearly written without erasure or deletions. District reserves the right to reject any Bid containing erasures or deletions.
 4. **Prevailing Wages.** Pursuant to sections 1770 et seq. of the California Labor Code, Bidder and all Subcontractors under the Bidder shall pay all workers on all work performed pursuant to the Contract not less than the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work as determined by the Director of the State of California Department of Industrial Relations (DIR) for the type of work performed and the locality in which the work is to be performed within the boundaries of the District. Copies of the general prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the Contract, as determined by the DIR are on file with the District and are available to any interested party on request or at www.dir.ca.gov/oprl/statistics_and_databases.html.
 5. **Contractor Registration.** Bidder shall ensure that it and its Subcontractors comply with the registration and compliance monitoring provisions of Labor Code section 1771.4, including furnishing its CPRs to the Labor Commissioner, and are registered pursuant to Labor Code section 1725.5. Bidder and its subcontractors shall comply with Labor Code section 1725.5 to 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 the Contract.
 6. **DVBE.** Section 17076.11 of the Education Code requires school districts using funds allocated pursuant to the State of California School Facility Program for the construction and/or modernization of school building(s) to have a participation goal for disabled veteran business enterprises ("DVBE") of at least three percent (3%) per year of the overall dollar amount expended on projects that receive state funding. For any project that is at least partially state-funded, the low Bidder must submit certification of compliance with the procedures for implementation of DVBE contracting goals with its signed Agreement. DVBE Certification Participation Forms are attached. Bidders should not submit these forms with their Bids.
 7. **Bidder Diligence.** Submission of Bid signifies careful examination of the Contract Documents and a complete understanding of the nature, extent, and location of Work to be performed. Bidders must complete the tasks listed below as a condition to bidding, and submission of Bid shall constitute the Bidder's express representation to District that Bidder has fully completed the following:
 - a. Bidder has visited the Project Site, if required, and has examined thoroughly and understood the nature and extent of the Contract Documents, Work, Site, locality, actual conditions, as-built conditions, and all local conditions and federal, state and local laws, and regulations that in any manner may affect cost, progress, performance, or furnishing of Work or that relate to any aspect of the means, methods, techniques, sequences, or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto;
 - b. Bidder has conducted or obtained and has understood all examinations, investigations, explorations, tests, reports, and studies that pertain to the subsurface conditions, as-built conditions, underground facilities, and all other physical conditions at or contiguous to the Site or otherwise that may affect the cost, progress, performance, or furnishing of Work, as Bidder considers necessary for the performance or furnishing of Work at the Contract Price, within the Contract Time, and in accordance with the other

terms and conditions of Contract Documents, including specifically the provisions of the General Conditions. Bidder has notified the District if it contends that it requires additional examinations, investigations, explorations, tests, reports, studies, or similar information or data prior to submitting its bid;

- c. Bidder has correlated its knowledge and the results of all observations, examinations, investigations, explorations, tests, reports, and studies with the terms and conditions of the Contract Documents;
- d. Bidder has given the District prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and the actual conditions, and the written resolution thereof by the District is acceptable to Bidder;
- e. Bidder has made a complete disclosure in writing to the District of all facts bearing upon any possible interest, direct or indirect, that Bidder believes any representative of the District or other officer or employee of the District presently has or will have in this Contract or in the performance thereof or in any portion of the profits thereof;
- f. Bidder must, prior to bidding, perform the work, investigations, research, and analysis required by the Instructions to Bidders and that Bidder represented in its Bid Form and the Agreement that it performed prior to bidding. Bidder is charged with all information and knowledge that a reasonable bidder would ascertain from having performed this required work, investigation, research, and analysis. Bid prices must include entire cost of all work "incidental" to completion of the Work.
- g. **Conditions Shown on the Contract Documents:** Information as to underground conditions, as-built conditions, or other conditions or obstructions, indicated in the Contract Documents, e.g., on Drawings or in Specifications, has been obtained with reasonable care, and has been recorded in good faith. However, District only warrants, and Bidder may only rely, on the accuracy of limited types of information.
 - (1) As to above-ground conditions or as-built conditions shown or indicated in the Contract Documents, there is no warranty, express or implied, or any representation express or implied, that this information is correctly shown or indicated. This information is verifiable by independent investigation and Bidder is required to make that verification as a condition to bidding. In submitting its Bid, Bidder shall rely on the results of its own independent investigation. In submitting its Bid, Bidder shall not rely on District-supplied information regarding above-ground conditions or as-built conditions.
 - (2) As to any subsurface condition shown or indicated in the Contract Documents, Bidder may rely only upon the general accuracy of actual reported depths, actual reported character of materials, actual reported soil types, actual reported water conditions, or actual obstructions shown or indicated. District is not responsible for the completeness of this information for bidding or construction; nor is District responsible in any way for any conclusions or opinions of Bidder drawn from that information; nor is District responsible for subsurface conditions that are not specifically shown if those subsurface conditions are reasonably determinable by above-ground conditions and observation or as-built conditions (e.g., subsurface soil conditions in areas contiguous to areas where an above-ground condition is shown; utility pipes between a manhole and a water source, etc.).
- h. **Conditions Shown in Reports and Drawings Supplied for Informational Purposes:** Reference is made to the document entitled Existing Information and Documentation Regarding Project Site, for identification of:
 - (1) Subsurface Conditions: Those reports of explorations and tests of subsurface conditions at or contiguous to the Project Site that have been utilized by Architect in preparing the Contract Documents; and

- (2) Physical Conditions: Those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Project Site that has been utilized by Architect in preparing the Contract Documents.
 - (3) These reports and drawings are **not** Contract Documents and, except for any “technical” data regarding subsurface conditions specifically identified in Existing Information and Documentation Regarding Project Site, and underground facilities data, Bidder may not in any manner rely on the information in these reports and drawings.
8. **As-Builts.** Bidders may examine any available “as-built” drawings of previous work by giving District reasonable advance notice. District will not be responsible for accuracy of “as-built” drawings. The document entitled Existing Information and Documentation Regarding Project Site applies to all supplied “as-built” drawings.
9. **Questions.** All questions about the meaning or intent of the Contract Documents are to be directed in writing to the District. Interpretations or clarifications considered necessary by the District in response to those questions will be issued in writing by Addenda faxed, mailed, or delivered to all parties recorded by the District as having received the Contract Documents. Questions received less than **SEVEN (7)** calendar days prior to the date for opening Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
10. **Addenda.** Addenda may also be issued to modify parts of the Contract Documents as deemed advisable by the District. Bidder must acknowledge each Addendum in its Bid Form by number or its Bid may be considered non-responsive. Each Addenda shall be part of the Contract Documents. A complete listing of Addenda may be obtained from the District.
11. **Substitution for Specified Items.** Bids shall be based on products and systems specified in the Contract Documents or listed by name in Addenda. All requests must comply with the requirements specified in the General Conditions, the Specifications and the following:
 - a. **Request for Substitution Prior to Bid.**
 - (1) District must receive any request for substitution a minimum of **FOURTEEN (14)** calendar days prior to the date of bid opening.
 - (2) **Information with Request.** Requests for substitutions shall contain sufficient information to assess acceptability of the product or system and impact to Project, including, without limitation, the requirements specified in the General Conditions and the Specifications. Insufficient information shall be grounds for rejection of substitution.
 - (3) The District’s denial of a substitution request prior to the date of bid opening shall be conclusive, requiring Bidders to list only approved items. The District is not responsible and/or liable in any way for a Bidder’s damages and/or claims related, in any way, to that Bidder’s basing its bid on any requested substitution that the District has not approved. Bidder’s Bid shall be deemed non-responsive if it identifies a product or manufacturer of a non-approved substitution.
 - (4) Approved substitutions shall be listed in Addenda.
 - (5) District reserves the right not to act upon submittals of substitutions until after the date of bid opening. If the District does not act on a substitution request prior to the date of bid opening, Bidders must bid based on products and systems specified in Contract Documents or listed by name in Addenda.

- b. **Request for Substitution after Bid Award.** Substitutions may be requested after the Contract has been awarded only if indicated in and in accordance with requirements specified in the General Conditions, as may be modified in the Special Conditions.
12. **Alternates.** The Contract may include alternates. Alternates are defined as alternate products, materials, equipment, systems, methods, or major elements of the construction, that may, at the District's option and under terms established in the Contract and pursuant to section 20103.8 of the Public Contract Code, be selected for the Work. The District shall award the Contract, if it awards it at all, to the lowest responsive responsible bidder based on the criteria as indicated in the Invitation to Bid.
13. **Notice of Award.** The Bidder awarded the Contract shall execute and submit the following documents by 5:00 p.m. of the **SEVENTH (7TH)** calendar day following the date of the Notice of Award. Failure to properly and timely submit these documents entitles District to, among other remedies, make a claim against Bidder's Bid Bond or deposit Bidder's cash, cashier's check, or certified check. The proceeds thereof may be retained by District as liquidated damages, in District's sole discretion.
- a. Agreement: To be executed by successful Bidder. Submit two (2) copies, each bearing an original signature.
 - b. Escrow of Bid Documentation: This must include all required documentation. See the document Escrow of Bid Documentation for more information.
 - c. Performance Bond (100%): On the form provided in the Contract Documents and fully executed as indicated on the form.
 - d. Payment Bond (100%) (Contractor's Labor and Material Bond): On the form provided in the Contract Documents and fully executed as indicated on the form.
 - e. Insurance Certificates and Endorsements as required.
 - f. Certifications to be Completed by Contractor
 - g. Disabled Veterans' Business Enterprise Participation Certification.
 - h. Criminal Background Investigation/Fingerprinting Certification.
14. **Notice to Proceed.** District may issue a Notice to Proceed within **THREE (3)** months from the date of the Notice of Award. Upon receipt of the Notice to Proceed, Contractor shall complete the Work within the period of time indicated in the Contract Documents. It is further expressly understood by Contractor that Contractor shall not be entitled to any claim of additional compensation or additional time when the Notice to Proceed is issued within the 3-month period.
- a. The District may postpone issuing the Notice to Proceed beyond the 3-month period, upon reasonable notice to Contractor.
 - b. If the Contractor believes that a postponement of issuance of the Notice to Proceed will cause a hardship to Contractor, the Contractor may, by written notice to District within **SEVEN (7)** calendar days after receipt by Contractor of District's notice of postponement, take one of the following actions:
 - (1) **Agree with the postponement.** This would be at no additional cost to the District.
 - (2) **Terminate the Contract.** District shall only be obligated to pay Contractor for any Work that Contractor had performed at the time of notification of postponement and that the District had in writing authorized Contractor to perform, if any, prior to issuing a Notice to Proceed.

- (3) **Request additional compensation.** Contractor must submit detailed documentation demonstrating the need for that additional compensation, compared to the calculations and amounts that Contractor used to prepare its bid. If the Parties do not agree on an amount for the requested additional compensation, the Contractor can agree to the postponement without any additional compensation, or either Party may terminate the Contract.
- c. If the Contract is terminated as a result of a notice of postponement, District shall have the authority to award the Contract to the next lowest responsive responsible Bidder.
15. **Bid Protests.** Any bid protest by any Bidder regarding any other bid on this Project must be submitted in writing to the District, before 5:00 p.m. of the **THIRD (3rd)** Business Day following the date of bid opening.
- a. The protest must contain a complete statement of any and all bases for the protest.
- b. The protest must refer to the specific portions of all documents that form the bases for the protest, including the specific portion(s) of the bid(s) that the Bidder is protesting.
- c. The protest must include the name, address and telephone number of the person representing the protesting party.
- d. The party filing the protest must concurrently transmit a copy of the protest and any attached documentation to all other parties with a direct financial interest that may be adversely affected by the outcome of the protest, which must include all other Bidders or proposers who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.
- e. The procedure and time limits set forth in this paragraph are mandatory and are each Bidder's sole and exclusive remedy in the event of bid protest. Failure to comply with these procedures shall constitute a waiver of any right to further pursue the bid protest, including filing a Government Code Claim or legal proceedings.
16. **Rejection of Bids.** District reserves the right to reject any or all bids, including without limitation the right to reject any or all nonconforming, non-responsive, unbalanced, or conditional bids, to re-bid, and to reject the bid of any Bidder if District believes that it would not be in the best interest of the District to make an award to that Bidder, whether because the bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by District. District also reserves the right to waive inconsequential deviations not involving price, time, or changes in the Work. For purposes of this paragraph, an "unbalanced bid" is one having nominal prices for work item(s) that represent substantive work and/or overly-enhanced prices for nominal work item(s).
17. **Bidder's Representative's Authority.** Each bid must be executed by an authorized representative of the Bidder. Bidders may be asked to provide documentation of that authority (e.g., an authenticated resolution of its Board of Directors, a power of attorney evidencing the capacity of the person signing the Bid Form to bind the Bidder to its bid, etc.).
18. **Bidder Responsibility.** Prior to the award of Contract, District reserves the right to consider the responsibility of the Bidder. District may conduct investigations as District deems necessary to assist in the evaluation of any bid and to establish the responsibility, including, without limitation, qualifications and financial ability of Bidders, proposed subcontractors, suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to District's satisfaction within the Contract Time.

END OF DOCUMENT

DOCUMENT 00 31 19

EXISTING INFORMATION AND DOCUMENTATION REGARDING PROJECT SITE

1. Summary

This document describes existing conditions at or near the Project and use of information available regarding existing conditions. This document is **not** part of the Contract Documents. See General Conditions for definition(s) of terms used herein. Contractor is required to request from the District a copy of any reports that it believes are necessary to perform Contractor's Work in a safe, efficient and workman-like manner.

2. Reports and Information on Existing Conditions

- a. Documents providing a general description of the Site and conditions of the Work may have been collected by District, its consultants, contractors, and tenants. These documents may include previous contracts, contract specifications, tenant improvement contracts, as-built drawings, utility drawings, and information regarding underground facilities.
- b. Information regarding existing conditions may be inspected at the District offices or the Construction Manager's offices, if any, and copies may be obtained at cost of reproduction and handling upon Bidder's agreement to pay for such copies. These reports, documents, and other information are **not** part of the Contract Documents.
- c. Information regarding existing conditions may also be included in the Project Manual, but shall **not** be considered part of the Contract Documents.
- d. The reports and other data or information regarding existing conditions and underground facilities at or contiguous to the Project are the following:

[LIST ALL EXISTING INFORMATION AND DOCUMENTATION REGARDING PROJECT SITE HERE]:
"No Reports available"

- (1) **Geotechnical Data.** Geotechnical data at or near the Project that is in the District's possession available for Contractor's review.
 - (A) **Geotechnical Reports.** Geotechnical reports that may have been prepared for and around the Site by soil investigation engineers hired by the District and its consultants, contractors, and tenants. Geotechnical reports may be inspected at the District offices or the Construction Manager's offices, if any, and copies may be obtained at cost of reproduction and handling upon Bidder's agreement to pay for such copies. These reports are **not** part of the Contract Documents. The reports and drawings of physical conditions that may relate to the Project are the following:

[LIST ALL GEOTECHNICAL REPORTS HERE AND PROVIDE A LINK TO EACH WHENEVER FEASIBLE, OR OTHERWISE MAKE THESE DOCUMENTS AVAILABLE TO ALL BIDDERS.]

"No Reports available"

- (2) **Soils Investigation Report**
- (3) **Mitigation Monitoring Plan from CEQA document**
- (4) **Original Construction Drawings**
- (5) **Survey of Site**
- (6) **Hazardous Material Reports**
- (7) **Asbestos and/or AHERA Reports**

3. Use of Information

- a. Information regarding existing conditions was obtained only for use of District and its consultants, contractors, and tenants for planning and design and is **not** part of the Contract Documents.
- b. District does not warrant, and makes no representation regarding, the accuracy or thoroughness of any information regarding existing conditions. Bidder represents and agrees that in submitting a bid it is not relying on any information regarding existing conditions supplied by District.
- c. Under no circumstances shall District be deemed to warrant or represent existing above-ground conditions, as-built conditions, or other actual conditions, verifiable by independent investigation. These conditions are verifiable by Contractor by the performance of its own independent investigation that Contractor must perform as a condition to bidding, and Contractor should not and shall not rely on this information or any other information supplied by District regarding existing conditions.
- d. Any information shown or indicated in the reports and other data supplied herein with respect to existing underground facilities at or contiguous to the Project may be based upon information and data furnished to District by the District's employees and/or consultants or builders of such underground facilities or others. District does not assume responsibility for the completeness of this information, and Bidder is solely responsible for any interpretation or conclusion drawn from this information.
- e. District shall be responsible only for the general accuracy of information regarding underground facilities, and only for those underground facilities that are owned by District, and only where Bidder has conducted the independent investigation required of it pursuant to the Instructions to Bidders, and discrepancies are not apparent.

4. Limited Reliance on Certain Information

- a. Reference is made herein for identification of:
 - (1) Reports of explorations and tests of subsurface conditions at or contiguous to the Site that have been utilized by District in preparation of the Contract Documents.
 - (2) Drawings of physical conditions in or relating to existing subsurface structures (except underground facilities) that are at or contiguous to the Site and have been utilized by District in preparation of the Contract Documents.
- b. Bidder may rely upon the general accuracy of the "technical data" contained in the reports and drawings identified above, but only insofar as it relates to subsurface conditions, provided Bidder has conducted the independent investigation required pursuant to Instructions to Bidders, and discrepancies are not apparent. The term "technical data" in the referenced reports and drawings shall be limited as follows:
 - (1) The term "technical data" shall include actual reported depths, reported quantities, reported soil types, reported soil conditions, and reported material, equipment or structures that were encountered during subsurface exploration. The term "technical data" does not include, and Bidder may not rely upon, any other data, interpretations, opinions or information shown or indicated in such drawings or reports that otherwise relate to subsurface conditions or described structures.
 - (2) The term "technical data" shall not include the location of underground facilities.
 - (3) Bidder may not rely on the completeness of reports and drawings for the purposes of bidding or construction. Bidder may rely upon the general accuracy of the "technical data" contained in such

reports or drawings.

- (4) Bidder is solely responsible for any interpretation or conclusion drawn from any “technical data” or any other data, interpretations, opinions, or information provided in the identified reports and drawings.

5. Investigations/Site Examinations

- a. Before submitting a Bid, each Bidder is responsible for conducting or obtaining any additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and underground facilities) at or contiguous to the Site or otherwise, that may affect cost, progress, performance, or furnishing of Work or that relate to any aspect of the means, methods, techniques, sequences, or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto or that Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of Contract Documents.
- b. On request, District will provide each Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies, as each Bidder deems necessary for submission of a Bid. Bidders must fill all holes and clean up and restore the Site to its former condition upon completion of its explorations, investigations, tests, and studies. Such investigations and Site examinations may be performed during any and all Site visits indicated in the Invitation to Bid and only under the provisions of the Contract Documents, including, but not limited to, proof of insurance and obligation to indemnify against claims arising from such work, and District’s prior approval.

END OF DOCUMENT

DOCUMENT 00 41 13

BID FORM

To: Governing Board of **Orinda Union School District** ("District")

From: _____
(Proper Name of Bidder)

1. **Total Bid.** The undersigned declares that the Contract Documents including, without limitation, the Invitation to Bid, the Instructions to Bidders, and the Special Conditions have been read, and agrees and proposes to furnish all necessary labor, materials, and equipment to perform and furnish all work in accordance with the terms and conditions of the Contract Documents, including, without limitation, the Drawings and Specifications for the following project:

Glorietta Elementary School Transitional Kinder/Kindergarten Play Yard ("Project" or "Contract")

and will accept in full payment for that Work the following total lump sum amount, all taxes included:

TOTAL BASE BID

\$ _____ Dollars

NOTE: IF THERE ARE ALLOWANCES IDENTIFIED IN THIS BID FORM, DO NOT INCLUDE ANY ALLOWANCE(S) AMOUNTS IN THESE BID AMOUNTS.

2. **Additive Alternates:**

Additive Alternate #1

FURNITURE SUCH AS PEBBLE SEAT, PICNIC TABLES, TWIG BENCH, S.L.D. \$ _____ Dollars
FOR COMPLETE LIST

Additive Alternate #2

ADDITIONAL PLAY STRUCTURES, S.L.D. \$ _____ Dollars
(NOTE THAT THE ADDITIONAL STRUCTURES WILL BE CONTRACTOR
FURNISHED AND CONTRACTOR INSTALLED)

Additive Alternate #3

LANDSCAPE WALL, S.L.D. \$ _____ Dollars

Additive Alternate #4

ASPHALT PAINT, S.L.D. \$ _____ Dollars

Descriptions of alternates are primarily scope definitions and do not necessarily detail the full range of

materials and processes needed to complete the construction.

3. **Unit Price(s).** The Bidder's Base Bid includes the following unit price(s), which the Bidder must provide and the District may, at its discretion, utilize in valuing additive and/or deductive change orders:

Not Applicable

4. **Allowance(s).** The Bidder's Base Bid shall **NOT** include the following potential Allowance(s). The District will add some or all of the following Allowance(s) amount(s) to the successful bidder's Contract, at the District's discretion. Contractor shall be permitted to invoice for Work under an Allowance in the identical structure as a Change Order.

Not Applicable

5. **Contract Review.** The undersigned has reviewed the Work outlined in the Contract Documents and fully understands the scope of Work required in this bid, understands the construction and project management function(s) is described in the Contract Documents, and that each Bidder who is awarded a contract shall be in fact a prime contractor, not a subcontractor, to the District, and agrees that its bid, if accepted by the District, will be the basis for the Bidder to enter into a contract with the District in accordance with the intent of the Contract Documents.
6. **Requests for Clarification.** The undersigned has notified the District in writing of any discrepancies or omissions or of any doubt, questions, or ambiguities about the meaning of any of the Contract Documents, and has contacted the Construction Manager before bid date to verify the issuance of any clarifying Addenda.
7. **Contract Time.** The undersigned agrees to commence work under this Contract on the date established in the Contract Documents and to complete all work within the time specified in the Contract Documents.
8. **Contractual Provisions.** The undersigned hereby acknowledges and agrees to be bound by following provisions and all provisions in the Contract Documents:
- The liquidated damages clause of the General Conditions and Agreement.
 - The "Changes in the Work" provisions in the General Conditions that limit the permitted charges and mark-ups on change orders and on the amount of home office overhead that the successful bidder can receive from the District.
 - The "Claims" provisions in the General Conditions that delineate the required process to submit and process disputes and claims.
 - The "COVID-19" provisions in the Contract Documents related to the Contractor's staffing requirements and its compliance with all applicable and existing federal, state, and/or local statutes, orders, rules, regulations, ordinances, and/or directives relating to construction site safety in connection with COVID-19, and/or any similar virus or derivative strain.
9. **Bid Open for 90 Days.** It is understood that the District reserves the right to reject this bid and that the bid shall remain open to acceptance and is irrevocable for a period of ninety (90) days.
10. **Attachments.** The following documents are attached hereto:

- The Bid Bond on the District's form or other security
- The Designated Subcontractors List
- The Noncollusion Declaration
- Iran Contracting Act Certification

11. **Addenda Acknowledgement.** Receipt and acceptance of the following addenda is hereby acknowledged:

No. _____, Dated _____	No. _____, Dated _____
No. _____, Dated _____	No. _____, Dated _____
No. _____, Dated _____	No. _____, Dated _____
No. _____, Dated _____	No. _____, Dated _____
☐ Or check here if no addenda were issued.	

12. **Bidder's License.** Bidder acknowledges that the license required for performance of the Work is as stated in the Invitation to Bid. Bidder certifies that it is, at the time of bidding, and shall be throughout the period of the contract, licensed by the State of California to do the type of work required under the terms of the Contract Documents. Bidder further certifies that it is regularly engaged in the general class and type of work called for in the Contract Documents.

13. **Labor Harmony.** The undersigned hereby certifies that Bidder is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the Work.

14. **DIR Registration.** Bidder shall ensure that it and its Subcontractors comply with the registration and compliance monitoring provisions of Labor Code section 1771.4, including furnishing its CPRs to the Labor Commissioner, and are registered pursuant to Labor Code section 1725.5.

15. **General Acknowledgement.** The Bidder represents that it is competent, knowledgeable, and has special skills with respect to the nature, extent, and inherent conditions of the Work to be performed. Bidder further acknowledges that there are certain peculiar and inherent conditions existent in the construction of the Work that may create, during the Work, unusual or peculiar unsafe conditions hazardous to persons and property. Bidder expressly acknowledges that it is aware of such peculiar risks and that it has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the Work with respect to such hazards.

16. **False Claims Act.** Bidder expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms "claim" and "knowingly" are defined in the California False Claims Act, Cal. Gov. Code, §12650 et seq.), the District will be entitled to civil remedies set forth in the California False Claim Act. It may also be considered fraud and the Contractor may be subject to criminal prosecution.

Furthermore, Bidder hereby certifies to the District that all representations, certifications, and statements made by Bidder, as set forth in this bid form, are true and correct and are made under penalty of perjury.

Dated this _____ day of _____ 20 _____

Signature _____

Signed by (Print Name) _____

Title of Person Signing _____

Name of Bidder _____

Type of Organization _____

Address of Bidder _____

Taxpayer's Identification No. of Bidder _____

Telephone Number _____

Fax Number _____

E-mail _____ Web page _____

Bidder's DIR Registration No.: No.: _____

Contractor's License No(s): No.: _____ Class: _____ Expiration Date: _____

No.: _____ Class: _____ Expiration Date: _____

No.: _____ Class: _____ Expiration Date: _____

If Bidder is a corporation, provide the following:

Name of Corporation: _____

President: _____

Secretary: _____

Treasurer: _____

END OF DOCUMENT

DOCUMENT 00 43 13

BID BOND (SECURITY)

**(Note: If Bidder is providing a bid bond as its bid security,
Bidder must use this form, NOT a surety company form.)**

The undersigned, _____ as Principal ("Principal");

and _____ as Surety ("Surety"; a corporation organized and existing under and by virtue of the laws of the State of _____ and authorized to do business as a surety in the State of California) are held and firmly bound unto the **Orinda Union School District** ("District") as Oblige, in the sum of \$ _____ Dollars, lawful money of the United States, for the payment to the District will and truly to be made pursuant to the provisions herein. Principal and Surety each of us, bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted a bid to the District for all Work specifically described in the accompanying bid and if the District awards the contract to the Principal and, within the time and manner required under the Contract Documents, after the prescribed forms are presented to Principal for signature, the Principal enters into a written contract, in the prescribed form in accordance with the bid, and files two bonds (one guaranteeing faithful performance and the other guaranteeing payment for labor and materials as required by law), and meets all other conditions to the contract between the Principal and the Oblige becoming effective, or if the Principal shall fully reimburse and save harmless the Oblige from any damage sustained by the Oblige through failure of the Principal to enter into the written contract and to file the required performance and labor and material bonds, and to meet all other conditions to the Contract between the Principal and the Oblige becoming effective, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect and the Surety shall immediately issue full payment of the sum stated above to the Oblige upon notification from the Oblige that the Principal has not taken all steps to nullify or void this obligation.

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

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

If the District awards the bid, the security of unsuccessful bidder(s) shall be returned within sixty (60) days from the time the award is made. Unless otherwise required by law, no bidder may withdraw its bid for ninety (90) days after the date of the bid opening.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and Surety above named, on

_____, 20_____.

Principal

By

Surety

By

Name of California Agent of Surety

Address of California Agent of Surety

Telephone Number of California Agent of Surety

Bidder must attach Power of Attorney and Certificate of Authority for Surety and a Notarial Acknowledgment for all Surety's signatures. The California Department of Insurance must authorize the Surety to be an admitted Surety Insurer.

END OF DOCUMENT

DOCUMENT 00 43 36

DESIGNATED SUBCONTRACTORS LIST

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

Glorietta Elementary School Transitional Kinder/Kindergarten Play Yard ("Project" or "Contract")

1. **Listed.** Bidder must list hereinafter the name and location of each subcontractor who will be employed, and the scope of Work that each will perform if the Contract is awarded to the Bidder. Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., it must clearly identify the name and location of each subcontractor who will perform work or labor or render service to the Bidder in or about the construction of the Work in an amount in excess of one-half of one percent (1/2 of 1%) of Bidder's total Bid.
2. **CSLB Number.** Bidder must provide the Contactor State License Board number ("**CSLB No.**") for all listed subcontractors.
3. **DIR Number.** Bidder must provide the Department of Industrial Relations registration number ("**DIR No.**") for all listed subcontractors.
4. **Same Scope.** If more than one subcontractor is named for the same scope of Work, state with specificity the particular scope or portion that each subcontractor will perform.
5. **No Vendors or Suppliers.** Bidder need not list entities that are only vendors or suppliers of materials.
6. **Not Listed.** As to any Work that Bidder fails to list that is in excess of one-half of one percent (1/2 of 1%) of Bidder's total Bid, Bidder agrees that it is qualified to perform that scope of Work and will perform that scope of Work, or be subjected to penalty under applicable law.
7. **Alternate Work.** If alternate bids are called for and Bidder intends to use Subcontractors different from or in addition to those Subcontractors listed for work under the base Bid, Bidder must list Subcontractors that will perform Work in an amount in excess of one half of one percent (1/2 of 1%) of Bidder's total Bid, including alternates.
8. **DVBEs.** Bidder must indicate which, if any, of its subcontractors are disabled veteran business enterprises (DVBE) and the estimated percentage of the Work those subcontractor(s) will perform.
9. **Bidders may correct inadvertent error(s) in listing subcontractors' CSLB Nos. or DIR Nos. within twenty-four (24) hours after bid opening.**
10. **Additional Sheets.** If further space is required for the list of proposed subcontractors, additional sheets showing the required information, as indicated below, shall be attached hereto and made a part of this document and submitted with this form.

I certify and declare under penalty of perjury under the laws of the State of California that all the information listed on the following page(s) is complete, true, and correct.

Date: _____

Proper Name of Bidder: _____

Signature: _____

Print Name: _____

Title: _____

Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:

Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:

Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:
Subcontractor Name	Portion of Work (Scope)	Location of Business	CSLB No.:
			DIR No.:
			If DVBE, % of Work:

END OF DOCUMENT

DOCUMENT 00 43 40

NONCOLLUSION DECLARATION
Public Contract Code § 7106

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the _____ **[PRINT YOUR TITLE]**

of _____ **[PRINT FIRM NAME]**.

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 the following date:

Date: _____

Proper Name of Bidder: _____

City, State: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

DOCUMENT 00 43 50

IRAN CONTRACTING ACT CERTIFICATION (Public Contract Code § 2204)

Glorietta Elementary School Transitional Kinder/Kindergarten Play Yard ("Project" or "Contract")

Pursuant to Public Contract Code (PCC) section 2204, an Iran Contracting Act certification is required for solicitations of goods or services of one million dollars (\$1,000,000) or more.

Bidder shall complete **ONLY ONE** of the following three paragraphs.

☐ 1. Bidder's Total Base Bid is less than one million dollars (\$1,000,000).

OR

☐ 2. Bidder's Total Base Bid is one million dollars (\$1,000,000) or more, but Bidder is **not** on the current list of persons engaged in investment activities in Iran created by the California Department of General Services ("DGS") pursuant to Public Contract Code § 2203(b), and Bidder is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person, for 45 days or more, if that other person 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.

OR

☐ 3. Bidder's Total Base Bid is one million dollars (\$1,000,000) or more, but the District has given prior written permission to Bidder to submit a proposal pursuant to PCC 2203(c) or (d). **A copy of the written permission from the District is included with Bid.**

I certify that I am duly authorized to legally bind the Bidder to this certification, that the contents of this certification are true, and that this certification is made under the laws of the State of California.

Date: _____

Proper Name of Bidder: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

DOCUMENT 00 45 00

NOTICE OF AWARD

Dated: _____, 20__

To: _____
("Contractor")

(Address)

From: Governing Board ("Board") of **Orinda Union School District** ("District")

Re: **Glorietta Elementary School Transitional Kinder/Kindergarten Play Yard (DSA#01-122865)** ("Project" or "Contract")

Contractor was awarded the Contract on _____, 20__, [**CHOOSE ONE:**] by action of the District's Board. The Contract Price is \$ _____ **Dollars** and includes alternates _____.

Three (3) copies of each of the Contract Documents (except Drawings) accompany the Notice of Award. Three (3) sets of the Drawings will be delivered separately or otherwise made available. Additional copies are available at cost of reproduction.

Contractor must comply with the following conditions precedent within **SEVEN (7)** calendar days of the date of this Notice of Award.

Contractor shall execute and submit the following Contract Documents by 5:00 p.m. of the **SEVENTH (7TH)** calendar day following the date of the Notice of Award. Failure to properly and timely submit the following Contract Documents entitles District to foreclose on Contractor's bid bond and award the contract to the next responsive, responsible bidder.

- a. Agreement: Submit two (2) copies, each bearing an original signature. **If Contractor is a corporation, Contractor must attach a certified copy of the corporation's by-laws, or the resolution of the Board of Directors of the corporation, authorizing the signatory to execute the Agreement and the bonds required by the Contract Documents.**
- b. Escrow of Bid Documentation: Include all required documentation. Refer to the Escrow of Bid Documentation document for details.
- c. Performance Bond (100%): Fully executed form provided in the Contract Documents.
- d. Payment Bond (100%) (Contractor's Labor and Material Bond): Fully executed form provided in the Contract Documents.
- e. Insurance Certificates and Endorsements as required.
- f. Certifications to be Completed by Contractor
- g. Disabled Veterans' Business Enterprise Participation Certification.
- h. Criminal Background Investigation/Fingerprinting Certification.

Failure to comply with these conditions within the time specified will entitle District to consider Contractor's bid

abandoned, to annul the Notice of Award, and to declare Contractor's Bid Security forfeited, as well as any other rights the District may have against Contractor.

District will return to Contractor one fully signed counterpart of the Agreement.

Orinda Union School District

SIGNATURE: _____

NAME: _____

TITLE: _____

END OF DOCUMENT

DOCUMENT 00 45 10

AGREEMENT

This agreement is made and entered into on _____, 202_____, by and between the **Orinda Union School District** ("District") and _____ ("**Contractor**") ("**Agreement**"). The District and the Contractor agree as follows:

1. **The Work:** Contractor shall furnish all tools, equipment, apparatus, facilities, labor, and material necessary to perform and complete in a good and workmanlike manner, the work of the following project:

Glorietta Elementary School Transitional Kinder/Kindergarten Play Yard ("Project" or "Contract" or "Work")

The Work shall be performed and completed as required in the Contract Documents as defined in the General Conditions including, without limitation, the Drawings and Specifications, under the direction and supervision of, and subject to, the approval of the District or its authorized representative.

2. **The Contract Documents:**

- a. The complete Contract consists of all Contract Documents as defined in the General Conditions and incorporated herein by this reference. All obligations of the District and Contractor are fully set forth and described in the Contract Documents. The Contract Documents are intended to cooperate so that Work called for in one and not mentioned in the other or vice versa is to be performed the same as if mentioned in all Contract Documents.
- b. **Interpretation of Contract Documents/Order of Precedence:** Questions concerning the intent, precedence, or meaning of the Contract Documents, including the Drawings or Specifications, shall be submitted to the District for interpretation. Inconsistencies in the Contract Documents shall be resolved by giving precedence in the following order:
- (i) District-approved modifications (e.g., Change Orders, Force Account Directives, etc.), beginning with the most recent (if any);
 - (ii) Agreement;
 - (iii) Special Conditions (if any);
 - (iv) Supplemental Conditions (if any);
 - (v) General Conditions;
 - (vi) Remaining Division 0 documents (Documents beginning with "00");
 - (vii) Division 1 Documents (Documents beginning with "01");
 - (viii) Division 2 through Division 49 documents (Technical Specifications);
 - (ix) Figured dimensions;
 - (x) Large-scale drawings;
 - (xi) Small-scale drawings.

In case of conflict, the greater quantity and/or higher standard of workmanship shall apply unless the District expressly in writing (e.g., via a Change Order) accepts a lesser quantity or lower quality of workmanship and the Contract Price is adjusted accordingly. The decision of the District in the matter shall be final.

3. **Integration / Modification.** The Contract Documents and any documents specifically incorporated by reference are completely integrated as the complete and exclusive statement of the terms of the Agreement. This Agreement supersedes all previous contracts, agreements, and / or communications, both oral and written, and constitutes the entire understanding of the District and Contractor. No extrinsic evidence

whatsoever shall be admissible or used to explain or supplement the terms of the Contract, Contract Documents, or any items incorporated by reference. No changes, amendments or alterations shall be effective unless in writing, signed by both Parties, and unless provided otherwise by the Contract Documents.

4. **Classification of Contractor's License:** Contractor hereby acknowledges that it currently holds valid Type B Contractor's license(s) issued by the State of California, Contractor's State Licensing Board, in accordance with division 3, chapter 9, of the Business and Professions Code and in the classification called for in the Contract Documents.
5. **Time for Completion:** It is hereby understood and agreed that the Contractor's project completion date is July 31, 2025. The District shall not approve an early completion schedule by Contractor. A schedule showing the Work completed in less than the Contract Time indicated in the Contract, shall be considered to have Project Float.
6. **Completion-Extension of Time:** If Contractor fails to complete the Work within the Contract Time, due allowance being made for the contingencies provided for herein, Contractor shall become liable to District for all loss and damage that District may suffer on account thereof. Contractor shall coordinate its Work with the work of all other contractors. The District shall not be liable for delays resulting from Contractor's failure to coordinate its Work with other contractors in a manner that allows for timely completion of Contractor's Work. Contractor shall be liable for delays to other contractors caused by Contractor's failure to coordinate its Work with the work of other contractors.
7. **Liquidated Damages:** Time is of the essence for all Work to be performed. It is hereby understood and agreed that it is and will be difficult and/or impossible to ascertain and determine the actual damage that District will sustain in the event of and by reason of Contractor's delay; therefore, pursuant to Government Code section 53069.85 and Public Contract Code section 7203, Contractor shall forfeit and pay to District the following sum(s) as liquidated damages ("**Liquidated Damages**"):
 - **Project Completion: \$500 dollars** per day as Liquidated Damages for each and every day's delay beyond the Contract Time to complete all the Work.
 - a. Each portion of the Liquidated Damages shall be calculated cumulatively. For example, if Contractor is late in completing two milestones and the entire Project, Contractor will forfeit and pay three separate Liquidated Damages amounts. It is hereby understood and agreed that neither the total cumulative Liquidate Damages amount nor any portion of the Liquidated Damage amount are penalties.
 - b. District may deduct Liquidated Damages from money due or that may become due Contractor under this Agreement. Contractor's forfeiture of Liquidated Damages to District, and District's right to retain Liquidated Damages, are as indicated in Government Code section 53069.85 and as indicated herein and in the General Conditions. Liquidated Damages are automatically and without notice of any kind forfeited and payable by Contractor upon the accrual of each day of delay. Neither District's failure or delay in deducting Liquidated Damages from payments otherwise due the Contractor, nor District's failure or delay in notifying Contractor of the forfeiture and payment of Liquidated Damages, shall be deemed a waiver of District's right to Liquidated Damages and/or the District's right to withhold Liquidated Damages from any amounts that would otherwise be payable to the Contractor.
 - c. Contractor and Surety shall be liable for and pay to District the entire amount of Liquidated Damages including any portion that exceeds the amount of the Contract Price then held, retained or controlled by District.
 - d. Liquidated Damages shall be in addition, and not in lieu of, District's right to charge Contractor for the District's cost of completing or correcting items of the Work.

8. **Contract Price:** In consideration of the foregoing covenants, promises, and agreements, Contractor offers, in

the amounts stated below, to perform the Work according to the Contract Documents. District covenants, promises, and agrees that it will pay and cause to be paid to Contractor in full, and as the Contract Price the following amount(s):

\$ _____ Dollars
(“Contract Price”)

- a. The Contract Price shall be paid in lawful money of the United States pursuant to the payment provisions in the General Conditions.
 - b. The District may, at its sole discretion, increase or decrease the Contract Price by unit prices or alternates contained in Contractor’s original bid. If the Bid for the Work included proposal(s) for Alternate Bid Item(s), during Contractor’s performance of the Work, the District may elect to add any such Alternate Bid Item(s) if the item did not form a basis for award of the Agreement or delete any such Alternate Bid Item(s) if that item formed a basis for award of the Agreement. If the District elects to add or delete an Alternate Bid Item(s) pursuant to the foregoing, the cost or credit for that Alternate Bid Item(s) shall be as set forth in the Contractor’s Bid, at the District’s discretion. If any Alternate Bid Item is added or deleted from the Work pursuant to the foregoing, the Contract Time shall be adjusted by the number of days allocated for the added or deleted Alternate Bid Item in the Contract Documents; if days are not allocated for any Alternate Bid Item added or deleted pursuant to the foregoing, the Contract Time shall be equitably adjusted.
- 9. Insurance and Bonds:** Contractor shall provide all required certificates of insurance, and payment and performance bonds.
- 10. Performance of Work:** If Contractor fails to perform the Work properly or fails to perform any provisions of this Contract, the District, may, pursuant to the General Conditions and without prejudice to any other remedy it may have, cure the deficiencies and deduct the cost thereof from the payment then or thereafter due Contractor.
- 11. COVID-19.** Contractor is responsible for complying with all applicable and existing federal, state, and/or local statutes, orders, rules, regulations, ordinances, and/or directives relating to construction site safety in connection with COVID-19, and/or any similar virus or derivative strain. Contractor shall ensure it has supervisor employees onsite that are trained and knowledgeable of all of these requirements to ensure full compliance on Project Site(s).
- 12. Authority of Architect, Project Inspector, and DSA:** Contractor hereby acknowledges that the Architect(s), the Project Inspector(s), and the Division of the State Architect have authority to approve and/or stop Work if Contractor’s Work does not comply with the requirements of the Contract Documents, Title 24 of the California Code of Regulations, and all applicable laws. Contractor shall be liable for any delay caused by its non-compliant Work.
- 13. Assignment of Contract:** Neither the Contract, nor any part thereof, nor any moneys due or to become due thereunder, may be assigned by Contractor without the written approval of District, nor without the written consent of the Surety on Contractor’s Performance Bond (the “Surety”), unless the Surety has waived in writing its right to notice of assignment.
- 14. Payment of Prevailing Wages:** Contractor and all Subcontractors under Contractor shall pay all workers on Work performed pursuant to this Contract not less than the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work as determined by the Director of the Department of Industrial Relations, State of California, for the type of work performed and the locality in which the work is to be performed within the boundaries of the District, pursuant to sections 1770 et seq. of the California Labor Code.

15. Contractor & Subcontractor Registration: Contractor shall comply with the registration and compliance monitoring provisions of Labor Code section 1771.4, including complying with any applicable enforcement by the Department of Industrial Relations.

16. Authority of Contractor's Representatives: Contractor hereby certifies that the person who executes this Agreement has the authority and power to legally bind the Contractor. Contractor also certifies that each person(s) it employees on the Project at or above the level of project superintendent, has the authority to legally bind the Contractor.

17. Severability: If any term, covenant, condition, or provision of the Contract Documents is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the provisions in the Contract Documents shall remain in full force and effect and shall in no way be affected, impaired, or invalidated thereby.

18. Notice: Any notice required by the Agreement shall be in writing, dated and signed by the party giving notice or by a duly authorized representative of that party. Notice shall be served and considered effective if given in one of the following manners and to the following persons and addresses:

- a. By personal delivery; considered delivered on the day of delivery.
- b. By overnight delivery service; considered delivered one (1) day after date deposited, as indicated by the delivery service.
- c. By depositing same in United States mail, enclosed in a sealed envelope; considered delivered three (3) days after date deposited, as indicated by the postmarked date.
- d. By registered or certified mail with postage prepaid, return receipt requested; considered delivered on the day the notice is signed for.

If to District
Orinda Union School District
_____, CA _____
ATTN: _____

If to Contractor:
@Contractor
_____, CA _____
ATTN: _____

IN WITNESS WHEREOF, accepted and agreed on the date indicated above:

Dated: _____, 20____

Dated: _____, 20____

Orinda Union School District

_____ **Contractor**

Signature: _____

Signature: _____

Print Name: _____

Print Name: _____

Print Title: _____

Print Title: _____

NOTE: If the Contractor is a corporation, Contractor must attach a certified copy of the corporation's by-laws, or of the resolution of the Board of Directors of the corporation, authorizing the above person to execute this Agreement and the bonds required by the Contract Documents.

END OF DOCUMENT

DOCUMENT 00 45 40

CERTIFICATIONS TO BE COMPLETED BY CONTRACTOR

THE UNDERSIGNED MUST CHECK EACH BOX AND EXECUTE THIS FORM AND HEREBY CERTIFIES TO THE GOVERNING BOARD OF THE DISTRICT THAT:

- The undersigned is a representative of the Contractor,
- The undersigned is familiar with the facts herein certified and acknowledged,
- The undersigned is authorized and qualified to execute this Agreement and these certifications on behalf of Contractor and that by executing this Agreement undersigned is certifying the following items.

☐ **Labor Code Sections 1860-1861 (Workers' Compensation).** In accordance with Labor Code section 3700, every contractor will be required to secure the payment of compensation to his or her employees. I acknowledge and certify under penalty of perjury that I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

☐ **Government Code Sections 8355-8357 (Drug-Free Workplace).** I acknowledge and certify under penalty of perjury that I 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 the actions that 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) Any available drug counseling, rehabilitation, and employee assistance programs.
 - (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 also acknowledge that this Contract may be subject to suspension of payments under the contract or grant or termination of the contract or grant, or both, and the contractor or grantee thereunder may be subject to debarment, in accordance with the requirements of the above-referenced statute, if the contracting or granting agency determines that any of the following has occurred:

- (1) The contractor or grantee has made a false certification under Section 8355.
- (2) The contractor or grantee violates the certification by failing to carry out the requirements of subdivisions (a) to (c), inclusive, of Section 8355.

I also acknowledge that the Department of General Services shall establish and maintain a list of individuals and organizations whose contracts or grants have been canceled due to failure to comply with the above-referenced statute. This list shall be updated monthly and published each month. No state agency shall award a contract or grant to a person or organization on the published list until that person or organization has complied with the above-referenced statute.

☐ **Tobacco-Free Environment.** Pursuant to, without limitation, 20 U.S.C. section 6083, Labor Code section 6400 et seq., Health & Safety Code section 104350 et seq. and District Board Policies, all District sites, including the Project site, are tobacco-free environments. Smoking and the use of tobacco products by all persons is prohibited on or in District property. District property includes school buildings, school grounds, school owned vehicles and vehicles owned by others while on District property.

I acknowledge and certify under penalty of perjury that I am aware of the District's policy regarding tobacco-free environments at District sites, including the Project site and acknowledge and certify that I will adhere to the requirements of that policy and not permit any of my firm's employees, agents, subcontractors, or my firm's subcontractors' employees or agents to use tobacco and/or smoke on the Project site. The District also prohibits electronic cigarettes, "vaping" or similar product uses on District sites.

☐ **No Hazardous Materials.** I acknowledge and certify under penalty of perjury that no Asbestos, or Asbestos-Containing Materials, polychlorinated biphenyl (PCB), or any material listed by the federal or state Environmental Protection Agency or federal or state health agencies as a hazardous material, or any other material defined as being hazardous under federal or state laws, rules, or regulations ("New Hazardous Material"), shall be furnished, installed, or incorporated in any way into the Project or in any tools, devices, clothing, or equipment used to affect any portion of Contractor's work on the Project for District. I have instructed our employees with respect to the above-mentioned standards, hazards, risks, and liabilities.

- (i) Asbestos and/or asbestos-containing material shall be defined as all items containing but not limited to chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite. Any or all material containing greater than one-tenth of one percent (.1%) asbestos shall be defined as asbestos-containing material. Any disputes involving the question of whether or not material is New Hazardous Material shall be settled by electron microscopy or other appropriate and recognized testing procedure, at the District's determination. The costs of any such tests shall be paid by Contractor if the material is found to be New Hazardous Material.
- (ii) All Work or materials found to be New Hazardous Material or Work or material installed with equipment containing "New Hazardous Material," will be immediately rejected and this Work will be removed at Contractor's expense at no additional cost to the District.

The Contractor must immediately notify the District within two (2) Business Days, if the Contractor finds and before it disturbs, any material that the Contractor believes may be hazardous waste, as defined in section 25117 of the Health and Safety Code, and requires removal to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

☐ **Lead as a Health Hazard.** Lead poisoning is recognized as a serious environmental health hazard facing children today. Even at low levels of exposure, much lower than previously believed, lead can impair the development of a child's central nervous system, causing learning disabilities, and leading to serious behavioral problems. Lead enters the environment as tiny lead particles and lead dust disbursts when paint chips, chalks, peels, wears away over time, or is otherwise disturbed. Ingestion of lead dust is the most common pathway of childhood poisoning; lead dust gets on a child's hands and toys and then into a child's mouth through common hand-to-mouth activity. Exposures may result from construction or remodeling activities that disturb lead paint, from ordinary wear and tear of windows and doors, or from friction on other surfaces.

Ordinary construction and renovation or repainting activities carried out without lead-safe work practices can disturb lead-based paint and create significant hazards. Improper removal practices, such as dry scraping, sanding, or water blasting painted surfaces, are likely to generate high volumes of lead dust.

Because the Contractor and its employees will be providing services for the District, and because the Contractor's work may disturb lead-containing building materials, **Contractor is hereby notified** of the potential presence of lead-containing materials located within certain buildings utilized by the District. All school buildings built prior to

1993 are presumed to contain some lead-based paint until sampling proves otherwise.

(i) **Overview of California Law**

Education Code section 32240 et seq. is known as the Lead Safe Schools Protection Act. Under this act, the Department of Health Services ("DHS") is to conduct a sample survey of schools in the State of California for the purpose of developing risk factors to predict lead contamination in public schools. (Ed. Code, § 32241.)

Any school that undertakes any action to abate existing risk factors for lead is required to utilize trained and state-certified contractors, inspectors, and workers. (Ed. Code, § 32243, subd. (b).) Moreover, lead-based paint, lead plumbing, and solders, or other potential sources of lead contamination, shall not be utilized in the construction of any new school facility or the modernization or renovation of any existing school facility. (Ed. Code, § 32244.)

Both the Federal Occupational Safety and Health Administration ("Fed/OSHA") and the California Division of Occupational Safety and Health ("Cal/OSHA") have implemented safety orders applicable to all construction work where a contractor's employee may be occupationally exposed to lead.

The OSHA Regulations apply to all construction work where a contractor's employee may be occupationally exposed to lead. The OSHA Regulations contain specific and detailed requirements imposed on contractors subject to that regulation. The OSHA Regulations define construction work as work for construction, alteration, and/or repair, including painting and decorating. It includes, but is not limited to, the following:

- a. Demolition or salvage of structures where lead or materials containing lead are present;
- b. Removal or encapsulation of materials containing lead;
- c. New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead;
- d. Installation of products containing lead;
- e. Lead contamination/emergency cleanup;
- f. Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed; and
- g. Maintenance operations associated with the construction activities described in the subsection.

Because it is assumed by the District that all painted surfaces (interior as well as exterior) within the District contain some level of lead, it is imperative that the Contractor, its workers and subcontractors fully and adequately comply with all applicable laws, rules and regulations governing lead-based materials (including title 8, California Code of Regulations, section 1532. 1).

The Contractor must notify the District if any Work may result in the disturbance of lead-containing building materials. Any and all Work that may result in the disturbance of lead-containing building materials must be coordinated through the District. A signed copy of this Certification must be on file prior to beginning Work on the Project, along with all current insurance certificates.

(ii) **Renovation, Repair and Painting Rule, Section 402(c)(3) of the Toxic Substances Control Act**

In 2008, the U.S. Environmental Protection Agency, issued a rule pursuant to the authority of Section 402(c)(3)

of the Toxic Substances Control Act, requiring lead safe work practices to reduce exposure to lead hazards created by renovation, repair and painting activities that disturb lead-based paint (Renovation, Repair and Painting Rule). Renovations in homes, childcare facilities, and schools built prior to 1978 must be conducted by certified renovations firms, using renovators with accredited training, and following the work practice requirements to reduce human exposures to lead.

Contractor, its workers and subcontractors must fully and adequately comply with all applicable laws, rules and regulations governing lead-based materials, including those rules and regulations appearing within title 40 of the Code of Federal Regulations as part 745 (40 CFR 745).

The requirements apply to all contractors who disturb lead-based paint in a six-square-foot area or greater indoors or a 20-square-foot area outdoors. If a DPH-certified inspector or risk assessor determines that a home constructed before 1978 is lead-free, the federal certification is not required for anyone working on that particular building.

(iii) **Contractor's Liability**

If the Contractor fails to comply with any applicable laws, rules, or regulations, and that failure results in a site or worker contamination, the Contractor will be held solely responsible for all costs involved in any required corrective actions, and shall defend, indemnify, and hold harmless the District, pursuant to the indemnification provisions of the Contract, for all damages and other claims arising therefrom.

If lead disturbance is anticipated in the Work, only persons with appropriate accreditation, registrations, licenses, and training shall conduct this Work.

It shall be the responsibility of the Contractor to properly dispose of any and all waste products, including, but not limited to, paint chips, any collected residue, or any other visual material that may occur from the prepping of any painted surface. It will be the responsibility of the Contractor to provide the proper disposal of any hazardous waste by a certified hazardous waste hauler. This company shall be registered with the Department of Transportation (DOT) and shall be able to issue a current manifest number upon transporting any hazardous material from any school site within the District.

The Contractor shall provide the District with any sample results prior to beginning Work, during the Work, and after the completion of the Work. The District may request to examine, prior to the commencement of the Work, the lead training records of each employee of the Contractor.

I acknowledge and certify under penalty of perjury, that:

1. I have received notification of potential lead-based materials on the District's property;
 2. I am knowledgeable regarding and will comply with all applicable laws, rules, and regulations governing work with, and disposal of, lead.
-



Imported Materials. All soils, aggregate, or related materials ("Fill") that Contractor, a Subcontractor, agent or supplier, in any way, provides or delivers and/or supplies to the Project Site shall be free of any and all hazardous material as defined in section 25260 of the Health and Safety Code, shall satisfy the requirements of any environmental review of the Project performed pursuant to the statutes and guidelines of the California Environmental Quality Act, sections 21000 et seq. of the Public Resources Code ("CEQA"), and shall comply with the requirements of sections 17210 et seq. of the Education Code, including requirements for a Phase I environmental assessment acceptable to the State of California Department of Education and Department of Toxic Substances Control. I acknowledge that, to the furthest extent permitted by California law, the indemnification provisions in the Contract Documents apply to, without limitation, any claim(s) connected with providing, delivering, and/or supplying Fill.

☐ **Roofing Contract Financial Interest Certification (Public Contract Code § 3006)**

I, _____ [Your Name], _____ [Firm Name]
certify that I have not offered, given, or agreed to give, received, accepted, or agreed to accept, any gift, contribution, or any financial incentive whatsoever to or from any person in connection with a roof project contract or subcontract on the Project. As used in this certification, "person" means any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

I, _____ [Your Name], _____ [Firm Name]
certify that I do not have, and throughout the duration of the Contract, I will not have, any financial relationship in connection with the performance of the Contract with any architect, engineer, roofing consultant, materials manufacturer, distributor, or vendor that is not disclosed below.

I, _____ [Your Name], _____ [Firm Name]
have the following financial relationships with an architect, engineer, roofing consultant, materials manufacturer, distributor, or vendor, or other person in connection with the following roof project contract:

Name of firm ("Firm"): _____
Mailing address: _____
Address of branch office used for this Project: _____
If subsidiary, name and address of parent company: _____

For Projects without substantive roofing components, check the following box and execute this certification:

☐ The Work on the Contract (1) does not include the replacement or repair of a roof or (2) is a repair of twenty five percent (25%) or less of the roof, (3) or is a repair project that has a total cost of twenty one thousand dollars (\$21,000) or less.

☐ **Russian Sanctions Certification**

On February 21, 2022, President Biden issued Executive Order 14065 (<https://www.whitehouse.gov/briefing-room/presidential-actions/2022/02/21/executive-order-on-blocking-property-of-certain-persons-and-prohibiting-certain-transactions-with-respect-to-continued-russian-efforts-to-undermine-the-sovereignty-and-territorial-integrity-of-ukraine/>; "Federal Order") imposing economic sanctions and prohibiting many activities including, but not limited to, investing in, importing to, exporting from, and contracting with, areas of Ukraine and in Russia. On March 4, 2022, California Governor Newsom issued Executive Order N-6-22 requiring state agencies to take steps to ensure any agency and entity under contract with state agencies comply with the Federal Order (<https://www.gov.ca.gov/wp-content/uploads/2022/03/3.4.22-Russia-Ukraine-Executive-Order.pdf>; "State Order").

The District requires the Contractor, as a vendor with the District, to comply with the economic sanctions imposed in response to Russia's actions in Ukraine, including the orders and sanctions identified on the U.S. Department of the Treasury website (<https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/ukraine-russia-related-sanctions>).

If your Firm's contract with the District has a cumulative value of \$5 million or more, your certification here constitutes your written response to the District, indicating:

(1) that your Firm is in compliance with the required economic sanctions of the Federal and State Orders;

(2) the steps your Firm has taken in response to Russia's actions in Ukraine, including, but not limited to, desisting from making new investments in, or engaging in financial transactions with, Russian entities, not

transferring technology to Russia or Russian entities, and directly providing support to the government and people of Ukraine.

I ACKNOWLEDGE AND CERTIFY UNDER PENALTY OF PERJURY THAT I AM DULY AUTHORIZED TO LEGALLY BIND THE CONTRACTOR TO ALL PROVISIONS AND ITEMS INCLUDED IN THESE CERTIFICATIONS, THAT THE CONTENTS OF THESE CERTIFICATIONS ARE TRUE, AND THAT THESE CERTIFICATIONS ARE MADE UNDER THE LAWS OF THE STATE OF CALIFORNIA.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

DOCUMENT 00 45 55

DISABLED VETERAN BUSINESS ENTERPRISE PARTICIPATION CERTIFICATION

Section 17076.11 of the Education Code requires school districts using funds allocated pursuant to the State of California School Facility Program ("Program") for the construction and/or modernization of school buildings to have a participation goal for disabled veteran business enterprises ("DVBE(s)") of at least three percent (3%), per year, of the overall dollar amount expended each year by the school district on projects that receive state funding.

Section 2001 of the Public Contract Code requires school districts to require each Bidder to provide in its bid certain information about its Subcontractors. In addition to completing this certification as indicated herein, each Bidder must provide the information related to DVBEs as required in the Designated Subcontractors List.

- 1. Disabled Veteran Business Enterprise.** A DVBE is a business enterprise certified by the California Office of Small Business as a DVBE.
- 2. DVBE Participation Policy.** The District is committed to achieving this DVBE participation goal. The District encourages Contractor to ensure maximum opportunities for the participation of DVBEs in the Work of the Contract.
- 3. DVBE Participation Goal.** The three percent (3%) participation goal is not a quota, set-aside or rigid proportion.
- 4. Certification of Participation.** At the time of execution of the Contract, the Contractor will provide a statement to the District of anticipated participation of DVBEs in the contract.
- 5. Submission of Report.** During performance of the Contract, Contractor shall monitor the Work of the Contract, award of subcontracts and contracts for materials, equipment and supplies for the purpose of determining DVBE participation in the Work of the Contract.
 - a) Contractor shall report on a monthly basis all DVBEs utilized in the performance of the Work, the type or classification of the Work performed by each DVBE, and the dollar value of the Work performed by each DVBE.
 - b) Upon completion of the Work of the Contract, Contractor shall submit a report to the District in the form attached hereto identifying all DVBEs utilized in the performance of the Work, the type or classification of the Work performed by each DVBE, and the dollar value of the Work performed by each DVBE.
 - i) The submission to the District of this report is a condition precedent to the District's obligation to make payment of the Final Payment under the Contract Documents. The submission of this report shall be in addition to, and not in lieu of, any other conditions precedent set forth in the Contract Documents for the District's obligation to make payment of the Final Payment.
 - ii) The District reserves the right to request additional information or documentation from the Contractor evidencing efforts to comply with the three percent (3%) DVBE participation goal.

DVBE PARTICIPATION REPORT

Contractor Name: _____ Date: _____

Project Name: _____ Project Number: [PROJECT NO.]

DVBE Firm Name	Trade / Portion of Work	Subcontract/ Contract Value
Add more sheets as needed to include all information for each DVBE		

Does the cumulative dollar value of these DVBE contracts meet or exceed the participation goal of three percent (3%) of the final Contract Price, as adjusted by all change orders?

YES _____ NO _____

If your response is "NO," please attach to this report a detailed description of the reasons your firm did not achieve the participation goal of three percent (3%) of the final Contract Price.

I certify and declare under penalty of perjury under the laws of the State of California that all the foregoing information is complete, true, and correct.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

CRIMINAL BACKGROUND INVESTIGATION / FINGERPRINTING CERTIFICATION

The undersigned does hereby certify to the governing board of the District that undersigned is a representative of the Contractor, is familiar with the facts herein certified, is authorized and qualified to execute this certificate on behalf of Contractor; and that the information in this Criminal Background Investigation / Fingerprinting Certification is true and correct.

1. **Education Code.** Contractor has taken at least one of the following actions (check all that apply):

☐ **All Workers Fingerprinted.** The Contractor has complied with the fingerprinting requirements of Education Code section 45125.1 with respect to all Contractor's employees and all of its subcontractors' employees who interact with pupils, outside of the immediate supervision and control of the pupil's parent or guardian or a school employee, has a valid criminal records summary as described in Education Code Section 44237 (Contractor shall "require each applicant for employment in a position requiring contact with minor pupils to submit two sets of fingerprints prepared for submittal by the employer to the Department of Justice for the purpose of obtaining criminal record summary information from the Department of Justice and the Federal Bureau of Investigation."). A complete and accurate list of Contractor's employees and of all of its subcontractors' employees who may interact with District pupils during the course and scope of the Contract is attached hereto; and/or

☐ **Physical Barrier.** Pursuant to Education Code section 45125.2, Contractor has installed or will install, prior to commencement of work, a physical barrier at the Project site, that will limit contact between Contractor's employees and District pupils at all times; and/or

☐ **Continual Supervision by Fingerprinted Employee.** Pursuant to Education Code section 45125.2, Contractor certifies that all employees will be under the continual supervision of, and monitored by, an employee of the Contractor who the California Department of Justice has ascertained has not been convicted of a violent or serious felony. The name and title of the employee who will be supervising Contractor's employees and its subcontractors' employees is:

Name: _____ **Title:** _____

☐ **Unoccupied Site.** The Work on the Contract is at an unoccupied school site and no employee and/or subcontractor or supplier of any tier of Contract shall come in contact with the District pupils.

2. **Megan's Law (Sex Offenders).** I have verified and will continue to verify that the employees of Contractor that will be on the Project site and the employees of the Subcontractor(s) that will be on the Project site are **not** listed on California's "Megan's Law" Website (<http://www.meganslaw.ca.gov/>).

Contractor's responsibility for background clearance extends to all of its employees, subcontractors, and employees of subcontractors coming into contact with District pupils regardless of whether they are designated as employees or acting as independent contractors of the Contractor.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

DOCUMENT 00 54 70

STORM WATER POLLUTION PREVENTION PLAN

"NOT APPLICABLE"

END OF DOCUMENT

DOCUMENT 00 61 14

PERFORMANCE BOND (100% of Contract Price)

(Note: Contractors must use this form, NOT a surety company form.)

WHEREAS, the governing board ("Board") of the **Orinda Union School District**, ("District") and

_____, ("Principal")

have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

**Glorietta Elementary School Transitional Kinder/Kindergarten
Play Yard**

which Contract dated _____, 20____, and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof, and

WHEREAS, the Principal is required under the terms of the Contract to furnish a bond for the faithful performance of the Contract;

NOW, THEREFORE, the Principal and _____ ("Surety") are held and firmly bound unto the District in the penal sum of:

\$ _____ **DOLLARS,**

lawful money of the United States, for payment to the District and will and truly be made pursuant to the provisions herein. Principal and Surety, each of us, bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally to:

- Perform all the work required to complete the Project; and
- Pay to the District all damages the District incurs as a result of the Principal's failure to perform all the Work required to complete the Project.

In the event the Principal is declared by the District to be in breach or default in the performance of the Contract, then, after written notice from the District to the Surety, as provided for herein, the Surety shall either remedy the default or breach of the Principal or shall take charge of the Work of the Contract and complete the Contract with a Contractor other than the Principal at its own expense; provided, however, that the procedure by which the Surety undertakes to discharge its obligations under this Bond shall be subject to the advance written approval of the District.

The condition of the obligation is such that, if the above bounden Principal, his or its 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 the Contract and any alteration thereof made as therein provided, on his or its part to be kept and performed at the time and in the intent and meaning, including all contractual guarantees and warranties of materials and workmanship, and shall indemnify and save harmless the District, its trustees, officers and agents, as therein stipulated, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

As a condition precedent to the satisfactory completion of the Contract, the above obligation shall hold good for a period equal to the warranty and/or guarantee period of the Contract, during which time Surety's obligation shall continue if Contractor shall fail to make full, complete, and satisfactory repair, replace, and totally protect the District from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein

shall limit the District's rights or the Contractor's or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract or to the Work to be performed thereunder shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the Contract Documents or to the Work.

Any claims under this bond may be addressed to the Surety at the following address. This cannot be the Contractor's broker for this bond, but must be an employee of the Surety or the Surety's legal counsel:

Attention: _____

Telephone No.: (____) ____ - _____

Fax No.: (____) ____ - _____

E-mail Address: _____

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the _____ day of _____, 20____.

Principal

Surety

(Name of Principal)

(Name of Surety)

(Signature of Person with Authority)

(Signature of Person with Authority)

(Print Name)

(Print Name)

(Name of California Agent of Surety)

(Address of California Agent of Surety)

(Telephone Number of California Agent of Surety)

Contractor must attach a Notarial Acknowledgment for all Surety's signatures and a Power of Attorney and Certificate of Authority for Surety. The California Department of Insurance must authorize the Surety to be an admitted surety insurer.

END OF DOCUMENT

DOCUMENT 00 61 15

PAYMENT BOND -- Contractor's Labor & Material Bond (100% of Contract Price)

(Note: Contractors must use this form, NOT a surety company form.)

WHEREAS, the governing board ("Board") of the **Orinda Union School District**, ("District") and

_____, ("Principal")

have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

Glorietta Elementary School Transitional Kinder/Kindergarten Play Yard ("Project" or "Contract")

which Contract dated _____, 20____, and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof, and

WHEREAS, pursuant to law and the Contract, the Principal is required, before entering upon the performance of the work, to file a good and sufficient bond with the body by which the Contract is awarded in an amount equal to 100 percent (100%) of the Contract price, to secure the claims to which reference is made in the Civil Code of California, including section 9100, and the Labor Code of California, including section 1741.

NOW, THEREFORE, the Principal and _____ ("Surety") are held and firmly bound unto all laborers, material men, and other persons referred to in said statutes in the penal sum of:

\$ _____ DOLLARS,

lawful money of the United States, being a sum not less than the total amount payable by the terms of Contract, for the payment of which sum well and truly to be made pursuant to all applicable statutes and laws applicable to the provisions herein. Principal and Surety, each of us, bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, to those applicable statutes and laws, and to the provisions herein.

The condition of this obligation is that if the Principal or any of his or its subcontractors, of the heirs, executors, administrators, successors, or assigns of any, all, or either of them shall fail to pay for any labor, materials, provisions, equipment, 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 Act with respect to that work or labor, that the Surety will pay the same in an amount not exceeding the amount herein above set forth, and also in case suit is brought upon this bond, will pay a reasonable attorney's fee to be awarded and fixed by the Court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under sections 9000 through 9566 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void; otherwise it shall be and remain in full force and affect.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract or to the Work to be performed thereunder shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the Contract Documents or to the Work.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the _____ day of _____, 20____.

Principal

Surety

(Name of Principal)

(Name of Surety)

(Signature of Person with Authority)

(Signature of Person with Authority)

(Print Name)

(Print Name)

(Name of California Agent of Surety)

(Address of California Agent of Surety)

(Telephone Number of California Agent of Surety)

Contractor must attach a Notarial Acknowledgment for all Surety's signatures and a Power of Attorney and Certificate of Authority for Surety. The California Department of Insurance must authorize the Surety to be an admitted surety insurer.

END OF DOCUMENT

DOCUMENT 00 63 00

DISTRICT CONTRACT FORMS

Attached RFI Form will be used by general contractor.

Construction Management team will provide Change order Form to general contractor.

Orinda Union School District

8 Altarinda Road, Orinda CA 94563



RFI FORM

To: happy.patel@swinertonmc.com

Orinda Union School District

RFI (Contractor) #:

Project: GL- Transitional Kinder/Kindergarten
Play Yard

Date:

Project Bid Package #:

Spec. Section:

Contractor:

Drawing #:

Detail #:

QUESTION:

RECOMMENDED SOLUTION:

Reply Requested by (Date): _____ By: _____ Title: _____

REPLY:

END OF DOCUMENT

DOCUMENT 00 65 00

DISTRICT CLOSEOUT FORMS

Construction Management team will coordinate with general contractor to organize and submit closeout documents.

END OF DOCUMENT

DOCUMENT 00 65 10

NOTICE TO PROCEED

Dated: _____, 20__

To: _____
("Contractor")

(Address)

From: Governing Board ("Board") of **Orinda Union School District** ("District")

Re: **Glorietta Elementary School Transitional Kinder/Kindergarten Play Yard** ("Project" or "Contract")

Contractor is hereby notified that the Contract Time under the Contract will commence to run on _____, 20__. By that date, Contractor shall start performing its obligations under the Contract Documents. In accordance with the Agreement executed by Contractor, the Contract Time and Project Completion is **July 31, 2025.**

Contractor must submit the following documents by 5:00 p.m. of the **TENTH (10TH)** calendar day following the date of this Notice to Proceed:

1. Contractor's preliminary schedule of construction.
2. Contractor's preliminary schedule of submittals, including Shop Drawings, Product Data, and Samples submittals.
3. Contractor's preliminary schedule of values for all of the Work.
4. Contractor's preliminary Contractor's Safety Plan specifically adapted for the Project.
5. A complete subcontractors list, including the name, address, telephone number, facsimile number, California State Contractor's License number, classification, and monetary value of all Subcontracts.

Thank you. We look forward to a successful Project.

Orinda Union School District

SIGNATURE: _____

NAME: _____

TITLE: _____

END OF DOCUMENT

DOCUMENT 00 65 36

WARRANTY AND GUARANTEE FORM

1. _____ ("Contractor")

hereby agrees that the _____ ("Work" of Contractor)

which Contractor has installed for the **Orinda Union School District** ("District") for the following project:

Glorietta Elementary School Transitional Kinder/Kindergarten Play Yard ("Project" or "Contract")

was performed in accordance with the requirements of the Contract Documents and that the Work as installed fulfills the requirements of the Contract Documents.

2. Contractor agrees to repair or replace all of the Work that may prove to be defective in workmanship or material and any other adjacent Work that may be displaced in connection with such replacement within a period of _____ **YEAR(S)** from the date of Completion as defined in the Contract, ordinary wear and tear and unusual abuse or neglect excepted. The date of completion is _____, 20____.
3. In the event Contractor fails to comply with the above-mentioned conditions within a reasonable period of time, as determined by District, but not later than **SEVEN (7)** calendar days after being notified in writing by District, Contractor authorizes District to proceed to repair or replace the defective Work at the expense of Contractor. Contractor shall pay the costs and charges therefor upon demand.

4. **Representatives to be contacted for service subject to the terms of Contract:**

NAME: _____

ADDRESS: _____

PHONE NO.: _____

EMAIL: _____

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

DOCUMENT 00 70 00

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1. CONTRACT TERMS AND DEFINITIONS

1.1. Definitions

Wherever used in the Contract Documents, the following terms shall have the meanings indicated, which shall be applicable to both the singular and plural thereof:

1.1.1. Adverse Weather: Weather that satisfies all of the following conditions: (1) unusually severe precipitation, sleet, snow, hail, heat, or cold conditions in excess of the norm for the location and time of year it occurred, (2) unanticipated, and (3) occurring at the Project Site.

1.1.2. Allowance(s): Amount(s) stated in the Agreement for specific scopes of work for which Contractor may, upon District's written approval, bill its time, materials, and other items in the identical structure as a Change Order.

1.1.3. Approval, Approved, and/or Accepted: Refer to written authorization, unless stated otherwise.

1.1.4. Architect: The individual, partnership, corporation, joint venture, or any combination thereof, named as Architect that has the rights and authority assigned to the Architect in the Contract Documents. The term Architect means the District's Architect on this Project or the Architect's authorized representative. If no Architect is used on the Project, then all references in the Contract Documents to Architect shall be read to refer to District.

1.1.5. As-Built Drawings: A reproducible full-size sets of drawings to be prepared on a monthly basis, and upon Project Completion, pursuant to the Contract Documents, that reflect changes made during the performance of the Work, recording differences between the original design of the Work and the Work as constructed.

1.1.6. Bidder: A contractor who provides a bid to the District to perform the Work of the Contract.

1.1.7. Change Order: A written order to the Contractor authorizing an addition to, deletion from, or revision in the Work, and/or authorizing an adjustment in the Contract Price or Contract Time. If a Change Order is required to be approved by DSA, the District may call it a Construction Change Document.

1.1.8. Completion: When the entire Work shall have been completed, including all punch list items, as further detailed in the "Completion of the Project" Section herein. Final DSA approval of the Project is not required for Completion. There is no "Substantial Completion" or "Beneficial Occupancy" for this Project, although the District may occupy the Project prior to completion as permitted herein.

1.1.9. Construction Manager: The individual, partnership, corporation, joint venture, or any combination thereof, or its authorized representative, named as such by the District. If no Construction Manager is used on the Project, then all references in the Contract Documents to Construction Manager shall be read to refer to District.

1.1.10. Construction Schedule: The progress schedule of construction of the Project as provided by Contractor and approved by District.

1.1.11. Contract, Contract Documents: The Contract consists exclusively of the documents evidencing the agreement of the District and Contractor, identified as the Contract Documents. The Contract Documents consist of the following documents:

1.1.11.1. Notice to Bidders / Invitation to Bid

- 1.1.11.2. Instructions to Bidders
- 1.1.11.3. Bid Form
- 1.1.11.4. Bid Bond
- 1.1.11.5. Designated Subcontractors List
- 1.1.11.6. Noncollusion Declaration
- 1.1.11.7. Iran Contracting Act Certification
- 1.1.11.8. Certifications to be Completed by Contractor
- 1.1.11.9. Disabled Veteran's Business Enterprise Participation Certification
- 1.1.11.10. Criminal Background Investigation/Fingerprinting Certification
- 1.1.11.11. Notice of Award
- 1.1.11.12. Agreement
- 1.1.11.13. Escrow of Bid Documentation (if applicable)
- 1.1.11.14. Escrow Agreement for Security Deposits in Lieu of Retention
- 1.1.11.15. Storm Water Pollution Prevention Plan (if applicable)
- 1.1.11.16. Notice to Proceed
- 1.1.11.17. Performance Bond
- 1.1.11.18. Payment Bond (Contractor's Labor and Material Bond)
- 1.1.11.19. District Contract Forms (if applicable)
- 1.1.11.20. District Closeout Forms (if applicable)
- 1.1.11.21. Warranty and Guarantee Form
- 1.1.11.22. General Conditions
- 1.1.11.23. Special Conditions
- 1.1.11.24. Project Plans, Specifications, Technical Specifications, and Drawings
- 1.1.11.25. Addenda to any of the above documents
- 1.1.11.26. Schedules if approved in writing by the District
- 1.1.11.27. Change Orders or written modifications to the above documents if approved in writing by the District

1.1.12. Contract Price: The total monies payable to the Contractor under the terms and conditions of the Contract Documents.

1.1.13. Contract Time: The time period stated in the Agreement for the Completion of the Work.

1.1.14. Contractor: The licensed person, entity, or entities identified in the Agreement as contracting to perform the Work.

1.1.15. Daily Job Report(s): Daily Project reports prepared by the Contractor's employee(s) who are present on Site, which shall include the information required herein.

1.1.16. Day(s): Unless otherwise designated, day(s) means calendar day(s). **"Business Day(s)"** shall mean days except Saturday, Sunday, a day that is federally-recognized holiday, or a day that is a California-recognized holiday.

1.1.17. Defective or Nonconforming Work. Defective or nonconforming Work is any Work which is unsatisfactory, faulty or deficient by: (a) not conforming to the requirements of the Contract Documents; (b) not conforming to the standards of workmanship of the applicable trade; (c) not being in compliance with the requirements of any inspection, reference, standard, test, or approval required by the Contract Documents; or (d) damage to Work occurring prior to Completion.

1.1.18. District: The public agency or the school district for which the Work is performed.

1.1.19. Drawings: (or "Plans") The graphic and pictorial portions of the Contract Documents showing the design, location, scope and dimensions of the Work, generally including plans, elevations, sections, details, schedules, sequence of operation, and diagrams.

1.1.20. DSA: Division of the State Architect.

1.1.21. Force Account Directive: A process that may be used when the District and the Contractor cannot agree on a price for a specific scope of work or before Contractor prepares a price for the scope of work and Contractor is directed in writing by the District to perform on a time and materials basis.

1.1.22. Premises: The real property owned by the District on which the Project Site is located. For example, if the Project is only being performed on a portion of a school, the Site is only the area where the Project is located (the Project Site), and the Premises is the entire school site.

1.1.23. Product(s): New material, machinery, components, equipment, fixtures and systems forming the Work, including existing materials or components required and approved by the District for reuse.

1.1.24. Product Data: Illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by Contractor to illustrate a material, product, or system for a scope of the Work.

1.1.25. Project: The planned undertaking as provided for in the Contract Documents.

1.1.26. Project Inspector: (or "Inspector") Individual(s) retained by the District in accordance with title 24 of the California Code of Regulations to monitor and inspect the Project. If no Project Inspector is used on the Project, then all references in the Contract Documents to Project Inspector shall be read to refer to District.

1.1.27. Program Manager: The individual, partnership, corporation, joint venture, or any combination thereof, or its authorized representative, named as such by the District. If no Program Manager is designated for the Project then all references to Program Manager shall refer to District.

1.1.28. Proposed Change Order: A written request prepared by the Contractor requesting that the District and the Architect issue a Change Order based upon a proposed change to the Work.

1.1.29. Provide: Shall include “provide complete in place,” that is, “furnish and install,” and “provide complete and functioning as intended in place” unless specifically stated otherwise.

1.1.30. Request for Information: (or “RFI”) A written request prepared by the Contractor requesting that the Architect provide additional information necessary to clarify or amplify an item in the Contract Documents that the Contractor believes is not clearly shown or called for in the Drawings or Specifications or other portions of the Contract Documents, or to address issues that have arisen under field conditions.

1.1.31. Request for Substitution: A request by Contractor to substitute an equal or superior material, product, thing, or service for a specific material, product, thing, or service that has been designated in the Contract Documents by a specific brand or trade name.

1.1.32. Safety Orders: Written and/or verbal orders for construction issued by the California Division of Industrial Safety (“CalOSHA”) or by the United States Occupational Safety and Health Administration (“OSHA”).

1.1.33. Safety Plan: Contractor’s safety plan specifically adapted for the Project. Contractor’s Safety Plan shall comply with all provisions regarding Project safety, including all applicable provisions in these General Conditions.

1.1.34. Samples: Physical examples that illustrate materials, products, equipment, finishes, colors, or workmanship and that, when approved in accordance with the Contract Documents, establish standards by which portions of the Work will be judged.

1.1.35. Shop Drawings: All drawings, prints, diagrams, illustrations, brochures, schedules, and other data that are prepared by the Contractor, a subcontractor, manufacturer, supplier, or distributor, that illustrate how specific portions of the Work shall be fabricated or installed.

1.1.36. Site: The Project site as shown on the Drawings.

1.1.37. Specifications: That portion of the Contract Documents, Division 1 through Division 17, and all technical sections, and addenda to all of these, if any, consisting of written descriptions and requirements of a technical nature of materials, equipment, construction methods and systems, standards, and workmanship.

1.1.38. Subcontractor: A contractor and/or supplier who is under contract with the Contractor or with any other subcontractor, regardless of tier, to perform a portion of the Work.

1.1.39. Submittal Schedule: The schedule of submittals as provided by Contractor and approved by District.

1.1.40. Surety: The person, firm, or corporation that executes as surety the Contractor’s Performance Bond and Payment Bond, and must be a California admitted surety insurer as defined in the Code of Civil Procedure section 995.120.

1.1.41. SWPPP: The District’s Storm Water Pollution Prevention Plan.

1.1.42. Terms. The term “provide” means “provide complete in place” or to “furnish and install” such item. Unless otherwise provided in the Contract Documents, the terms “approved;” “directed;” “satisfactory;” “accepted;” “acceptable;” “proper;” “required;” “necessary” and “equal” shall mean as approved, directed, satisfactory, accepted, acceptable, proper, required, necessary and equal, in the opinion of the District. The term “typical” as used in the Drawings shall require the installation or furnishing of such item(s) of the Work designated as “typical” in all other areas similarly marked as “typical”; Work in such other areas shall conform to that shown as “typical” or as reasonably inferable

therefrom.

1.1.43. Unilateral Change Order: A written order prepared and issued by the District, the Construction Manager, and/or the Architect and signed by the District and the Architect, directing a change in the Work. **A Unilateral Change Order is NOT a Construction Change Document (which is defined above as a Change Order that DSA must approve).**

1.1.44. Work: All labor, materials, equipment, components, appliances, supervision, coordination, and services required by, or reasonably inferred from, the Contract Documents, that are necessary for the construction and Completion of the Project.

1.2. Laws Concerning the Contract

Contract is subject to all provisions of the Constitution and laws of California and the United States, governing, controlling, or affecting District, or the property, funds, operations, or powers of District, and such provisions are by this reference made a part hereof. Any provision required by law to be included in this Contract shall be deemed to be inserted.

1.3. No Oral Agreements

No oral agreement or conversation with any officer, agent, or employee of District, either before or after execution of Contract, shall affect or modify any of the terms or obligations contained in the Contract Documents.

1.4. No Assignment

Contractor shall not assign the Contract or any part thereof including, without limitation, any services or money to become due without the prior written consent of the District. Assignment without District's prior written consent shall be null and void. Any assignment of money due or to be come due under the Contract shall be subject to a prior lien for services rendered or material supplied for Work performed in favor of all persons, firms, or corporations rendering services or supplying material to the extent that claims are filed pursuant to the Civil Code, Code of Civil Procedure, Government Code, Labor Code, and/or Public Contract Code, and shall also be subject to deductions for Liquidated Damages or withholding of payments as determined by District in accordance with the Contract. Contractor shall not assign or transfer in any manner to a Subcontractor or supplier the right to prosecute or maintain an action against the District.

1.5. Confidentiality

Contractor shall maintain the confidentiality of all information, documents, programs, procedures and all other items that Contractor encounters while performing the Work. This requirement shall be ongoing and shall survive the expiration or termination of the Contract and specifically includes, without limitation, all student, parent, and employee disciplinary information and health information.

1.6. Notice and Service Thereof

Any notice required by the Contract shall be in writing, dated and signed by the party giving notice or by a duly authorized representative of that party and pursuant to the provisions in the Agreement.

1.7. No Waiver

The failure of District in any one or more instances to insist upon strict performance of any term of the Contract or to exercise any District option shall not be construed as a waiver or relinquishment of the right to assert or rely upon any such term or option on a future occasion. No action or failure to act by

the District, Architect, or Construction Manager shall constitute a waiver of any right or duty afforded the District under the Contract, nor shall any action or failure to act constitute an approval of or acquiescence in any breach hereunder, except as may be specifically agreed in writing.

1.8. Substitutions for Specified Items

1.8.1. Requests for substitutions prior to award of the Contract shall be submitted within the time period indicated in the Instructions to Bidders.

1.8.2. Requests for substitutions after award of the Contract shall be submitted within **THIRTY-FIVE (35)** days of the date of the Notice of Award. This time period may be extended by the District only, in its sole discretion.

1.8.3. Whenever in the Specifications any materials, process, or article is indicated or specified by grade, patent, or proprietary name, or by name of manufacturer, that Specification shall be deemed to be followed by the words "or equal." Contractor may, unless otherwise stated, offer any material, process, or article that shall be substantially equal or better in every respect to that so indicated or specified.

1.8.3.1. If the material, process, or article offered by Contractor is not, in the opinion of the District, substantially equal or better in every respect to that specified, then Contractor shall furnish the material, process, or article specified in the Specifications without any additional compensation or change order.

1.8.3.2. This provision shall not be applicable with respect to any material, product, thing or service for which District made findings and gave notice in accordance with Public Contract Code section 3400(b); therefore, Contractor shall not be entitled to request a substitution with respect to those materials, products or services.

1.8.4. A request for a substitution shall be in writing and shall include:

1.8.4.1. All variations of the proposed substitute from the material specified including, but not limited to, principles of operation, materials, or construction finish, thickness or gauge of materials, dimensions, weight, and tolerances;

1.8.4.2. Available maintenance, repair or replacement services;

1.8.4.3. Increases or decreases in operating, maintenance, repair, replacement, and spare parts costs;

1.8.4.4. Whether or not acceptance of the substitute will require other changes in the Work (or in work performed by the District or others under Contract with the District); and

1.8.4.5. The time impact on any part of the Work resulting directly or indirectly from acceptance of the proposed substitute.

1.8.5. No substitutions shall be made until approved, in writing, by the District. The burden of proof as to equality of any material, process, or article shall rest with Contractor. The Contractor warrants that if substitutes are approved:

1.8.5.1. The proposed substitute is equal or superior in all respects to that specified, and that such proposed substitute is suitable and fit for the intended purpose and will perform adequately the function and achieve the results called for by the general design and the Contract Documents;

1.8.5.2. The Contractor provides the same warranties and guarantees for the substitute that would be provided for that specified;

1.8.5.3. The Contractor shall be fully responsible for the installation of the substitute and any changes in the Work required, either directly or indirectly, because of the acceptance of such substitute, with no increase in Contract Price or Contract Time. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the Contract Price or Contract Time;

1.8.5.4. The Contractor shall be responsible for any re-design costs occasioned by District's acceptance and/or approval of any substitute; and

1.8.5.5. The Contractor shall, in the event that a substitute is less costly than that specified, credit the District with one hundred percent (100%) of the net difference between the substitute and the originally specified material. In this event, the Contractor agrees to execute a deductive Change Order to reflect that credit.

1.8.6. In the event Contractor furnishes a material, process, or article more expensive than that specified, the difference in the cost of that material, process, or article so furnished shall be borne by Contractor.

1.8.7. In no event shall the District be liable for any increase in Contract Price or Contract Time due to any claimed delay in the evaluation of any proposed substitute or in the acceptance or rejection of any proposed substitute.

1.8.8. If the District approves a substitution after the award of the Contract, the District shall memorialize that approval in a Change Order or other applicable Contract modification process.

1.9. Materials and Work

1.9.1. Except as otherwise stated in the Contract, Contractor shall provide and pay for all materials, labor, tools, equipment, transportation, supervision, temporary constructions of every nature, and all other services, management, and facilities of every nature whatsoever necessary to execute and complete the Contract within the Contract Time.

1.9.2. Unless otherwise specified, all materials shall be new and the best of their respective kinds and grades as noted or specified, and workmanship shall be of good quality.

1.9.3. Materials shall be furnished in sufficient quantities and at such times as to ensure uninterrupted progress of Work and shall be stored properly and protected as required.

1.9.4. For all materials and equipment specified or indicated in the Drawings, the Contractor shall provide all labor, materials, equipment, and services necessary for complete assemblies and complete working systems, functioning as intended. Incidental items not indicated on 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 here 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.

1.9.5. Contractor shall, after award of Contract by District and after relevant submittals have been approved, place orders for materials and/or equipment as specified so that delivery of same may be made without delays to the Work. Contractor shall, upon demand from District, present documentary evidence showing that orders have been placed.

1.9.6. District reserves the right but has no obligation, for any neglect in complying with the above instructions, to place orders for such materials and/or equipment as it may deem advisable in order that the Work may be completed at the date specified in the Agreement, and all expenses incidental to the procuring of said materials and/or equipment shall be paid for by Contractor or withheld from payment(s) to Contractor.

1.9.7. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in Work and agrees upon Completion of all Work to deliver the Site to District, together with all improvements and appurtenances constructed or placed thereon by it, and free from any claims, liens, or charges. Contractor further agrees that neither it nor any person, firm, or corporation furnishing any materials or labor for any Work shall have any right to lien any portion of the Premises or any improvement or appurtenance thereon, except that Contractor may install metering devices or other equipment of utility companies or of political subdivision, title to which is commonly retained by utility company or political subdivision. In the event of installation of any such metering device or equipment, Contractor shall advise District as to owner thereof.

1.9.8. Nothing contained in this Article, however, shall defeat or impair the rights of persons furnishing materials or labor under any bond given by Contractor for their protection or any rights under law permitting such protection or any rights under law permitting such persons to look to funds due Contractor in hands of District (e.g., stop payment notices). This provision shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing material for work when no formal contract is entered into for such material.

1.9.9. Title to new materials and/or equipment for the Work and attendant liability for its protection and safety shall remain with Contractor until incorporated in the Work of this Contract and accepted by District. No part of any materials and/or equipment shall be removed from its place of storage except for immediate installation in the Work. Contractor shall keep an accurate inventory of all materials and/or equipment in a manner satisfactory to District or its authorized representative and shall, at the District's request, forward it to the District.

1.9.10. Contractor certifies that it shall comply with the recycled product requirements of Public Contract Code section 22150, et seq., including, without limitation, section 22154 which states, "All businesses shall certify in writing to the contracting officer, or his or her representative, the minimum, if not exact, percentage of postconsumer material in the products, materials, goods, or supplies being offered or sold to any local public entity."

2. DISTRICT

2.1. The governing board of the District or its designees will act for the District in all matters pertaining to the Contract.

2.2. The District may, at any time,

2.2.1. Direct the Contractor to communicate with or provide notice to the Construction Manager or the Architect on matters for which the Contract Documents indicate the Contractor will communicate with or provide notice to the District; and/or

2.2.2. Direct the Construction Manager or the Architect to communicate with or direct the Contractor on matters for which the Contract Documents indicate the District will communicate with or direct the Contractor.

2.3. District's Rights if Contractor Fails to Perform. If the District at any time believes that the Contractor is behind schedule, is failing to construct the Project pursuant to the Contract Documents or is otherwise failing to perform any provisions of this Contract, the District, after **FORTY-EIGHT (48)** hours written

notice to the Contractor, may take any action necessary or beneficial to the District to complete the Project, takeover the Work of the Contract, terminate or suspend the Contract as indicated herein, or any combination or portion of those actions. The Contractor and the Surety shall be liable to the District for any cost incurred by the District in those actions and the District has the right to deduct the cost thereof from any payment then or thereafter due the Contractor.

3. ARCHITECT

- 3.1.** Architect shall have the authority to act on behalf of District to the extent expressly provided in the Contract Documents and to the extent determined by District to, among other things, observe the progress and quality of the Work on behalf of the District.
- 3.2.** Architect shall have authority to reject materials, workmanship, and/or the Work whenever rejection may be necessary, in Architect's reasonable opinion, to insure the proper execution of the Contract and if Work is defective or does not conform to the requirements of the Contract Documents. Whenever the Architect considers it necessary or advisable, for implementation of the intent of the Contract Documents, the Architect will have authority to require additional inspections or testing of the Work, whether or not such Work is fabricated, installed or completed. Neither this authority of the Architect nor a decision made in good faith by the Architect to exercise or not to exercise that authority shall give rise to a duty or responsibility to the Contractor, Subcontractors, material suppliers, their agents or employees, or other persons performing portions of the Work.
- 3.3.** Architect shall, with the District and on behalf of the District, determine the amount, quality, acceptability, and fitness of all parts of the Work, and interpret the Specifications, Drawings, and shall, with the District, interpret all other Contract Documents.
- 3.4.** Architect shall have all authority and responsibility established by law, including title 24 of the California Code of Regulations.
- 3.5.** Contractor shall provide District and the Construction Manager with a copy of all written communication between Contractor and Architect at the same time as that communication is made to Architect, including, without limitation, all RFIs, correspondence, submittals, claims, and proposed change orders.

4. CONSTRUCTION MANAGER

- 4.1.** If a Construction Manager is used on this Project, the Construction Manager will provide administration of the Contract on the District's behalf. After execution of the Contract and Notice to Proceed, all correspondence and/or instructions from Contractor and/or District shall be forwarded through the Construction Manager. The Construction Manager will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences, or procedures or for safety precautions in connection with the Work, which shall all remain the Contractor's responsibility.
- 4.2.** Construction Manager, however, will have authority to reject materials and/or workmanship not conforming to the Contract Documents, as determined by the District, the Architect, and/or the Project Inspector. Construction Manager shall also have the authority to require special inspection or testing of any portion of the Work, whether it has been fabricated, installed, or fully completed. Any decision made by Construction Manager, in good faith, shall not give rise to any duty or responsibility of the Construction Manager to the Contractor, any Subcontractor, their agents, employees, or other persons performing any of the Work. Construction Manager shall have free access to all parts of Work at any time.
- 4.3.** If the District does not use a Construction Manager on this Project, all references to Construction Manager or CM shall be read as District.

5. INSPECTOR, INSPECTIONS AND TESTS

5.1. Project Inspector

5.1.1. One or more Project Inspector(s), including special Project Inspector(s), as required, will be assigned to the Work by District, in accordance with requirements of title 24, part 1, of the California Code of Regulations, to enforce the building code and monitor compliance with Plans and Specifications for the Project previously approved by the DSA. Duties of Project Inspector(s) are specifically defined in section 4-342 of said part 1 of title 24.

5.1.2. No Work shall be carried on except with the knowledge and under the inspection of the Project Inspector(s). The Project Inspector(s) shall have free access to all parts of Work at any time. Contractor shall furnish Project Inspector(s) reasonable opportunities for obtaining such information as may be necessary to keep Project Inspector(s) fully informed respecting progress and manner of work and character of materials. Inspection of Work shall not relieve Contractor from the obligation to fulfill the Contract. Project Inspector(s) and the DSA are authorized to stop work whenever the Contractor and/or its Subcontractor(s) are not complying with the Contract Documents. Any work stoppage by the Project Inspector(s) and/or DSA shall be without liability to the District. Contractor shall instruct its Subcontractors and employees accordingly.

5.1.3. If Contractor and/or any Subcontractor requests that the Project Inspector(s) perform any inspection off-site, this shall only be done if it is allowable pursuant to applicable regulations and DSA, if the Project Inspector(s) agree to do so, and at the expense of the Contractor.

5.1.4. Limitations on Project Inspector Authority. The Project Inspector does not have authority to interpret the Contract Documents or to modify the Work depicted in the Contract Documents. No Work inconsistent with the Contract Documents shall be performed solely on the basis of the direction of the Project Inspector, and the Contractor shall be liable to the District for the consequences of all Work performed on such basis.

5.2. Tests and Inspections

5.2.1. Tests and Inspections shall comply with title 24, part 1, California Code of Regulations, group 1, article 5, section 4-335, and with the provisions of the Specifications.

5.2.2. If the Contract Documents, laws, ordinances or any public authority with jurisdiction over the Work requires the Work, or any portion thereof, to be specially tested, inspected or approved, the Contractor shall give the Architect, the Construction Manager and the Project Inspector written notice of the readiness of such Work for observation, testing or inspection at least seventy-two (72) hours prior to the time for the conducting of such test, inspection or observation. If inspection, testing or observation is by authority other than the District, the Contractor shall inform the Project Inspector and the Construction Manager not less than seventy-two (72) hours prior to the date fixed for such inspection, test or observation. The Contractor shall not cover up any portion of the Work subject to tests, inspections or observations prior to the completion and satisfaction of the requirements of such test, inspection or observation. In the event that any portion of the Work subject to tests, inspection or approval shall be covered up by Contractor prior to completion and satisfaction of the requirements of such tests, inspection or approval, Contractor shall be responsible for the uncovering of such portion of the Work as is necessary for performing such tests, inspection or approval without adjustment of the Contract Price or the Contract Time on account thereof.

5.2.3. The District will select an independent testing laboratory to conduct the tests. Selection of the materials required to be tested shall be by the laboratory or the District's representative and not by the Contractor. The Contractor shall notify the District's representative a sufficient time in advance of its readiness for required observation or inspection.

5.2.4. The Contractor shall notify the District's representative a sufficient time in advance of the

manufacture of material to be supplied under the Contract Documents, that must by terms of the Contract Documents be tested, in order that the District may arrange for the testing of same at the source of supply. This notice shall be, at a minimum, seventy-two (72) hours prior to the manufacture of the material that must be tested.

5.2.5. Any material shipped by the Contractor from the source of supply prior to having satisfactorily passed required testing and inspection or prior to the receipt of notice from the representative that testing and inspection will not be required, shall not be incorporated into and/or onto the Project.

5.2.6. The District will select and pay testing laboratory costs for all tests and inspections. Costs of tests of any materials found to be not in compliance with the Contract Documents shall be paid for by the District and reimbursed by the Contractor or deducted from the Contract Price.

5.3. Costs for After Hours and/or Off Site Inspections

5.3.1. If the Contractor performs Work outside the Inspector's regular working hours, over a period of more than eight (8) hours per day by any single person, on weekends/holidays or requests the Inspector to perform inspections off Site, then the costs of any inspections required outside regular working hours, over a period of more than eight (8) hours per day by any single person, on weekends/holidays or off Site, shall be borne by the Contractor and may be invoiced to the Contractor by the District or the District may deduct those expenses from the next Progress Payment.

6. CONTRACTOR

Contractor shall construct the Work for the Contract price including any adjustment(s) to the Contract Price pursuant to provisions herein regarding changes to the Contract Price. Except as otherwise noted, Contractor shall provide and pay for all labor, materials, equipment, permits, fees, licenses, facilities, transportation, taxes, and services necessary for the proper execution and Completion of the Work, except as indicated herein.

6.1. Status of Contractor

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

6.1.2. As required by law, Contractor and all Subcontractors shall be properly licensed and regulated by the Contractor's State License Board, located at 9821 Business Park Drive, , Sacramento, California 95827, with a mailing address of Post Office Box 26000, Sacramento, California, and with a website at <http://www.cslb.ca.gov>.

6.2. Contractor's Supervision

6.2.1. During progress of the Work, Contractor shall keep on the Premises, and at all other locations where any Work related to the Contract is being performed, a competent project manager and construction superintendent who are employees of the Contractor, to whom the District does not object and at least one of whom shall be fluent in English, written and verbal.

6.2.2. The project manager and construction superintendent shall both speak fluently the predominant language of the Contractor's employees.

6.2.3. Before commencing the Work, Contractor shall give written notice to District of the name of its project manager and construction superintendent. Neither the Contractor's project manager nor construction superintendent shall be changed except with prior written notice to District, unless the Contractor's project manager and/or construction superintendent proves to be unsatisfactory to Contractor, District, any of the District's employees, agents, the Construction Manager, or the Architect, in which case, Contractor shall notify District in writing. District retains the right to reasonably refuse Contractor's replacement personnel. The Contractor's project manager and construction superintendent shall each represent Contractor, and all directions given to Contractor's project manager and/or construction superintendent shall be as binding as if given to Contractor.

6.2.4. Contractor shall give efficient supervision to Work, using its best skill and attention. Contractor shall carefully study and compare all Contract Documents, Drawings, Specifications, and other instructions and shall at once report to District, Construction Manager, and Architect any error, inconsistency, or omission that Contractor or its employees and Subcontractors may discover, in writing, with a copy to District's Project Inspector(s). The Contractor shall have responsibility for discovery of errors, inconsistencies, or omissions.

6.2.5. The Contractor's project manager shall devote sufficient time to the Project on site, and in the Contractor's home office to pre-plan activities to meet the Construction Schedule and fulfill all Contract obligations. This includes making timely submittals, issuing and disseminating necessary RFI's, promptly processing and distributing bulletins, change orders and payments, keeping required logs current etc. If any of these activities fall behind contract requirements or dates necessary to complete the Project on time, the Contractor must provide a full time project manager on the Project Site dedicated solely to the Project, until the deficiencies are corrected.

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

6.2.7. Omissions from the Drawings or Specifications, or the misdescription of details of Work which are manifestly necessary to carry out the intent of the Drawings and Specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed Work, but they shall be performed as if fully and correctly set forth and described in the Drawings and Specifications.

6.2.8. The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The Contractor shall be responsible to see that the finished Work complies accurately with the Contract Documents.

6.3. Duty to Provide Fit Workers

6.3.1. Contractor and Subcontractor(s) shall at all times enforce strict discipline and good order among their employees and shall not employ or work any unfit person or anyone not skilled in work assigned to that person. It shall be the responsibility of Contractor to ensure compliance with this requirement. District may require Contractor to permanently remove unfit persons from Project Site.

6.3.2. COVID-19. Contractor shall ensure that all its employees and employees of its subcontractors shall comply with all applicable and existing federal, state, and/or local statutes, orders, rules, regulations, ordinances, and/or directives relating to construction site safety in connection with COVID-19, and/or any similar virus or derivative strain.

6.3.3. Any person in the employ of Contractor or Subcontractor(s) whom District may deem incompetent or unfit shall be excluded from working on the Project and shall not again be employed on the Project except with the prior written consent of District.

6.3.4. The Contractor shall furnish labor that can work in harmony with all other elements of labor employed or to be employed in the Work.

6.3.5. If Contractor intends to make any change in the name or legal nature of the Contractor's entity, Contractor must first notify the District. The District shall determine if Contractor's intended change is permissible while performing the Contract.

6.3.6. Compliance with Immigration Reform and Control Act of 1986. As required by law, Contractor and all Subcontractors shall employ individuals for the Work in conformity with the Immigration Reform and Control Act of 1986, 8 USC §§1101 et seq.

6.4. Personnel

6.4.1. Contractor, Contractor's employees, Subcontractors, Subcontractors' employees, or any person associated with the Work shall conduct themselves in a manner appropriate for a school site. The District will not permit any (1) verbal or physical contact with neighbors, students, and faculty; (2) profanity, or inappropriate attire or behavior; (3) photographing, videoing, or audio recording of any neighbors, students, and faculty or any posting of any photographs, videos, or audio recordings of any neighbors, students, and faculty on any internet site, social media platform of any kind, regardless of source of any photograph, video, or audio recording. District may require Contractor to permanently remove noncomplying persons from Project Site.

6.4.2. The Contractor shall employ a full-time superintendent and necessary assistants who shall have complete authority to represent and act on behalf on the Contractor on all matters pertaining to the Work. The superintendent shall be competent and have a minimum of five (5) years' experience in construction supervision on projects of similar scale and complexity. The superintendent shall be satisfactory to the District and, if not satisfactory, shall be replaced by the Contractor with one that is acceptable to the District. The superintendent shall not be changed without the written consent of the District unless the superintendent ceases to be employed by the Contractor.

6.4.3. The Contractor shall employ a competent estimator and necessary assistants, or contract for sufficient services of an estimating consultant and to process proposed change orders. The estimator shall have a minimum of five (5) years' experience in estimating. The estimator shall be satisfactory to the District and, if not satisfactory, shall be replaced by the Contractor with one that is acceptable. The Contractor shall submit PCO's requested by the District within fourteen (14) calendar days.

6.4.4. The Contractor shall employ a competent scheduler and necessary assistants, or contract for sufficient services of a scheduling consultant. The scheduler shall have a minimum of five (5) years' experience in scheduling. The scheduler shall be satisfactory to the District and, if not satisfactory, shall be replaced by the Contractor with one that is acceptable.

6.4.5. Contractor shall at all times enforce strict discipline and good order among Contractor's employees, and shall not employ on the Project any unfit person or anyone not skilled in the task assigned.

6.4.6. If Contractor or any Subcontractor on the Project site fails to comply with any provision herein, the District may have the offending person(s) immediately removed from the Site, and the person(s) shall be replaced within three (3) days, at no additional expense to the District. Contractor, on behalf of it and its Subcontractors, hereby waives any claim that the provisions of this paragraph or the enforcement thereof interferes, or has the potential to interfere, with its right to control the means and methods of its performance and duties under this Contract.

6.5. Prohibition on Harassment

6.5.1. In addition to the non-discrimination requirements in the Contract Documents, the Contractor and all Subcontractors must comply with these provisions prohibiting harassment at the Site. The District is committed to providing a campus and workplace free of sexual harassment and harassment based on factors such as race, color religion, national origin, ancestry, age, medical condition, marital status, disability or veteran status. Harassment includes without limitation, verbal, physical or visual conduct which creates an intimidating, offensive or hostile environment such as racial slurs; ethnic jokes; posting of offensive statements, posters or cartoons or similar conduct. Sexual harassment includes without limitation the solicitation of sexual favors, unwelcome sexual advances, or other verbal, visual or physical conduct of a sexual nature.

6.5.2. Contractor shall take all reasonable steps to prevent harassment from occurring, including without limitation affirmatively raising the subject of harassment among its employees, expressing strong disapproval of any form of harassment, developing appropriate sanctions, informing employees of their right to raise and how to raise the issue of harassment and informing complainants of the outcome of an investigation into a harassment claim.

6.5.3. Contractor shall not permit any person, whether employed by Contractor or a Subcontractor or any other person or entity, performing any Work at or about the Site to engage in any prohibited form of harassment. Any person performing or providing Work on or about the Site engaging in a prohibited form of harassment directed to any student, faculty member or staff of the District or directed to any other person on or about the Site shall be subject to immediate removal and shall be prohibited thereafter from providing or performing any portion of the Work. Upon the District's receipt of any notice or complaint that any person employed directly or indirectly by Contractor on any Subcontractor in performing or providing the Work has engaged in a prohibited form of harassment, the District will promptly undertake an investigation of such notice or complaint. In the event that the District, after such investigation, reasonably determines that a prohibited form of harassment has occurred, the District shall promptly notify the Contractor of the same and direct that the person engaging in such conduct be immediately removed from the Site. Unless the District's determination that a prohibited form of harassment has occurred is grossly negligent or without reasonable cause, District shall have no liability for directing the removal of any person determined to have engaged in a prohibited form of harassment nor shall the Contract Price or the Contract Time be adjusted on account thereof. The indemnity provisions of the Contract Documents apply to any assertion by any person dismissed from performing or providing work at the direction of the District pursuant to this provision; or (ii) the assertion by any person that any person directly or indirectly under the employment or direction of the Contractor has engaged in a prohibited form of harassment directed to or affecting such person. The obligations of the Contractor and the Surety under the preceding sentence are in addition to, and not in lieu of, any other obligation of defense, indemnity and hold harmless whether arising under the Contract Documents, at law or otherwise; these obligations survive completion of the Work or the termination of the Contract.

6.6. Conferences and Meetings.

6.6.1. In addition to the conference and meeting requirements in the Specifications, Contractor's supervisory personnel for the Work and the Contractor's management personnel shall attend all required meetings as required by the Contract Documents or as requested by the District. The Contractor's personnel participating in conferences and meetings relating to the Work shall be authorized to act on

behalf of the Contractor and to bind the Contractor. The Contractor is solely responsible for arranging for the attendance by Subcontractors and Material Suppliers at meetings and conferences relating to the Work as necessary, appropriate or as requested by the District.

6.6.2. Preconstruction Conference. The Contractor's representatives (and representatives of Subcontractors as requested by the District) shall attend a preconstruction conference at such time and place as designated by the District. The preconstruction conference will generally address the requirements of the Work and Contract Documents, and to establish construction procedures. Subject matters of the preconstruction conference will include as appropriate: (a) administrative matters, including an overview of the respective responsibilities of the District, Architect, Construction Manager, Contractor, Subcontractors, Project Inspector, and others performing any part of the Work or services relating to the Work; (b) Submittals; (c) Changes; (d) employment practices, including Certified Payroll preparation and submission and prevailing wage rate responsibilities of the Contractor and Subcontractors; (e) Progress Schedule development and maintenance; (f) development of Schedule of Values and payment procedures; (g) implementation of BIM, if applicable; (h) communication procedures, including the handling of Requests for Information; (i) emergency and safety procedures; (j) Site visitor policies; (k) conduct of Contractor/Subcontractor personnel at the Site; and (l) Completion, Punchlist and closeout procedures.

6.6.3. Progress Meetings. Progress meetings will be conducted on regular intervals (weekly unless otherwise expressly indicated elsewhere in the Contract Documents). The Contractor's representatives and representatives of Subcontractors (as requested by the District) shall attend progress meetings. Progress Meetings will be chaired by the District or the Construction Manager and will generally include as agenda items: Site safety, field issues, coordination of Work, construction progress and impacts to timely Completion, if any. The purposes of the progress meetings include: a formal and regular forum for discussion of the status and progress of the Work by all Project participants, a review of progress or resolution of previously raised issues and action items assigned to the Project participants, and reviews of the Progress schedule and submittals. Contractor shall prepare and submit at each progress meeting a three (3) week look-ahead schedule identifying all planned activities for the next three (3) weeks and any deviations from activities in the current Construction Schedule.

6.6.4. Special Meetings. As deemed necessary or appropriate by the District, special meetings will be conducted with the participation of the Contractor, Subcontractors and other Project participants as requested by the District.

6.6.5. Minutes of Meetings. following conclusion of the preconstruction conference, progress meetings and special meetings, the Architect or the Construction Manager will prepare and distribute minutes reflecting the items addressed and actions taken at a meeting or conference. Unless the Contractor notifies the Architect and the Construction Manager in writing of objections or corrections to minutes prepared hereunder within five (5) days of the date of distribution of the minutes, the minutes as distributed shall constitute the official record of the meeting or conference. No objections or corrections of any Subcontractor or Material Supplier shall be submitted directly to the Architect or the Construction Manager; such objections or corrections shall be submitted to the Architect and the Construction Manager through the Contractor. If the Contractor timely interposes objections or notes corrections, the resolution of such matters shall be addressed at the next scheduled progress meeting.

6.7. Purchase of Materials and Equipment

6.7.1. The Contractor is required to order and obtain materials and equipment sufficiently in advance of its Work at no additional cost or advance payment from District to ensure against price escalations or delays. All materials and equipment shall be stored on-Site and secured by Contractor unless otherwise approved in writing by the District.

6.7.2. Off-Site Storage of Materials and Equipment Only Upon District's Written Consent. If

Contractor intends to store materials and/or equipment off site after District has paid for those materials and/or equipment, Contractor must first obtain the District's express, written consent. If Contractor receives District's consent to store materials and/or equipment off site ("Stored Materials"), Contractor shall comply with all of the following:

6.7.2.1. Property of Others Insurance. Contractor shall procure and maintain, during the entire time Stored Materials are in off-site storage, insurance coverage acceptable to the District that shall protect Contractor and District from all claims for Stored Materials that are lost, stolen, or damaged. The District shall be named as a loss payee for this insurance coverage. The insurance coverage shall include a "loss payable endorsement" stating that all amounts payable will be paid as a joint-check to the Contractor and District. If approved in advance by District, this required insurance may be obtained by an "Employee Theft Protection Insurance Policy" or an "Employee Theft Protection Bond."

6.7.2.2. Payment for Stored Materials. District shall only make payment to Contractor for Stored Materials if agreed upon in advance, in writing, by the District and provided that Contractor submits an itemized list of all Stored Materials with Contractor's Application for Payment. Contractor's itemized list of all Stored Materials shall be supported by all of the following:

6.7.2.2.1. Itemized breakdown of the Stored Materials for the purpose of requesting partial payment, identifying the serial numbers and exact storage location of each piece of equipment and material; and

6.7.2.2.2. Verified invoices for the Stored Materials; and

6.7.2.2.3. Original copy of Property of Others Insurance, Employee Theft Protection Insurance Policy, or an Employee Theft Protection Bond based on the type of insurance required by the District. These documents shall include certificates and endorsements stating the coverage and that the District is a loss payee or obligee, as appropriate.

6.7.2.2.4. An express, signed document from Contractor indicating that the District may, at any time and at its sole discretion, have unhindered and unqualified access to all Stored Materials and to remove the Stored Materials.

6.8. Documents on Work

6.8.1. Contractor shall at all times keep on the Work Site, or at another location as the District may authorize in writing, one legible copy of all Contract Documents, including Addenda and Change Orders, and current titles 19 and 24 of the California Code of Regulations, the specified edition(s) of the California Building Standards Code (electronic versions are acceptable), all approved Drawings, Plans, Schedules, and Specifications, and all codes and documents referred to in the Specifications, and made part thereof. These documents shall be kept in good order and available to District, Construction Manager, Architect, Architect's representatives, the Project Inspector(s), and all authorities having jurisdiction. Contractor shall be acquainted with and comply with the provisions of these titles as they relate to this Project. (See particularly the duties of Contractor, title 24, part 1, California Code of Regulations, section 4-343.) Contractor shall also be acquainted with and comply with all California Code of Regulations provisions relating to conditions on this Project, particularly titles 8 and 17. Contractor shall coordinate with Architect and Construction Manager and shall submit its verified report(s) according to the requirements of title 24.

6.8.2. Daily Job Reports.

6.8.2.1. Contractor shall maintain, at a minimum, at least one (1) set of Daily Job Reports on the

Project. These must be prepared by the Contractor's employee(s) who are present on Site, and must include, at a minimum, the following information:

- 6.8.2.1.1.** A brief description of all Work performed on that day.
- 6.8.2.1.2.** A summary of all other pertinent events and/or occurrences on that day.
- 6.8.2.1.3.** The weather conditions on that day.
- 6.8.2.1.4.** A list of all Subcontractor(s) working on that day,
- 6.8.2.1.5.** A list of each Contractor employee working on that day and the total hours worked for each employee.
- 6.8.2.1.6.** A complete list of all equipment on Site that day, whether in use or not.
- 6.8.2.1.7.** A complete list of all materials, supplies, and equipment delivered on that day.
- 6.8.2.1.8.** A complete list of all inspections and tests performed on that day.

6.8.2.2. Each day Contractor shall provide a copy of the previous day's Daily Job Report to the District or the District's Construction Manager.

6.9. Preservation of Records

District shall have the right to examine and audit all Daily Job Reports or other Project records of Contractor's project manager(s), project superintendent(s), and/or project foreperson(s), all certified payroll records and/or related documents including, without limitation, payroll, payment, timekeeping and tracking documents; all books, estimates, records, contracts, documents, bid documents, bid cost data, subcontract job cost reports, and other data of the Contractor, any Subcontractor, and/or supplier, including computations and projections related to bidding, negotiating, pricing, or performing the Work or Contract modification, in order to evaluate the accuracy, completeness, and currency of the cost, manpower, coordination, supervision, or pricing data at no additional cost to the District. These documents may be duplicative and/or be in addition to any Bid Documents held in escrow by the District. Contractor shall make available at its office at all reasonable times the materials described in this paragraph for the examination, audit, or reproduction until three (3) years after final payment under this Contract. Notwithstanding the provisions above, Contractor shall provide any records requested by any governmental agency, if available, after the time set forth above.

6.10. Integration of Work

6.10.1. Contractor shall do all cutting, fitting, patching, and preparation of Work as required to make its several parts come together properly, to fit it to receive or be received by work of other contractors, and to coordinate tolerances to various pieces of work, showing upon, or reasonably implied by, the Drawings and Specifications for the completed structure, and shall conform them as District and/or Architect may direct.

6.10.2. All cost caused by defective or ill-timed Work shall be borne by Contractor, inclusive of repair work.

6.10.3. Contractor shall not endanger any work performed by it or anyone else by cutting, excavating, or otherwise altering work and shall not cut or alter work of any other contractor except with written consent of District.

6.11. Obtaining of Permits and Licenses

6.11.1. Contractor shall secure and pay for all permits, licenses, and certificates. Contractor must review the Special Conditions for any changes or exceptions to this provision.

6.12. Work to Comply with Applicable Laws and Regulations

6.12.1. Contractor shall give all notices and comply with all applicable laws, ordinances, rules, and regulations relating to the Work, including the specific laws, ordinances, rules, and regulations as indicated and specified in the Contract Documents and identified below, including but not limited to the appropriate statutes and administrative code sections. If Contractor observes that Drawings and Specifications are at variance therewith, or should Contractor become aware of the development of conditions not covered by Contract Documents that will result in finished Work being at variance therewith, Contractor shall promptly notify District in writing and any changes deemed necessary by District shall be made as provided in Contract for changes in Work.

6.12.1.1. National Electrical Safety Code, U. S. Department of Commerce

6.12.1.2. National Board of Fire Underwriters' Regulations

6.12.1.3. California Building Standards Code , latest addition, and the California Code of Regulations, Title 24, including amendments

6.12.1.4. Manual of Accident Prevention in Construction, latest edition, published by A.G.C. of America

6.12.1.5. Industrial Accident Commission's Safety Orders, State of California

6.12.1.6. Regulations of the State Fire Marshall (title 19, California Code of Regulations) and Pertinent Local Fire Safety Codes

6.12.1.7. Americans with Disabilities Act

6.12.1.8. Education Code of the State of California

6.12.1.9. Government Code of the State of California

6.12.1.10. Labor Code of the State of California, division 2, part 7, Public Works and Public Agencies

6.12.1.11. Public Contract Code of the State of California

6.12.1.12. California Art Preservation Act

6.12.1.13. U. S. Copyright Act

6.12.1.14. U. S. Visual Artists Rights Act

6.12.2. Contractor shall comply will all applicable mitigation measures, if any, adopted by any public agency with respect to this Project pursuant to the California Environmental Quality Act ("CEQA") (Public Resources Code sections 21000 et. seq.) (Also see the Special Conditions.)

6.12.3. If Contractor performs any Work that it knew, or through exercise of reasonable care should have known, to be contrary to any applicable laws, ordinance, rules, or regulations, Contractor shall bear all costs arising therefrom.

6.12.4. Where Specifications or Drawings state that materials, processes, or procedures must be approved by the DSA, State Fire Marshall, or other body or agency, Contractor shall be responsible for satisfying requirements of such bodies or agencies.

6.13. Safety/Protection of Persons and Property

6.13.1. Contractor will be solely and completely responsible for conditions of the Work Site, including safety of all persons and property during performance of the Work. This requirement will apply continuously and not be limited to normal working hours.

6.13.2. COVID-19. Contractor is responsible for complying with all applicable and existing federal, state, and/or local statutes, orders, rules, regulations, ordinances, and/or directives relating to construction site safety in connection with COVID-19, and/or any similar virus or derivative strain. Contractor shall ensure it has supervisor employees onsite that are trained and knowledgeable of all of these requirements to ensure full compliance on Project Site(s).

6.13.3. The wearing of hard hats will be mandatory at all times for all personnel on Site. Contractor shall supply sufficient hard hats to properly equip all employees and visitors.

6.13.4. Any construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures in, on, or near the Work Site.

6.13.5. Implementation and maintenance of safety programs shall be the sole responsibility of the Contractor.

6.13.6. Contractor shall furnish to the District a copy of the Contractor's safety plan within the time frame indicated in the Contract Documents and specifically adapted for the Project.

6.13.7. 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 performance of the Contract and shall take all necessary measures and be responsible for the proper care and completion and final acceptance by District. All Work shall be solely at Contractor's risk with the exception of damage to the Work caused by "acts of God" as defined in Public Contract Code section 7105.

6.13.8. Contractor shall take, and require Subcontractors to take, all necessary precautions for safety of workers on the Project 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. Contractor shall furnish, erect, and properly maintain at all times, all necessary safety devices, safeguards, construction canopies, signs, 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.

6.13.9. Hazards Control. Contractor shall store volatile wastes in covered metal containers and remove them from the Site daily. Contractor shall prevent accumulation of wastes that create hazardous conditions. Contractor shall provide adequate ventilation during use of volatile or noxious substances.

6.13.10. Contractor shall designate a responsible member of its organization on the Project, whose duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety requirements, and to protect the life, safety, and health of workers. Name and position of person so designated shall be reported to District by Contractor.

6.13.11. 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, Contractor shall correct such violation promptly.

6.13.12. Storm Water. Contractor shall comply with the District's Storm Water Pollution Prevention Plan (SWPPP) and, if indicated in the Special Conditions, shall be the District's Qualified SWPPP Practitioner, at no additional cost to the District.

6.13.13. In an emergency affecting safety of life or of work or of adjoining property, Contractor, without special instruction or authorization, shall act, at its discretion, to prevent such threatened loss or injury. Any compensation claimed by Contractor on account of emergency work shall be determined by agreement.

6.13.14. All salvage materials will become the property of the Contractor and shall be removed from the Site unless otherwise called for in the Contract Documents. The District reserves the right to designate certain items of value that shall be turned over to the District.

6.13.15. All connections to public utilities and/or existing on-site services shall be made and maintained in such a manner as to not interfere with the continuing use of same by the District during the entire progress of the Work.

6.13.16. Contractor shall provide such heat, covering, and enclosures as are necessary to protect all Work, materials, equipment, appliances, and tools against damage by weather conditions, such as extreme heat, cold, rain, snow, dry winds, flooding, or dampness.

6.13.17. Contractor shall protect and preserve the Work from all damage or accident, providing temporary roofs, window and door coverings, boxing, or other construction as needed. Contractor shall be responsible for existing structures, walks, roads, trees, landscaping, materials, equipment, furnishings, and/or improvements in working areas; and shall provide adequate protection therefor. If temporary removal is necessary of any of the above items, or damage occurs due to the Work, the Contractor shall replace same at its expense with same kind, quality, and size of Work or item damaged. This shall include any adjoining property of the District and others.

6.13.18. 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.

6.13.19. Contractor shall confine apparatus, the storage of materials, and the operations of workers to limits indicated by law, ordinances, permits, or directions of the District, and shall not interfere with the Work or unreasonably encumber Premises or overload any structure with materials. Contractor shall enforce all instructions of District and Architect regarding signs, advertising, fires, and require that all workers comply with all regulations while on Project Site.

6.13.20. Contractor shall take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed, Contractor shall have a civil engineer, registered as a professional engineer in California, replace them at no cost to District.

6.13.21. In the event that the Contractor enters into any agreement with owners of any adjacent property to enter upon the adjacent property for the purpose of performing the Work, Contractor shall fully indemnify, defend, and hold harmless each person, entity, firm, or agency that owns or has any interest in adjacent property. The form and content of the agreement of indemnification shall be approved by the District prior to entering the adjacent property. The Contractor shall also indemnify the District as provided in the indemnification provision herein. These provisions shall be in addition to any other

requirements of the owners of the adjacent property.

6.13.22. Infectious Disease Compliance Provisions

6.13.22.1. Compliance with Orders. Contractor and its Subcontractors, agents and employees thereof, are responsible for complying with all applicable and existing federal, State, and/or local statutes, orders, rules, regulations, ordinances, and/or directives in any way relating to construction site safety, the Work, the Project, and Site, in connection with any infectious and communicable disease in any form, whether bacterial or viral, including, without limitation, MSRA, influenza, COVID-19, and/or any similar virus or derivative strain (“**Infectious Disease(s)**”). Contractor shall ensure it has supervisor employees onsite that are trained and knowledgeable of all these requirements to ensure full compliance on Site and the Work. Contractor’s obligations hereunder shall include, without limitation providing personal protective equipment (“PPE”) to its employees and to ensure that its subcontractors provide PPE equipment to its employees to prevent the spread of an Infectious Disease at the Project Site(s).

6.13.22.2. Infectious Disease and Contract Time. Contractor agrees that the Contract Time is based on Contractor’s full compliance with all applicable and existing federal, State, and/or local statutes, orders, rules, regulations, ordinances, and/or directives relating to construction site safety, the Work, the Project, and the Site in connection with an Infectious Disease. Any dispute concerning the Contract Time in connection with any delay associated with an Infectious Disease shall be resolved pursuant to the Claims procedures in these General Conditions.

6.13.22.3. Infectious Disease Release. Contractor acknowledges that it is voluntarily and freely entering into the Contract for this Project and deciding to perform the Work which will require Contractor to enter upon and into the Site and that Contractor use of the Site includes the possible exposure to and illness from an Infectious Disease. Contractor further acknowledges the dangers involved and with full knowledge of these dangers, voluntarily agrees to assume all risks of bodily injury, death, or property damage, whether those risks are known or unknown. Contractor hereby releases District, its agents, representatives, officers, consultants, employees, trustees, and volunteers from any and all liabilities, causes of action, lawsuits, claims, demands, or damages of any kind whatsoever that Contractor, its staff, participants, relatives, children, spouse, partner, household members, family members, employees, guests, invitees, volunteers, agents, consultants, Subcontractors, and any other person tracing exposure or illness to Contractor, now have, or may have in the future, for injury, trauma, illness, loss, unwanted contact, harassment, disability, death or property damages related to being exposed to or contracting an Infectious Disease while using the Site for the performance of the Work. Contractor shall include this paragraph in all subcontracts with Subcontractors.

6.13.22.4. Contractor shall ensure it has supervisor employees onsite that are trained and knowledgeable of all of these requirements to ensure full compliance on Project Site(s).

6.13.22.5. Any cost to comply with these “Infectious Disease Compliance Provisions” shall be at Contractor’s sole expense and expense, but may be included in the Contract Price.

6.13.23. Photos, Videos and Use of Drones.

6.13.23.1. Contractor may photograph or video the progress of the Work and shall provide all of those photos and videos to the District at the District’s request. Contractor may utilize drones or similar aerial equipment to photograph, video or monitor the progress of the Work and for security purposes, but Contractor must comply with all legal requirements of the federal government, the State of California, and the County and City in which the Project is located, applicable to the use of drones or similar aerial equipment. In addition, Contractor shall ensure that no photographs, videos or digital recordings of any kind are taken of District students

or staff.

6.13.23.2. If Contractor utilizes drones or any other unmanned aircraft during construction operations, Contractor must either ensure its insurance coverage includes unmanned aircraft operations or procure and maintain a separate aircraft liability policy to cover unmanned aircraft operations.

6.14. Working Evenings and Weekends

Contractor may be required to work evenings and/or weekends at no additional cost to the District. Contractor shall give the District seventy-two (72) hours' notice prior to performing any evening and/or weekend work. Contractor shall perform all evening and/or weekend work only upon District's written approval and in compliance with all applicable rules, regulations, laws, and local ordinances including, without limitation, all noise and light limitations. Contractor shall reimburse the District for any Inspector and custodial charges necessitated by the Contractor's evening and/or weekend work.

6.15. Noise and Dust Control

6.15.1. In addition to the noise control, dust control and related requirements in the Specifications, Contractor shall control the noise and dust at the Site as indicated here.

6.15.2. Noise Control. The Contractor shall install 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 at the Site shall be limited as required by applicable law, rule or regulation. If classes are in session at any point during the progress of the Work, and, in the District's reasonable discretion, the noise from any Work disrupts or disturbs the students or faculty or the normal operation of the school at the Site, at the District's request, the Contractor shall schedule the performance of that Work around normal school hours or make other arrangements so that the Work does not cause disruption or disturbance. In no event shall those arrangements result in adjustment of the Contract Price or the Contract Time.

6.15.3. Dust Control. The Contractor shall be fully and solely responsible for maintaining and upkeeping all areas of the Site and adjoining areas, outdoors and indoors, free from flying debris, grinding powder, sawdust, dirt and dust as well as any other product, product waste or work waste, that by becoming airborne may cause respiratory inconveniences to persons, particularly to students and District personnel. Additionally, the Contractor shall take specific care to avoid deposits of airborne dust or airborne elements. Those protection devices, systems or methods shall be in accordance with the regulations set forth by the EPA and OSHA, and other applicable law, rule or regulation. Additionally, the Contractor shall be responsible to regularly and routinely clean up and remove any and all deposits of dust and other elements. Damage and/or any liability derived from the Contractor's failure to comply with these requirements shall be exclusively at the cost of the Contractor, including, without limitation, any and all penalties that may be incurred for violations of applicable law, rule or regulation, and any amounts expended by the District to pay such damages shall be due and payable to the District on demand. Contractor shall replace any damages property or part thereof and professionally clean any and all items that become covered or partially covered to any degree by dust or other airborne elements. If classes are in session at any point during the progress of Work, and, in the District's reasonable discretion, flying debris, grinding powder, sawdust, dirt or dust from any 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 that Work around normal school hours and make other arrangements so that the Work does not cause disruption or disturbance. In no event shall those arrangements result in adjustment of the Contract Price or the Contract Time.

6.15.4. Contractor Failure to Comply. If the Contractor fails to comply with the requirements for dust control, noise control, or any other maintenance or clean up requirement of the Contract Documents, the

District, Architect, Project Inspector, or Construction Manager shall notify the Contractor in writing and the Contractor shall take immediate action. Should the Contractor fail to respond with immediate and responsive action and not later than twenty-four (24) hours from that notification, the District shall have the absolute right to proceed as it may deem necessary to remedy such matter. Any and all costs incurred by the District in connection with those actions shall be the sole responsibility of, and be borne by, the Contractor; the District may deduct those amounts from the Contract Price then or thereafter due the Contractor.

6.16. Cleaning Up

6.16.1. The Contractor shall provide all services, labor, materials, and equipment necessary for protecting the Work, all school occupants, furnishings, equipment, and building structure from damage until its Completion and final acceptance by District. Dust barriers shall be provided to isolate dust and dirt from construction operations. At Completion of the Work and portions thereof, Contractor shall clean to the original state any areas beyond the Work area that become dust laden as a result of the Work. The Contractor must erect the necessary warning signs and barricades to ensure the safety of all school occupants. The Contractor at all times must maintain good housekeeping practices to reduce the risk of fire damage and must make a fire extinguisher, fire blanket, and/or fire watch, as applicable, available at each location where cutting, braising, soldering, and/or welding is being performed or where there is an increased risk of fire.

6.16.2. Contractor at all times shall keep Premises free from debris such as waste, rubbish, and excess materials and equipment caused by the Work. Contractor shall not leave debris under, in, or about the Premises, but shall promptly remove same from the Premises on a daily basis. If Contractor fails to clean up, District may do so and the cost thereof shall be charged to Contractor. If Contract is for work on an existing facility, Contractor shall also perform specific clean-up on or about the Premises upon request by the District as it deems necessary for the continuing education process. Contractor shall comply with all related provisions of the Specifications.

6.16.3. If the Construction Manager, Architect, or District observes the accumulation of trash and debris, the District will give the Contractor a 24-hour written notice to mitigate the condition.

6.16.4. Should the Contractor fail to perform the required clean-up, or should the clean-up be deemed unsatisfactory by the District, the District will then perform the clean-up. All cost associated with the clean-up work (including all travel, payroll burden, and costs for supervision) will be deducted from the Contract Price, or District may withhold those amounts from payment(s) to Contractor.

7. SUBCONTRACTORS

7.1. Contractor shall provide the District with information for all Subcontracts as required in the Contractor's Submittals and Schedules Section.

7.2. No contractual relationship exists between the District and any Subcontractor, supplier, or sub-subcontractor by reason of the Contract.

7.3. Contractor agrees to bind every Subcontractor by terms of the Contract as far as those terms are applicable to Subcontractor's work. If Contractor shall subcontract any part of the Contract, Contractor shall be as fully responsible to District for acts and omissions of any Subcontractor and of persons either directly or indirectly employed by any Subcontractor, as it is for acts and omissions of persons directly employed by Contractor. The divisions or sections of the Specifications are not intended to control the Contractor in dividing the Work among Subcontractors or limit the work performed by any trade.

7.4. District's consent to, or approval of, or failure to object to, any Subcontractor under the Contract shall not in any way relieve Contractor of any obligations under the Contract and no such consent shall be deemed

to waive any provisions of the Contract.

7.5. Contractor acknowledges sections 4100 through 4114 of the Public Contract Code of the State of California, as regards subletting and subcontracting, and shall comply with all applicable requirements therein. In addition, Contractor acknowledges sections 1720 through 1861 of the Labor Code of the State of California, as regards the payment of prevailing wages and related issues, and shall comply with all applicable requirements therein all including, without limitation, section 1775 and the Contractor's and Subcontractors' obligations and liability for violations of prevailing wage law and other applicable laws.

7.6. No Contractor whose Bid is accepted shall, without consent of the awarding authority and in full compliance with section 4100, et seq, of the Public Contract Code, including, without limitation, sections 4107, 4107.5, and 4109 of the Public Contract Code, either:

7.6.1. Substitute any person as a Subcontractor in place of the Subcontractor designated in the original Bid; or

7.6.2. Permit any Subcontract to be assigned or transferred, or allow any portion of the Work to be performed by anyone other than the original Subcontractor listed in the Bid; or

7.6.3. Sublet or subcontract any portion of the Work in excess of one-half of one percent (1/2 of 1%) of the Contractor's total bid as to which his original bid did not designate a Subcontractor.

7.7. The Contractor shall be responsible for the coordination of the trades, Subcontractors, sub-subcontractors, and material or equipment suppliers working on the Project.

7.8. Contractor is solely responsible for settling any differences between the Contractor and its Subcontractor(s) or between Subcontractors.

7.9. Contractor must include in all of its subcontracts the assignment provisions as indicated in the Termination section of these General Conditions.

8. OTHER CONTRACTS/CONTRACTORS

8.1. District reserves the right to let other contracts, and/or to perform work with its own forces, in connection with other portions of the Project or other construction or operations at or about the Site. Contractor shall afford other contractors reasonable opportunity for introduction and storage of their materials and execution of their work and shall properly coordinate and connect Contractor's Work with the work of other contractors.

8.2. In addition to Contractor's obligation to protect its own Work, Contractor shall protect the work of any other contractor that Contractor encounters while working on the Site.

8.3. If any part of Contractor's Work depends for proper execution or results upon work of District or any other contractor, Contractor shall inspect and promptly report to the District in writing before proceeding with its Work any defects in District's or any other contractor's work that render Contractor's Work unsuitable for proper execution and results. Contractor shall be held accountable for damages to District for District's or any other contractor's work that Contractor failed to inspect or should have inspected. Contractor's failure to inspect and report shall constitute Contractor's acceptance of all District's or any other contractor's work as fit and proper for reception of Contractor's Work, except as to defects that may develop in District's or any other contractor's work after execution of Contractor's Work.

8.4. To ensure proper execution of its subsequent work, Contractor shall measure and inspect work already in place and shall at once report to the District in writing any discrepancy between that executed work and

the Contract Documents.

- 8.5.** Contractor shall ascertain to its own satisfaction the scope of the Project and nature of District's or any other contracts that have been or may be awarded by District in completion of the Project to the end that Contractor may perform this Contract in light of the other contracts, if any.
- 8.6.** Nothing herein contained shall be interpreted as granting to Contractor exclusive occupancy of the Site, the Premises, or of the Project. The District shall have complete access to the Project Site for any reasonable purpose at all times. Contractor shall not cause any unnecessary hindrance or delay to the use and/or school operation(s) of the Premises and/or to District or any other contractor working on the Project. If simultaneous execution of any contract or school operation is likely to cause interference with performance of Contractor's Contract, Contractor shall coordinate with those contractor(s), person(s), and/or entity(s) and shall notify the District of the resolution.

9. DRAWINGS AND SPECIFICATIONS

- 9.1.** A complete list of all Drawings that form a part of the Contract is to be found as an index on the Drawings themselves, and/or may be provided to the Contractor and/or in the Table of Contents.
- 9.2.** Materials or Work described in words that so applied have a well-known technical or trade meaning shall be deemed to refer to recognized standards, unless noted otherwise.
- 9.3.** Trade Name or Trade Term. It is not the intention of the Contract to go into detailed descriptions of any materials and/or methods commonly known to the trade under "trade name" or "trade term." The mere mention or notation of "trade name" or "trade term" shall be considered sufficient notice to Contractor that it will be required to complete the work so named, complete, finished, and operable, with all its appurtenances, according to the best practices of the trade.
- 9.4.** The naming of any material and/or equipment shall mean furnishing and installing of same, including all incidental and accessory items thereto and/or labor therefor, as per best practices of the trade(s) involved, unless specifically noted otherwise.
- 9.5.** Contract Documents are complementary, and what is called for by one shall be binding as if called for by all. As such, Drawings and Specifications are intended to be fully cooperative and to agree. However, if Contractor observes that Drawings and Specifications are in conflict, Contractor shall promptly notify District and Architect in writing, and any necessary changes shall be made as provided in the Contract Documents.
- 9.6.** In the case of discrepancy or ambiguity in the Contract Documents, the order of precedence in the Agreement shall prevail. However, in the case of discrepancy or ambiguity solely between and among the Drawings and Specifications, the discrepancy or ambiguity shall be resolved in favor of the interpretation that will provide District with the functionally complete and operable Project described in the Drawings and Specifications. In case of ambiguity, conflict, or lack of information, District will furnish clarifications with reasonable promptness.
- 9.7.** Drawings and Specifications are intended to comply with all laws, ordinances, rules, and regulations of constituted authorities having jurisdiction, and where referred to in the Contract Documents, the laws, ordinances, rules, and regulations shall be considered as a part of the Contract within the limits specified. Contractor shall bear all expense of correcting work done contrary to said laws, ordinances, rules, and regulations.

9.8. Ownership of Drawings

- 9.8.1.** All copies of the Drawings, Designs, Specifications, and copies of other incidental architectural

and engineering work, or copies of other Contract Documents furnished by District, are the property of District. They are not to be used by Contractor in other work and, with the exception of signed sets of Contract Documents, are to be returned to District on request at Completion of Work, or may be used by District as it may require without any additional costs to District. 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. District hereby grants the Contractor, Subcontractors, sub-subcontractors, and material or equipment suppliers a limited license to use applicable portions of the Drawings prepared for the Project in the execution of their Work under the Contract Documents.

10. CONTRACTOR'S SUBMITTALS AND SCHEDULES

Contractor's submittals shall comply with the provisions and requirements of the Specifications including, without limitation Submittals. No submittal, unless approved in writing by the District as acceptable and complete, shall be a Contract Document.

10.1. Schedules, Safety Plan and Complete Subcontractor List

10.1.1. Within **TEN (10)** calendar days after the date of the Notice to Proceed (unless otherwise specified in the Notice to Proceed or in the Special Conditions), Contractor shall prepare and submit to the District for review, in a form supported by sufficient data to substantiate its accuracy as the District may require:

10.1.1.1. Schedule of Work. Contractor shall provide a preliminary schedule of construction indicating the starting and completion dates of the various stages of the Work, including any information and following any form as may be specified in the Specifications. Once approved by District, this shall become the Construction Schedule. This schedule shall include and identify all tasks that are on the Project's critical path with a specific determination of the start and completion of each critical path task, all contract milestones and each milestone's completion date(s) as may be required by the District, and the date of Project Completion.

10.1.1.1.1. Proposed Advanced Schedule. The District is not required to accept an early completion ("advanced") schedule; i.e., one that shows early completion dates for the Contract completion or milestones. Contractor shall not be entitled to extra compensation if the District allows the Contractor to proceed performing the Contract on an earlier ("advanced") schedule and Contractor completes the Project, for whatever reason, beyond the date shown in that earlier ("advanced") schedule, but within the Time for Completion indicated in the Contract. A schedule showing the work completed in less than the Time for Completion indicated in the Contract, shall be considered to have Project Float.

10.1.1.1.2. Float or Slack in the Schedule. Float or slack is the amount of time between the early start date and the late start date, or the early finish date and the late finish date, of any of the activities in the schedule. Float or slack is not for the exclusive use of or benefit of either the District or the Contractor, but its use shall be determined solely by the District.

10.1.1.2. Schedule of Submittals. The Contractor shall provide a preliminary schedule of submittals, including Shop Drawings, Product Data, and Samples submittals. Once approved by District, this shall become the Submittal Schedule. All submittals shall be forwarded to the District by the date indicated on the approved Submittal Schedule, unless an earlier date is necessary to maintain the Construction Schedule, in which case those submittals shall be forwarded to the District so as not to delay the Construction Schedule.

10.1.1.3. Schedule of Values. The Contractor shall provide a preliminary schedule of values for all component parts of the Work for which progress payments may be requested. The schedule of values must include quantities and prices of items totaling the Contract Price and

must subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. The preliminary schedule of values should include, at a minimum, the following information and the following structure:

10.1.1.3.1. Divided into at least the following categories:

- 10.1.1.3.1.1.** Overhead and profit;
- 10.1.1.3.1.2.** Supervision;
- 10.1.1.3.1.3.** General conditions;
- 10.1.1.3.1.4.** Layout;
- 10.1.1.3.1.5.** Mobilization;
- 10.1.1.3.1.6.** Submittals;
- 10.1.1.3.1.7.** Bonds and insurance;
- 10.1.1.3.1.8.** Closeout documentation;
- 10.1.1.3.1.9.** Demolition;
- 10.1.1.3.1.10.** Installation;
- 10.1.1.3.1.11.** Rough-in;
- 10.1.1.3.1.12.** Finishes;
- 10.1.1.3.1.13.** Testing;
- 10.1.1.3.1.14.** Punch List and acceptance.

10.1.1.3.2. Divided by each of the following areas:

- 10.1.1.3.2.1.** Site work;
- 10.1.1.3.2.2.** By each building;
- 10.1.1.3.2.3.** By each floor.

10.1.1.3.3. The preliminary schedule of values shall not provide for values any greater than the following percentages of the Contract value:

- 10.1.1.3.3.1.** Mobilization and layout combined to equal not more than 1%;
- 10.1.1.3.3.2.** Submittals, samples and shop drawings combined to equal not more than 3%;
- 10.1.1.3.3.3.** Bonds and insurance combined to equal not more than 2%.

10.1.1.3.4. Closeout Documentation. Closeout Documentation shall have a value in the preliminary schedule of not less than 5%. The value for Closeout Documentation shall be in addition to and shall not be a part of the Contract retention.

10.1.1.3.5. All items on the Schedule of Values must have a specific completion date on the Construction Schedule, or District has approved the Construction Schedule and the Construction Schedule is fully cost-loaded and resource-loaded, unless waived by the District in writing, and detailed as required by the Contract Documents

10.1.1.3.6. Contractor shall certify that the preliminary schedule of values as submitted to the District is accurate and reflects the costs as developed in preparing Contractor's bid. The preliminary schedule of values shall be subject to the District's review and approval of the form and content thereof. In the event that the District objects to any portion of the preliminary schedule of values, the District shall notify the Contractor, in writing, of the District's objection(s) to the preliminary schedule of values. Within five (5) calendar days of the date of the District's written objection(s), Contractor shall submit a revised preliminary schedule of values to the District for review and approval. The foregoing procedure for the preparation, review and approval of the preliminary schedule of values shall continue until the District has approved the entirety of the preliminary schedule of values.

10.1.1.3.7. Once the preliminary schedule of values is approved by the District, this shall become the Schedule of Values. The Schedule of Values shall not be thereafter modified or amended by the Contractor without the prior written consent and approval of the District, which may be granted or withheld in the sole discretion of the District.

10.1.1.3.8. Notwithstanding any provision of the Contract Documents to the contrary, payment of the Contractor's overhead, supervision, general conditions costs, and profit, as reflected in the Schedule of Values, shall be paid by the District in installments, based on percentage complete, with the disbursement of Progress Payments and the Final Payment.

10.1.1.3.9. The Contractor shall not "front-load" the Schedule of Values with false dollar amounts for activities to be performed in the early stages of the Project. The District may, in its sole discretion, utilize the costs listed in the Schedule of Values as the true cost of items to be deducted from the Contract Price through credit or deductive Change Order. The values for each line item shall include the amount of overhead and profit applicable to each item of work and shall include, at a minimum, a breakdown between rough and finish Work for the basic trades as well as individual dollar figures for large dollar equipment and materials to be installed or furnished for the Project. No individual line item or scope of work in the Schedule of Values shall exceed \$50,000, except with the express, written consent of the District. Exceptions will be given by the District for a single item of Equipment for which the true cost exceeds \$50,000. The Schedule of Values shall be subject to the District's review and approval of the form and content thereof. Upon request, Contractor shall provide District with data and documentation substantiating the accuracy of the proposed line items. In the event that the District shall reasonably object to any portion of the Schedule of Values, within ten (10) days of the District's receipt of the Schedule of Values, the District shall notify the Contractor, in writing of the District's objection(s) to the Schedule of Values together with any request for substantiating data or documentation. Within five (5) days of the date of the District's written objection(s) and request for substantiating data and documentation, Contractor shall submit a revised Schedule of Values to the District for review and approval together with the requested data and documentation. The foregoing procedure for the preparation, review and approval of the Schedule of Values shall continue until the District has approved of the entirety of the Schedule of Values. Once the Schedule of Values is approved by the District, the Schedule of Values shall not be thereafter modified or amended by the Contractor without the prior consent and approval of the District, which may be granted or withheld in the sole reasonable discretion of the District. Notwithstanding any provision of the Contract Documents to the contrary, payment of the Contractor's overhead, supervision and general conditions costs and profit, as such items are reflected in the Schedule of Values, shall be made incrementally as included in the activities included in the Approved Construction Schedule.

10.1.1.4. Safety Plan. The Contractor shall provide a preliminary Contractor's Safety Plan specifically adapted for the Project. Contractor's Safety Plan shall comply with the following requirements:

10.1.1.4.1. All applicable requirements of California Division of Industrial Safety ("CalOSHA") and/or of the United States Occupational Safety and Health Administration ("OSHA").

10.1.1.4.2. All provisions regarding Project safety, including all applicable provisions in these General Conditions.

10.1.1.4.3. Contractor's Safety Plan shall be prepared in both English and in the predominant language(s) of the Contractor's and its Subcontractors' employees.

10.1.1.5. Complete Subcontractor List. Contractor shall provide a preliminary Subcontractor List stating the name, address, telephone number, facsimile number, email address, California State Contractors License number, Department of Industrial Relations registration number, classification, and monetary value of all Subcontracts for parties furnishing labor, material, or equipment for the Project.

10.1.2. Contractor must provide all schedules both in hard copy and electronically, in a format (e.g., Microsoft Project, Primavera, or substantially similar product) approved in advance by the District.

10.1.3. The District will review the schedules submitted and the Contractor shall make changes and corrections in the schedules as requested by the District and resubmit the schedules until approved by the District.

10.1.4. The District shall have the right at any time to revise the Schedule of Values if, in the District's sole opinion, the Schedule of Values does not accurately reflect the value of the Work performed.

10.1.5. All submittals and schedules must be approved by the District before Contractor can rely on them as a basis for payment.

10.2. Monthly Progress Schedule(s)

10.2.1. Contractor shall provide Monthly Progress Schedule(s) to the District. A Monthly Progress Schedule shall update the approved Construction Schedule or the last Monthly Progress Schedule, showing all work completed and to be completed. The Monthly Progress Schedule shall be sent to the District and shall be in a format acceptable to the District and contain a written narrative of the progress of work that month and any changes, delays, or events that may affect the work. The process for District approval of the Monthly Progress Schedule shall be the same as the process for approval of the Construction Schedule.

10.2.2. Contractor shall also submit Monthly Progress Schedule(s) with all payment applications.

10.3. Material Safety Data Sheets (MSDS)

Contractor is required to ensure Material Safety Data Sheets are available in a readily accessible place at the Work 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 ensure proper labeling on substances brought onto the Project Site and 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. Two additional copies of the Material Safety Data Sheets shall also be submitted directly to the District.

10.4. Logistic Plan

Contractor shall provide a staging and logistics plan identifying laydown areas, loading and unloading areas, crane locations, fence locations, temporary utility connections, trailer locations, and emergency evacuation meeting area. This Logistics Plan must be approved by the District prior to the Contractor mobilizing on the Site.

10.5. Information Included in Submittals.

All Submittals shall be accompanied by a written transmittal and each set of plans shall carry a "wet stamp" or other writing by the Contractor providing an identification of the portion of the Drawings or the Specifications pertaining to the Submittal, with each Submittal numbered consecutively for ease of reference along with the following information: (i) date of submission; (ii) Project name; (iii) name of

submitting Subcontractor; and (iv) if applicable, the revision number. The foregoing information is in addition to, and not in lieu of, any other information required for the District's review, evaluation and approval of the Contractor's Submittals. Each Submittal shall be complete with its required number of copies, no piecemeal documentation is allowed. Any Submittal not bearing the required wet stamp as stated herein, shall be rejected until the appropriate wet stamp information is provided on each submittal.

10.6. Verification of Submittal Information.

By approving and submission of Submittals, the Contractor represents to the District and Architect that the Contractor has determined and verified materials, field measurements, field construction criteria, catalog numbers and similar data related thereto and has checked and coordinated the information contained within such Submittals with the requirements of the Work and of the Contract Documents. Each Submittal shall include the following certification duly executed by the Contractor's superintendent or project manager for the Work: "The Contractor has reviewed and approved the field dimensions and construction criteria of the attached Submittal. The Contractor has verified that the Submittal is complete and includes notations of any portion of the Work depicted in the Submittal which is not in strict conformity with the Contract Documents. The information in the attached Submittal has been reviewed and coordinated by the Contractor with information included in other Submittals."

10.7. Contractor Responsibility for Deviations.

The Contractor shall not be relieved of responsibility for correcting deviations from the requirements of the Contract Documents by the District's and Architect's review of Submittals unless the Contractor has specifically informed the District in writing of such deviation at the time of submission of the Submittal and the District has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Submittals by the District's and Architect's review or comments thereon.

10.8. No Performance of Work Without Architect Review.

The Contractor shall perform no portion of the Work requiring the District's and Architect's review of Submittals until the District and Architect have completed their review and returned the Submittal to the Contractor indicating "No Exception Taken" to that Submittal. The Contractor shall not perform any portion of the Work forming a part of a Submittal or which is affected by a related Submittal until the entirety of the Submittal or other related Submittal has been fully processed. All Work shall be in accordance with the final action taken by the District and the Architect review in review of Submittals and other applicable portions of the Contract Documents.

10.9. District and Architect Review of Submittals.

The purpose of the District's and Architect's review of Submittals and the time for the District's and Architect's return of Submittals to the Contractor shall be as set forth elsewhere in the Contract Documents. If the District and/or Architect return a Submittal as rejected or requiring correction(s) with re-submission, the Contractor, so as not to delay the progress of the Work, shall promptly thereafter resubmit a Submittal conforming to the requirements of the Contract Documents; the resubmitted Submittal shall indicate the portions thereof modified in accordance with the District's and Architect's direction. When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the District shall be entitled to rely upon the accuracy and completeness of the Contractor's calculations and certifications accompanying Submittals. The District's and Architect's review of the Submittals is for the limited purposes described in the Contract Documents. The District and Architect will review each Submittal twice. Should additional Submittals be required as a result of failure of the Contractor to address comments, the Contractor will pay for the Architect's services on a time and material basis for each subsequent review.

10.10. Deferred Approval Items.

In the event that any portion of the Work is designated in the Contract Documents as a "Deferred Approval" item from DSA, Contractor shall be solely and exclusively responsible for the preparation of Submittals for such item(s) in a timely manner so as not to delay or hinder the completion of the Work within the Contract Time. All work, labor, materials, equipment or services necessary to complete the design, engineering and permitting/approval of the Deferred Approval items shall be provided by the Contractor without adjustment of the Contract Price or the Contract Time.

10.11. Contractor Responsibility for Deviations

The Contractor shall not be relieved of responsibility for correcting deviations from the requirements of the Contract Documents by the District's or Architect's review of Submittals unless the Contractor has specifically informed the District and the Architect in writing of such deviation at the time of submission of the Submittal and the District and the Architect have given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Submittals by the District's or the Architect's review or comments thereon.

11. SITE ACCESS, CONDITIONS AND REQUIREMENTS

11.1. Site Investigation

Before bidding on the Work, Contractor shall make a careful investigation of the Site and thoroughly familiarize itself with the requirements of the Contract. By the act of submitting a bid for the Work included in the Contract, Contractor shall be deemed to have made a complete study and investigation, and to be familiar with and accepted the existing conditions of the Site.

11.2. Soils Investigation Report

11.2.1. When a soils investigation report obtained from test holes at Site is available, that report shall be available to the Contractor but shall not be a part of the Contract. Any information obtained from that report or any information given on Drawings as to subsurface soil condition or to elevations of existing grades or elevations of underlying rock is approximate only, is not guaranteed, does not form a part of the Contract, and Contractor may not rely thereon. By submitting its bid, Contractor acknowledges that it made visual examination of Site and made whatever tests Contractor deems appropriate to determine underground condition of soil.

11.2.2. If a soils report is identified in the Contract Documents, it is not a Contract Document. Further, no representation is made by District that information provided is adequate for purposes of construction of the Project. District disclaims responsibility for any and all interpretations made by the Contractor of any soil or subsurface condition for information, such as soil-bearing values, rock profiles, presence and scope of boulders and cobbles, soil stability and the presence or level and extent of underground water.

11.2.3. The Contractor shall determine the means, methods, techniques and sequences necessary to achieve required soil contours and characteristics of all completed Work.

11.2.4. If after execution of the Contract, the Contractor encounters conditions at the Site than are materially different from those customarily encountered at or near the Premises, any request by the Contractor for additional funds or additional time, shall be governed by provisions of the Contract Documents for Changes in the Work related to unforeseen conditions.

11.2.5. Contractor agrees that no claim against District will be made by Contractor for damages and hereby waives any rights to damages if, during progress of Work, Contractor encounters subsurface or latent conditions at Site materially differing from those shown on Drawings or indicated in Specifications,

or for unknown conditions of an unusual nature that differ materially from those ordinarily encountered in the work of the character provided for in Plans and Specifications, except as indicated in the provisions of these General Conditions regarding trenches, trenching, and/or existing utility lines.

11.3. Access to Work

District and its representatives shall at all times have access to Work wherever it is in preparation or progress, including storage and fabrication. Contractor shall provide safe and proper facilities for access so that District's representatives may perform their functions.

11.4. Layout and Field Engineering

11.4.1. All field engineering required for layout of this Work and establishing grades for earthwork operations shall be furnished by Contractor at its expense. This Work shall be done by a qualified, California-registered civil engineer approved in writing by District and Architect. Any required Record and/or As-Built Drawings of Site development shall be prepared by the approved civil engineer.

11.4.2. Contractor shall be responsible for having ascertained pertinent local conditions such as location, accessibility, and general character of the Site and for having satisfied itself as to the conditions under which the Work is to be performed. District shall not be liable for any claim for allowances because of Contractor's error or negligence in acquainting itself with the conditions at the Site.

11.4.3. Contractor shall protect and preserve established benchmarks and monuments and shall make no changes in locations without the prior written approval of District. Contractor shall replace any benchmarks or monuments that are lost or destroyed subsequent to proper notification of District and with District's approval.

11.5. Utilities for Construction

Utilities necessary to complete the Work and to completely perform all of the Contractors' obligations shall be obtained by the Contractor without adjustment of the Contract Price. The Contractor shall furnish and install necessary or appropriate temporary distributions of utilities, including utilities furnished by the District. Any such temporary distributions shall be removed by the Contractor upon completion of the Work. The costs of all such utility services, including the installation and removal of temporary distributions thereof, shall be borne by the Contractor and included in the Contract Price. Also refer to other utility requirements as indicated in the Specifications.

11.6. Sanitary Facilities

At all times during Work at the Site, the Contractor shall obtain and maintain temporary sanitary facilities in conformity with applicable law, rule or regulation. The Contractor shall maintain temporary sanitary facilities in a neat and clean manner with sufficient toilet room supplies. Personnel engaged in the Work are not permitted to use toilet facilities at the Site. Also refer to other Sanitary facility requirements as indicated in the Specifications.

11.7. Surveys

Contractor shall provide surveys done by a California-licensed civil engineer surveyor to determine locations of construction, grading, and site work as required to perform the Work.

11.8. Regional Notification Center

Contractor, except in an emergency, shall contact the appropriate regional notification center at least two (2) days prior to commencing any excavation if the excavation will be conducted in an area or in a private easement that 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. No excavation shall be commenced and/or carried out by the Contractor unless an inquiry identification number has been assigned to the Contractor or any Subcontractor and the Contractor has given the District the identification number. Any damages arising from Contractor's failure to make appropriate notification shall be at the sole risk and expense of the Contractor. Any delays caused by failure to make appropriate notification shall be at the sole risk of the Contractor and shall not be considered for an extension of the Contract time.

11.9. Existing Utility Lines

11.9.1. Pursuant to Government Code section 4215, District assumes the responsibility for removal, relocation, and protection of main or trunk utility lines and facilities located on the construction Site at the time of commencement of construction under the Contract with respect to any such utility facilities that are not identified in the Plans and Specifications. Contractor shall not be assessed for liquidated damages for delay in completion of the Project caused by failure of District or the owner of a utility to provide for removal or relocation of such utility facilities.

11.9.2. Locations of existing utilities provided by District shall not be considered exact, but approximate within reasonable margin and shall not relieve Contractor of responsibilities to exercise reasonable care nor costs of repair due to Contractor's failure to do so. District shall compensate Contractor for the costs of locating, repairing damage not due to the failure of Contractor to exercise reasonable care, and removing or relocating such utility facilities not indicated in the Plans and Specifications with reasonable accuracy, and for equipment necessarily idle during such work.

11.9.3. No provision herein shall be construed to preclude assessment against Contractor for any other delays in completion of the Work. Nothing in this Article shall be deemed to require District to indicate the presence of existing service laterals, appurtenances, or other utility lines, within the exception of main or trunk utility lines, whenever the presence of these utilities on the Site can be inferred from the presence of other visible facilities, such as buildings, meter junction boxes, on or adjacent to the Site.

11.9.4. If Contractor, while performing Work, discovers utility facilities not identified by District in Contract Plans and Specifications, Contractor shall immediately, but in no case longer than two (2) Business Days, notify the District and the utility in writing. The cost of repair for damage to above-mentioned visible facilities without prior written notification to the District shall be borne by the Contractor.

11.10. Notification

Contractor understands, acknowledges and agrees that the purpose for prompt notification to the District pursuant to these provisions is to allow the District to investigate the condition(s) so that the District shall have the opportunity to decide how the District desires to proceed as a result of the condition(s). Accordingly, failure of Contractor to promptly notify the District in writing, pursuant to the applicable provisions of these General Conditions, shall constitute Contractor's waiver of any claim for damages or delay incurred as a result of the condition(s).

11.11. Hazardous Materials

Contractor shall comply with all provisions and requirements of the Contract Documents related to hazardous materials including, without limitation, certifications related to hazardous materials in the document entitled Certifications to be Completed by Contractor.

11.12. No Signs

Neither the Contractor nor any other person or entity shall display any signs not required by law or the

Contract Documents at the Site, fences trailers, offices, or elsewhere on the Site without specific prior written approval of the District.

12. TRENCHES

12.1. 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, promptly submit to the District and/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.

12.2. 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.

12.3. No Tort Liability of District

Pursuant to Labor Code section 6705, nothing in this Article shall impose tort liability upon the District or any of its employees.

12.4. 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.

12.5. Discovery of Hazardous Waste, Unusual Conditions and/or Unforeseen Conditions

12.5.1. Pursuant to Public Contract Code section 7104, if the Work involves digging trenches or other excavations that extend deeper than four (4) feet below the surface, the Contractor shall immediately, but in no case longer than two (2) Business Days, and before the following conditions are disturbed, notify the District, in writing, of any:

12.5.1.1. Material that the Contractor believes may be material that is hazardous waste, as defined in section 25117 of the Health and Safety Code, and requires removal to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

12.5.1.2. Subsurface or latent physical conditions at the Site differing from those indicated.

12.5.1.3. 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.

12.5.2. The District shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work, shall issue a Change Order under the procedures described herein.

12.5.3. In the event that a dispute arises between District and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any scheduled Completion date provided for by the Contract, but shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided by the Contract or by law that pertain to the resolution of disputes and protests, which include the requirement that Contractor complies with the notice and PCO provisions of the Contract Documents. Contractor's failure to submit a proposed change order pursuant to the terms of the Contract Documents shall be deemed a waiver of Contractor's right to an adjustment of the Contract Price of Contract Time.

13. INSURANCE AND BONDS

13.1. Insurance

Unless different provisions and/or limits are indicated in the Special Conditions, all insurance required of Contractor and/or its Subcontractor(s) shall be in the amounts indicated herein and include the provisions set forth herein.

13.1.1. Commercial General Liability and Automobile Liability Insurance

13.1.1.1. Contractor shall procure and maintain, during the life of the Contract, Commercial General Liability Insurance and Automobile Liability Insurance that shall protect Contractor, District, State, Construction Manager(s), Project Inspector(s), and Architect(s) from all claims for bodily injury, property damage, personal injury, death, advertising injury, and medical payments arising from operations under the Contract. This coverage shall be provided in a form at least as broad as the Insurance Services Office (ISO) standard form. Contractor shall ensure that Products Liability and Completed Operations coverage, Fire Damage Liability, and any Auto including owned, non-owned, and hired, are included within the above policies and at the required limits, or Contractor shall procure and maintain these coverages separately.

13.1.1.2. Contractor's deductible or self-insured retention for its Commercial General Liability Insurance policy shall not exceed \$25,000 unless approved in writing by District.

13.1.2. Umbrella Liability Insurance

13.1.2.1. Contractor shall procure and maintain, during the life of the Contract, an Excess Liability and/or Umbrella Liability Insurance Policy. Any Umbrella Liability Insurance Policy shall protect Contractor, District, State, Construction Manager(s), Program Manager(s), and Architect(s) in the amounts indicated herein, and shall comply with all requirements for Commercial General Liability and Automobile Liability, Employers' Liability Insurance, and Sexual Molestation and Abuse Liability. This coverage shall be provided in a form at least as broad as the Insurance Services Office (ISO) standard form.

13.1.2.2. There shall be no gap between the per occurrence amount of any underlying policy and the start of the coverage under the Umbrella Liability Insurance Policy.

13.1.2.3. Whether this Excess Liability and/or Umbrella Liability Insurance Policy is written on a "follow form" or "stand alone" form, the coverages shall equal or greater than the Contractor's Commercial General Liability and Automobile Liability, Employers' Liability Insurance, and Sexual Molestation and Abuse Liability with no exclusions that reduce or eliminate coverage items.

13.1.3. Subcontractor(s): Contractor shall require its Subcontractor(s), if any, to procure and maintain Commercial General Liability Insurance, Automobile Liability Insurance, and Umbrella Liability Insurance

with minimum limits equal to at least fifty percent (50%) of the amounts required of the Contractor.

13.1.4. Workers' Compensation and Employers' Liability Insurance

13.1.4.1. In accordance with provisions of section 3700 of the California Labor Code, the Contractor and every Subcontractor shall be required to secure the payment of compensation to its employees.

13.1.4.2. Contractor shall procure and maintain, during the life of this Contract, Workers' Compensation Insurance and Employers' Liability Insurance for all of its employees engaged in Work under the Contract, on/or at the Site of the Project. This coverage shall cover, at a minimum, medical and surgical treatment, disability benefits, rehabilitation therapy, and survivors' death benefits. Contractor shall require its Subcontractor(s), if any, to procure and maintain Workers' Compensation Insurance and Employers' Liability Insurance for all employees of Subcontractor(s). Any class of employee or employees not covered by a Subcontractor's insurance shall be covered by Contractor's insurance. If any class of employee or employees engaged in Work under the Contract, on or at the Site of the Project, are not protected under the Workers' Compensation Insurance, Contractor shall provide, or shall cause a Subcontractor to provide, adequate insurance coverage for the protection of any employee(s) not otherwise protected before any of those employee(s) commence work.

13.1.5. Sexual Molestation and Abuse Liability Insurance. Contractor shall procure and maintain, during the life of this Contract, sexual molestation and abuse insurance. Contractor shall require its Subcontractor(s), if any, to procure and maintain sexual molestation and abuse insurance for all employees of Subcontractor(s). Any class of employee or employees not covered by a Subcontractor's insurance shall be covered by Contractor's insurance. If any class of employee or employees engaged in Work under the Contract, on or at the Site of the Project, are not covered under the sexual molestation and abuse insurance, Contractor shall provide, or shall cause a Subcontractor to provide, adequate insurance coverage to cover any employee(s) not otherwise covered before any of those employee(s) commence work.

13.1.6. Builder's Risk Insurance: Builder's Risk "All Risk" Insurance (NO Earthquake or Flood).

13.1.6.1. Contractor (Builder) shall procure and maintain, during the life of this Contract, Builder's Risk (Course of Construction), or similar first party property coverage acceptable to the District, issued on a replacement cost value basis. The cost shall be consistent with the total replacement cost of all insurable Work included within the Contract Documents.

13.1.6.2. Coverage is to insure against all risks of accidental physical loss and shall include without limitation the perils of vandalism and/or malicious mischief (both without any limitation regarding vacancy or occupancy), sprinkler leakage, water damage, mold, civil authority, theft, sonic disturbance, collapse, wind, fire, war, terrorism, lightning, smoke, and rioting. Coverage shall include debris removal, demolition, increased costs due to enforcement of all applicable ordinances and/or laws in the repair and replacement of damaged 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, including completed Work and Work in progress, to the full insurable value thereof.

13.1.6.3. Coverage shall be maintained until final payment has been made as provided under the Contract or until no person or entity other than the District has an insurable interest in the property to be covered, whichever is later. This insurance shall cover as insureds the District, Contractor, all Subcontractors of every tier on the Project, and all vendors and suppliers. Coverage must also be maintained for any materials stored offsite that will be incorporated into the Project.

13.1.6.4. The deductible for this insurance shall be paid by Contractor.

13.1.6.5. Contractor must review the Special Conditions to confirm the scope of this requirement and if the District has modified this provision.

13.1.7. Proof of Carriage of Insurance and Other Requirements: Endorsements and Certificates

13.1.7.1. Contractor shall not commence Work nor shall it allow any Subcontractor to commence Work under the Contract, until Contractor and its Subcontractor(s) have procured all required insurance and Contractor has delivered in duplicate to the District complete endorsements (or entire insurance policies) and certificates indicating the required coverages have been obtained, and the District has approved these documents.

13.1.7.2. Endorsements, certificates, and insurance policies shall include the following:

13.1.7.2.1. A clause stating:

13.1.7.2.1.1. “This policy shall not be amended, canceled or modified and the coverage amounts shall not be reduced until notice has been mailed to District, Architect, and Construction Manager stating date of amendment, modification, cancellation or reduction. Date of amendment, modification, cancellation or reduction may not be less than thirty (30) days after date of mailing notice.”

13.1.7.2.1.2. In lieu of receiving an endorsement with this clause, the District may, at its sole discretion, accept written notification from Contractor and its insurer to the District of any amendments, modifications, cancellations or reduction in coverage, not less than thirty (30) days prior to such coverage changes occur.

13.1.7.2.2. Language stating in particular those insured, extent of insurance, location and operation to which insurance applies, expiration date, to whom cancellation and reduction notice will be sent, and length of notice period.

13.1.7.3. All endorsements, certificates and insurance policies shall state that District, its trustees, employees and agents, the State of California, Construction Manager(s), Program Manager(s), Inspector(s) and Architect(s) are named additional insureds under all policies except Workers’ Compensation Insurance and Employers’ Liability Insurance.

13.1.7.4. Contractor’s and Subcontractors’ insurance policy(s) shall be primary and non-contributory to any insurance or self-insurance maintained by District, its trustees, employees and/or agents, the State of California, Construction Manager(s), Program Manager(s), Inspector(s), and/or Architect(s).

13.1.7.5. All endorsements shall waive any right to subrogation against any of the named additional insureds.

13.1.7.6. All policies shall be written on an occurrence form.

13.1.7.7. Unless otherwise stated in the Special Conditions, all of Contractor’s insurance shall be placed with insurers **ADMITTED** in California with a current A.M. Best's rating of no less than **A—** or **A:VII**.

13.1.7.8. The insurance requirements set forth herein shall in no way limit the Contractor’s liability arising out or relating to the performance of the Work or related activities.

13.1.7.9. Failure of Contractor and/or its Subcontractor(s) to comply with the insurance requirements herein shall be deemed a material breach of the Agreement.

13.1.8. Insurance Policy Limits

Unless different limits are indicated in the Special Conditions, the limits of insurance shall not be less than the following amounts:

Commercial General Liability	Includes: Bodily Injury, Property Damage, Personal & Advertising Injury, Product Liability and Completed Operations	\$2,000,000 each occurrence; \$4,000,000 general aggregate
Automobile Liability – <u>Any</u> Auto	Combined Single Limit	\$2,000,000 per occurrence
Excess Liability (Umbrella)		\$6,000,000 per occurrence; \$6,000,000 aggregate
Workers Compensation		Statutory limits pursuant to State law
Employers' Liability		\$2,000,000 each incident, each disease; \$2,000,000 policy limit
Sexual Abuse / Molestation		\$1,000,000 each incident; \$2,000,000 policy limit
Builder's Risk (Course of Construction)		Issued for the value and scope of Work indicated herein.
Property of Others	Combined Single Limit General Aggregate	Issued for the value and scope of Work stored off-site.

13.2. Contract Security – Bonds

13.2.1. Contractor shall furnish two surety bonds issued by a California admitted surety insurer as follows:

13.2.1.1. Performance Bond: A bond in an amount at least equal to one hundred percent (100%) of Contract Price as security for faithful performance of this Contract.

13.2.1.2. Payment Bond: A bond in an amount at least equal to one hundred percent (100%) of the Contract Price as security for payment of persons performing labor and/or furnishing materials in connection with the Contract.

13.2.2. Cost of bonds shall be included in the Bid and Contract Price.

13.2.3. All bonds related to the Project shall be in the forms set forth in the Contract Documents and shall comply with all requirements of the Contract Documents, including, without limitation, the bond forms.

14. WARRANTY/GUARANTEE/INDEMNITY

14.1. Warranty/Guarantee

14.1.1. Contractor shall obtain and preserve for the benefit of the District, manufacturer's warranties on materials, fixtures, and equipment incorporated into the Work. All manufacturer, material, and fixture

warranties shall commence at Project Completion. Contractor shall ensure that all warranties are maintained for the benefit of the District, regardless of the who the manufacturer is, who the installing Subcontractor was, if any, etc. While the District will fully expect the Contractor to manage all warranty work through all applicable warranty periods, the District must have that same ability if the Contractor fails to perform its warranty obligations as required.

14.1.2. In addition to guarantees required elsewhere, Contractor shall, and hereby does guarantee and warrant all Work against all defects for a period of **ONE (1)** year after the later of the following dates:

14.1.2.1. The date of completion as defined in Public Contract Code section 7107, subdivision (c),

14.1.2.2. The commissioning date for the Project, if any.

14.1.3. At the District's sole option, Contractor shall repair or replace any and all of that Work, together with any other Work that may be displaced in so doing, that may prove defective in workmanship and/or materials within a **ONE (1)** year period from date of Completion as defined above without expense whatsoever to District. In the event of failure of Contractor and/or Surety to commence and pursue with diligence said replacements or repairs within **TEN (10)** days after being notified in writing, Contractor and Surety hereby acknowledge and agree that District is authorized to proceed to have defects repaired and made good at expense of Contractor and/or Surety who hereby agree to pay costs and charges therefore immediately on demand.

14.1.4. If, in the opinion of District, defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to District or to prevent interruption of operations of District, District will attempt to give the notice required above. If Contractor or Surety cannot be contacted or neither complies with District's request for correction within a reasonable time as determined by District, District may, notwithstanding the above provision, proceed to make all corrections and/or provide attentions the District believes are necessary. The costs of correction or attention shall be charged against Contractor and Surety of the guarantees provided in this Article or elsewhere in the Contract Documents.

14.1.5. The above provisions do not in any way limit the guarantees on any items for which a longer guarantee is specified or on any items for which a manufacturer gives a guarantee for a longer period. Contractor shall furnish to District all appropriate guarantee or warranty certificates as indicated in the Specifications or upon request by District.

14.1.6. Nothing herein shall limit any other rights or remedies available to District.

14.2. Indemnity

14.2.1. To the furthest extent permitted by California law, Contractor shall indemnify, defend with legal counsel reasonably acceptable to the District, keep and hold harmless the District and its consultants, the Architect and its consultants, the Construction Manager and its consultants, separate contractors, and their respective board members, officers, representatives, contractors, agents, and employees, in both individual and official capacities ("Indemnitees"), against all suits, claims, damages, losses, and expenses, including but not limited to attorney's fees, caused by, arising out of, resulting from, or incidental to, the performance of the Work by Contractor, its Subcontractors, vendors, or suppliers, including, without limitation, any such suit, claim, damage, loss, or expense attributable to, without limitation, bodily injury, sickness, disease, death, alleged patent violation or copyright infringement, or to injury to or destruction of tangible property (including damage to the Work itself) including the loss of use resulting therefrom, except to the extent caused by the sole negligence, active negligence, or willful misconduct of the Indemnitees, and/or to any extent that would render these provisions void or unenforceable. This agreement and obligation of Contractor shall not be construed to negate, abridge, or otherwise reduce

any right or obligation of indemnity that would otherwise exist as to any party or person described herein. This indemnification, defense, and hold harmless obligation includes, without limitation:

14.2.1.1. Any failure or alleged failure by Contractor to comply with any provision of law, any failure or alleged failure to timely and properly fulfill all of its obligations under the Contract Documents in strict accordance with their terms, and without limitation, any stop payment notice actions or liens, including liens by the California Department of Labor Standards Enforcement.

14.2.1.2. Any claim arising (including bid protests) from any errors or mistakes in Contractor's bid documents provided to Subcontractors.

14.2.2. Contractor shall give prompt notice to the District in the event of any injury (including death), loss, or damage included herein. Without limitation of the provisions herein, if Contractor's agreement to indemnify, defend, and hold harmless the Indemnitees as provided herein against liability for damage arising out of bodily injury to persons or damage to property caused by or resulting from the negligence of any of the Indemnitees shall to any extent be or be determined to be void or unenforceable, it is the intention of the parties that these circumstances shall not otherwise affect the validity or enforceability of Contractor's agreement to indemnify, defend, and hold harmless the rest of the Indemnitees, as provided herein, and in the case of any such suits, claims, damages, losses, or expenses caused in part by the default, negligence, or act or omission of Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, and in part by any of the Indemnitees, Contractor shall be and remain fully liable on its agreements and obligations herein to the full extent permitted by law.

14.2.3. In any and all claims against any of the Indemnitees by any employee of Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, Contractor's indemnification obligation herein shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

14.2.4. The defense and indemnification obligations hereunder shall survive the Completion of Work, including the warranty/guarantee period, and/or the termination of the Agreement.

15. TIME

15.1. Notice to Proceed

District may issue a Notice to Proceed as indicated in the Instructions to Bidders or will otherwise instruct the Contractor to begin performing the Work of the Project.

15.2. Hours of Work

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. Contractor and Subcontractors shall continuously furnish sufficient forces to ensure the performance of the Work in accordance with the Construction Schedule. In no event will the District be responsible for the costs of Work performed outside of regular working hours, including, without limitation, overtime or weekend Work, unless expressly agreed to by the District in writing and approved in a Change Order.

15.3. Progress and Completion

15.3.1. Time of the Essence

Time limits stated in the Contract Documents are of the essence to the Contract. By executing the Agreement, Contractor confirms that the Contract Time is a reasonable period for performing the Work.

15.3.2. No Commencement Without Insurance

15.3.2.1. Contractor shall not commence operations on the Project or elsewhere prior to the effective date of insurance and bonds. The date of commencement of the Work shall not be changed by the effective date of such insurance. If Contractor commences Work without insurance and bonds, all Work is performed at Contractor's peril and shall not be compensable until and unless Contractor secures bonds and insurance pursuant to the terms of the Contract Documents and subject to District's claim for damages.

15.4. Schedule

Contractor shall provide to District, Construction Manager, and Architect a schedule in conformance with the Contract Documents and as required in the Notice to Proceed and the Contractor's Submittals and Schedules section of these General Conditions.

15.5. Expeditious Completion

The Contractor shall proceed expeditiously with adequate forces and shall achieve Completion within the Contract Time.

16. EXTENSIONS OF TIME – LIQUIDATED DAMAGES

16.1. Contractor's Notice of Delay

16.1.1. In addition to the requirements indicated in this subsection, Contractor shall submit any request for an adjustment of the Contract Price or the Contract Time through the Change Order provisions in these General Conditions.

16.1.2. Contractor shall, within **FIVE (5)** calendar days of any delay impacting the critical path in completing the Work, notify District in writing of the causes of the delay including documentation and facts explaining the delay.

16.1.3. Any request by Contractor for an adjustment of the Contract Price or the Contract Time for a delay shall be submitted in accordance with the provisions in the Contract Documents governing changes in Work. When requesting time, requests must be submitted with full justification and documentation. Such justification must be based on the official Construction Schedule as updated at the time of occurrence of the delay or execution of Work related to any changes to the Scope of Work.

16.1.4. Any claim for delay must include the following information as support, without limitation:

16.1.4.1. Duration. The duration of the activity relating to the changes in the Work and the resources (manpower, equipment, material, etc.) required to perform the activities within the stated duration.

16.1.4.2. Schedule Analysis. A detailed schedule analysis articulating the cause of any delay and explaining the delay's impact to critical path and each activity of the Project. This analysis may be in the form of a time impact analysis. The time impact analysis shall provide all documentation and justification necessary to substantiate the requested extension. All

supporting documentation shall be based on the then current Monthly Progress Schedule.

16.1.4.3. Logical Ties / Fragnets. Specific logical ties to the Contract Schedule for the proposed changes and/or delay showing the activity/activities in the Construction Schedule that are affected by the change and/or delay. (A portion of any delay of seven (7) days or more must be provided.) Include a “fragnet” analysis for the portion of the schedule and the activities the Contractor contends are impacted by the delay.

16.1.4.4. Updated Construction Schedule. A recovery or updated Construction Schedule must be submitted.

16.1.5. District shall review the facts and extent of any noticed delay and may grant Contract Time extension(s) of time for completing Work when, in the District’s judgment, the findings of fact justify an extension.

16.1.6. Extension(s) 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.

16.1.7. An extension of time may only be granted if Contractor has timely submitted the updated Construction Schedule as required herein.

16.1.8. Following submission of a notice of delay, the District may determine whether the delay is to be considered:

16.1.8.1. Excusable and Compensable, Excusable and Non-Compensable, or Unexcused;

16.1.8.2. How long the delay continues; and

16.1.8.3. To what extent the prosecution and Completion of the Work might be delayed thereby.

16.1.9. Contractor’s failure to request adjustment(s) of the Contract Time in strict conformity with applicable provisions of the Contract Documents shall be deemed Contractor’s waiver of its right to assert a claim for a delay.

16.1.10. Limitations Upon Adjustment of Contract Time on Account of Delays. Any adjustment of the Contract Time on account of an Excusable Delay or a Compensable Delay shall be limited as set forth herein. No adjustment of the Contract Time shall be made on account of any Excusable Delays or Compensable Delays unless those delay(s) actually and directly impact Work or Work activities on the critical path of the then current and updated approved Construction Schedule as of the date on which a delay first occurs. The District shall not be deemed in breach of, or otherwise in default of any obligation hereunder, if the District shall deny a request by the Contractor for an adjustment of the Contract Time for any delay that does not actually and directly impact Work on the then current and updated approved Construction Schedule. In submitting a request for an adjustment of Contract Time, and as a condition precedent to the District’s review of that request, Contractor shall insert into the then current and updated approved Construction Schedule a “fragnet” analysis representing the event that Contractor claims to result in delay to the critical path as depicted in the updated approved Construction Schedule. If an Excusable Delay and a Compensable Delay occur concurrently, the maximum extension of the Contract Time shall be the number of days from the commencement of the first delay to the cessation of the delay that ends last. If an Unexcused Delay occurs concurrently with either an Excusable Delay or a Compensable Delay, the maximum extension of the Contract Time shall be the number of days, if any, which the Excusable Delay or the Compensable Delay exceeds the period of time of the Unexcused Delay.

16.2. Excusable and Compensable Delay(s)

16.2.1. Contractor is **not** entitled to additional compensation for any delay, even a delay caused by Adverse Weather or an Excusable Delay, unless **all** of the following conditions are met (“**Excusable and Compensable Delay**”):

16.2.1.1. The District is responsible for the delay;

16.2.1.2. The delay is unreasonable under the circumstances involved and impacts the critical path of the Work and extends the most current Contract Completion date;

16.2.1.3. The delay was not within the contemplation of District and Contractor;

16.2.1.4. Contractor complies with the Change Order procedures, and if necessary, the Claims procedures of the Contract Documents;

16.2.1.5. The delay could not have been avoided or mitigated by the Contractor's care, prudence, foresight, and diligence;

16.2.1.6. The delay extends the most current Contract Completion date; and

16.2.1.7. The delay is not concurrent with a Contractor-caused delay or other type of Excusable Delay.

16.2.2. In accordance with California Public Contract Code section 7102, if the Contractor's progress is delayed by the events described in the preceding subsection, Contractor shall not be precluded from the recovery of damages directly and proximately resulting therefrom. In that event, Contractor's damages, if any, shall be limited to direct, actual and unavoidable additional costs of labor, materials or construction equipment directly resulting from that delay, and shall exclude special, indirect or consequential damages. In no event shall Contractor seek costs or damages for delays, interruptions, hindrances or disruptions to the Work for on-Site or off-Site costs or damages based upon formulas, e.g. Eichleay or other formula. Except as expressly provided for herein, Contractor shall not have any other claim, demand or right to adjustment of the Contract Price arising out of delay, interruption, hindrance or disruption to the progress of the Work. Adjustments to the Contract Price and the Contract Time, if any, on account of Changes to the Work or Suspension of the Work shall be governed by the applicable provisions of the Contract Documents, including without limitation, the “Changes in the Work” section and the percentages in the “Format for Proposed Change” section of these General Conditions.

16.3. Excusable and Non-Compensable Delay(s)

16.3.1. An "Excusable Delay" shall mean an interruption of the Work beyond the reasonable control of the Contractor and that:

16.3.1.1. Could have not been avoided by the Contractor exercising care, prudence, foresight, and diligence, and

16.3.1.2. Actually extended the most current Project Completion date.

16.3.2. The Contractor may be entitled to an extension of the Project Completion date if there is an Excusable Delay, but the Contractor shall not be entitled to additional compensation for an Excusable Delay.

16.3.3. Force Majeure.

16.3.3.1. Excusable Delays are limited to interruptions that satisfy the above requirements and that are acts of God; acts of a public enemy; fires; floods; windstorms;

tornadoes; earthquakes; wars; riots; insurrections; epidemics; pandemics; quarantine restrictions; strikes; lockouts; fuel shortages; freight embargoes; and Adverse Weather that satisfies the requirements herein ("**Force Majeure Events**").

16.3.3.2. If an Infectious Disease impacts the progress of the Work and Contractor demonstrates that the event satisfies the conditions of the Contract Documents for an adjustment to the Contract Time, it will be considered a Force Majeure Event.

16.3.3.3. In addition to any other requirement of the Contract Documents, Contractor shall not be entitled to any adjustment to the Contract Time unless Contractor submits a PCO and the District has issued a Change Order pursuant to the "Changes in the Work" provisions herein. If the Parties cannot in good faith and reasonably agree to an increase in the Contract Time, the Parties agree that dispute will be resolved pursuant to the Claims Resolution Process herein.

16.3.4. Contractor is aware that governmental agencies and utilities, including, without limitation, the Division of the State Architect, the Department of General Services, gas companies, electrical utility companies, water districts, and other agencies may have to approve Contractor-prepared drawings or approve a proposed installation. Contractor shall include in its bid, time for possible review of its drawings and for reasonable delays and damages that may be caused by such agencies. Contractor is not entitled to make a claim for damages or delays or an Excusable Delay arising from the review of Contractor's drawings or other approvals from the Division of the State Architect, the Department of General Services, gas companies, electrical utility companies, water districts, and other agencies.

16.3.5. Neither the financial resources of the Contractor or any person or entity directly or indirectly engaged by the Contractor in performance of any portion of the Work shall be deemed conditions beyond the control of the Contractor. If an event of Excusable Delay occurs, the Contract Time shall be subject to adjustment hereunder only if the Contractor establishes: (i) full compliance with all applicable provisions of the Contract Documents relative to the method, manner and time for Contractor's notice and request for adjustment of the Contract Time; (ii) that the event(s) forming the basis for Contractor's request to adjust the Contract Time are outside the reasonable control and without any fault or neglect of the Contractor or any person or entity directly or indirectly engaged by Contractor in performance of any portion of the Work; and (iii) that the event(s) forming the basis for Contractor's request to adjust the Contract Time directly and adversely impacted the critical path of the Work as indicated in the approved Construction Schedule or the most recent updated approved Construction Schedule relative to the date(s) of the claimed event(s) of Excusable Delay.

16.3.6. Computation of Time / Adverse Weather

16.3.6.1. The Contractor will only be allowed a time extension for Adverse Weather conditions if requested by Contractor within five (5) calendar days of the Adverse Weather event, and only if all of the following conditions are met – thereby making the resulting delay an Excusable Delay.

16.3.6.1.1. The weather conditions constitute Adverse Weather, as defined herein and further specified in the Special Conditions;

16.3.6.1.2. Contractor can verify that the Adverse Weather caused delays in excess of five (5) hours of the indicated labor required to complete the scheduled tasks of Work on the day affected by the Adverse Weather;

16.3.6.1.3. The Contractor's crew is dismissed as a result of the Adverse Weather; and

16.3.6.1.4. The number of days of delay exceed those indicated in the Special Conditions.

16.3.6.2. A day-for-day extension will only be allowed for those days in excess of those indicated in the Special Conditions and only if the tasks of Work on the day affected by the Adverse Weather were tasks required to be performed on that day to maintain the critical path of the Construction Schedule.

16.3.6.3. The Contractor shall work seven (7) days per week, if necessary, irrespective of inclement weather, to maintain access and the Construction Schedule, and to protect the Work under construction from the effects of Adverse Weather, all at no further cost to the District.

16.3.6.4. The Contract Time has been determined with consideration given to the average climate weather conditions prevailing in the County in which the Project is located.

16.4. Unexcused Delay(s) – Liquidated Damages

16.4.1. Unexcused delays refer to any delay to the progress of the Work caused by events or factors other than those specifically identified in the “Excusable and Compensable Delay(s)” or the “Excusable and Non-Compensable Delay(s)” sections above (“**Unexcused Delays**”). Neither the Contract Price nor the Contract Time shall be adjusted on account of Unexcused Delays.

16.4.2. 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 completed within the time specified in the Contract Documents, it is understood that the District will suffer damage. It being impractical and unfeasible to determine the amount of actual damage, it is agreed the Contractor shall forfeit and pay to District as fixed and liquidated damages, and not as a penalty, the amount set forth in the Agreement for each calendar day of delay in Completion. Contractor and its Surety shall be liable for the amount thereof pursuant to Government Code section 53069.85.

16.4.3. Contractor shall not forfeit or pay liquidated damages for an Excusable Delay or an Excusable and Compensable Delay.

17. CHANGES IN THE WORK

17.1. No Changes Without Authorization

17.1.1. There shall be no change whatsoever in the Drawings, Specifications, or in the Work without an executed Change Order, a written Unilateral Change Order, or a written Force Account Directive authorized by the District as herein provided. District shall not be liable for the cost of any extra work, any changes to the Contract Time, or any substitutions, changes, additions, omissions, or deviations from the Drawings and Specifications unless the District's governing board has authorized the same and the cost thereof has been approved in writing by an executed Change Order, a written Unilateral Change Order, or a written Force Account Directive.

17.1.2. Verbal Order of Change in the Work. Any verbal order, direction, instruction, interpretation, or determination from the District, the Project Inspector or the Architect which in the opinion of the Contractor causes any change to the scope of the Work, or otherwise requires an adjustment to the Contract Price or the Contract Time, shall be treated as a Change only if the Contractor gives the Architect written notice within three (3) Business Days of the order, directions, instructions, interpretation or determination and prior to acting in accordance therewith. Time is of the essence in Contractor's written notice pursuant to the preceding sentence so that the District can promptly investigate and consider alternative measures to address the order, direction, instruction, interpretation or determination giving rise to Contractor's notice. Accordingly, Contractor acknowledges that its failure, for any reason, to give written notice within three (3) Business Days of any verbal order, direction, instruction, interpretation or determination shall be deemed Contractor's waiver of any right to assert or claim any entitlement to an adjustment of the Contract Time or the Contract Price on account of that verbal order, direction,

instruction, interpretation or determination. The written notice shall state the date, circumstances, extent of adjustment to the Contract Price or the Contract Time, if any, requested, and the source of the verbal order, directions, instructions, interpretation or determination that the Contractor regards as a Change. Unless the Contractor acts in strict accordance with this procedure, any verbal order, direction, instruction, interpretation or determination shall not be treated as a Change and the Contractor hereby waives any claim for any adjustment to the Contract Price or the Contract Time on account thereof.

17.1.3. The Surety, in executing and providing the Performance Bond and the Payment Bond, shall be deemed to have expressly agreed to any change to the Contract and to any extension of time made by reason thereof.

17.1.4. 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, Unilateral Change Order, or Force Account Directive. 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.

17.1.5. Contractor shall perform immediately all work that has been authorized by a fully executed Change Order, Unilateral Change Order, or Force Account Directive. Contractor shall be fully responsible for any and all delays and/or expenses caused by Contractor's failure to expeditiously perform this Work and Contractor's failure or refusal to so proceed with that Work may be deemed to be Contractor's default of a material obligation of the Contractor under the Contract Documents.

17.1.6. Should any Change Order result in an increase in the Contract Price, the cost of that 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. In the event that Contractor proceeds with any change in Work without a Change Order executed by the District, Unilateral Change Order, or Force Account Directive, Contractor waives any claim of additional compensation or time for that additional work.

17.1.7. Contractor understands, acknowledges, and agrees that the reason for District authorization 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 a change in Work becomes unnecessary.

17.1.8. In an emergency affecting safety of life or of work or of adjoining property, Contractor, without special instruction or authorization, shall act, at its discretion, to prevent all threatened loss or injury. Any compensation or time claimed by Contractor on account of emergency work shall be determined as indicated herein as a PCO.

17.1.9. No payments will be made, nor will District accept proposed change orders until the Contractor has complied with all the requirements of the Escrow of Bid Documentation document (if applicable).

17.2. Architect Authority

The Architect will have authority to order minor changes in the Work not involving any adjustment in the Contract Price, or an extension of the Contract Time, or a change that is inconsistent with the intent of the Contract Documents. These changes shall be effected by written Change Order, Unilateral Change Order, or by Architect's response(s) to RFI(s).

17.3. Change Orders

17.3.1. A Change Order is a written instrument prepared and issued by the District and/or the Architect and signed by the District (as authorized by the District's governing board), the Contractor, the Architect, and approved by the Project Inspector (if necessary) and DSA (if necessary), stating their agreement

regarding all of the following:

- 17.3.1.1.** A description of a change in the Work;
- 17.3.1.2.** The amount of the adjustment in the Contract Price, if any; and
- 17.3.1.3.** The extent of the adjustment in the Contract Time, if any.

17.3.2. If a Change Order is required to be approved by DSA, the District may call it a Construction Change Document.

17.3.3. If the District approves a Change, the District or the Architect shall provide a written Change Order to the Contractor describing the Change and setting forth the adjustment to the Contract Time and the Contract Price, if any, on account of that Change. All Change Orders shall be full payment and final settlement of all rights for direct, indirect and consequential costs, including without limitation, costs of delays or impacts related to, or arising out of, items covered and affected by the Change Order, as well as any adjustments to the Contract Time. Any demand or request for an adjustment to the Contract Time or the Contract Price relating to any Change incorporated into a Change Order not presented by the Contractor for inclusion in the Change Order shall be deemed waived. The Contractor shall execute the Change Order prepared pursuant to the foregoing. After the Change Order has been prepared and forwarded to the Contractor for execution, the Contractor shall not modify or amend the form or content of such Change Order, or any portion thereof.

17.4. Unilateral Change Orders

17.4.1. A Unilateral Change Order is a written order prepared and issued by the District, the Construction Manager, and/or the Architect and signed by the District, directing a change in the Work. The District may as provided by law, by Unilateral Change Order and without invalidating the Contract, order changes in the Work consisting of additions, deletions, or other revisions. Any dispute as to the sum of the Unilateral Change Order or timing of payment shall be resolved pursuant to the Payment provisions and the Claims provisions herein. **A Unilateral Change Order is NOT a Construction Change Document (which is defined above as a Change Order that DSA must approve).**

17.4.2. The District may issue a Unilateral Change Order in the absence of agreement on the terms of a Change Order.

17.5. Force Account Directives

17.5.1. When work, for which a definite price has not been agreed upon in advance, is to be paid for on a force account basis, all direct costs necessarily incurred and paid by the Contractor for labor, material, and equipment used in the performance of that Work, shall be subject to the approval of the District and compensation will be determined as set forth herein.

17.5.2. District will issue a Force Account Directive to proceed with the Work on a force account basis, and a not-to-exceed budget will be established by District.

17.5.3. All requirements regarding direct cost for labor, labor burden, material, equipment, and markups on direct costs for overhead and profit described in this section shall apply to Force Account Directives. However, District will only pay for actual costs verified in the field by the District or its authorized representative(s) on a daily basis.

17.5.4. Contractor shall be responsible for all cost related to the administration of Force Account Directive. The markup for overhead and profit for Contractor modifications shall be full compensation to the Contractor to administer Force Account Directive.

17.5.5. Contractor shall notify District or its authorized representative(s) at least twenty-four (24) hours prior to proceeding with any of the force account work. Furthermore, the Contractor shall notify the District when it has consumed eighty percent (80%) of the budget, and shall not exceed the budget unless specifically authorized in writing by the District. Contractor will not be compensated for force account work in the event that Contractor fails to timely notify the District regarding the commencement of force account work, or exceeding the force account budget.

17.5.6. Contractor shall diligently proceed with the work, and on a daily basis, submit a daily force account report on a form supplied by the District no later than 5:00 p.m. each day. The report shall contain a detailed itemization of the daily labor, material, and equipment used on the force account work only. The names of the individuals performing the force account work shall be included on the daily force account reports. The type and model of equipment shall be identified and listed. District will review the information contained in the reports, and sign the reports no later than the next work day, and return a copy of the report to Contractor for its records. District will not sign, nor will Contractor receive compensation for work District cannot verify. Contractor will provide a weekly force account summary indicating the status of each Force Account Directive in terms of percent complete of the not-to-exceed budget and the estimated percent complete of the work.

17.5.7. In the event Contractor and District reach a written agreement on a set cost for the work while the work is proceeding based on a Force Account Directive, the Contractor's signed daily force account reports shall be discontinued and all previously signed reports shall be invalid.

17.6. Price Request

17.6.1. Definition of Price Request. A Price Request ("PR") is a written request prepared by the Architect or the District, requesting the Contractor to submit to the District and the Architect an estimate of the effect of a proposed change in the Work on the Contract Price and the Contract Time.

17.6.2. Scope of Price Request. A Price Request shall contain adequate information, including any necessary Drawings and Specifications, to enable Contractor to provide the cost breakdowns required herein. Contractor shall not be entitled to any additional compensation for preparing a response to a Price Request, whether ultimately accepted or not.

17.6.3. Contractor shall not consider Price Requests to be instructions either to stop work in progress or to execute the proposed change.

17.6.4. Within the time specified in Price Request after receipt of Price Request, Contractor shall submit a quotation estimating cost adjustments to the Contract Price and the Contract Time necessary to execute the change, with the following documentation and information:

17.6.4.1. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

17.6.4.2. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

17.6.4.3. Include costs of labor and supervision directly attributable to the change.

17.6.4.4. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

17.7. Proposed Change Order

17.7.1. Proposed Change Order. The Contractor may issue a Proposed Change Order ("PCO"), only as a written request prepared by it to the District and the Architect, requesting that the District issue a Change Order based upon a proposed change to the Work.

17.7.2. Changes in Contract Price. A PCO shall include breakdowns pursuant to the provisions herein to validate any change in Contract Price and include all reasonable documentation as required herein.

17.7.3. Changes in Time. A PCO shall also include any changes in time required to complete the Project. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationships. Use available total float before requesting an extension of the Contract Time. 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 Construction Schedule as defined in the Contract Documents. If Contractor fails to request a time extension in a PCO, then the Contractor is thereafter precluded from requesting time and/or claiming a delay. If the Contractor is requesting additional time and believes that time is both Excusable and Compensable, then the Contractor must provide detailed documentation that supports its position and that addresses all the components of the "Excusable and Compensable Delay(s)" section above.

17.7.4. Unknown and/or Unforeseen Conditions. If Contractor submits a PCO requesting an increase in Contract Price and/or Contract Time that is based at least partially on Contractor's assertion that Contractor has encountered unknown and/or unforeseen condition(s) on the Project, then Contractor shall base the PCO on provable information that, beyond a reasonable doubt and to the District's satisfaction, demonstrates that the unknown and/or unforeseen condition(s) were actually unknown and/or unforeseen and that the condition(s) were reasonably unknown and/or unforeseen. If not, the District shall deny the PCO and the Contractor shall complete the Project without any increase in Contract Price and/or Contract Time based on that PCO.

17.7.5. Time to Submit PCO. Contractor shall submit its PCO within five (5) days of the date Contractor discovers, or reasonably should discover, the circumstances giving rise to the proposed change order, unless additional time to submit a proposed change order is granted in writing by the District. Time is of the essence in Contractor's written notice pursuant to the preceding sentence so that the District can promptly investigate and consider alternative measures to the address the basis for the PCI. Accordingly, Contractor acknowledges that its failure, for any reason, to give written notice (with Supporting Documentation to permit the District's review and evaluation) within this time frame shall be deemed Contractor's waiver, release, discharge and relinquishment of any right to assert or claim any entitlement to an adjustment of the Contract Time or the Contract Price on account of the circumstances giving rise to the PCO.

17.7.6. COVID-19 and other Infectious Disease(s).

17.7.6.1. Contractor agrees that its bid, the Contract Price and the Contract Time are based on the Contractor's full compliance with all applicable and existing federal, state, and/or local statutes, orders, rules, regulations, ordinances, and/or directives relating to construction site safety in connection with Infectious Disease(s) (as defined herein) including COVID-19, and/or any similar virus or derivative strain at the time of Contract award. Therefore, any cost or delay associated with Infectious Disease(s), or any derivative or similar strain thereof, or any federal, state, or local order relating thereto, shall not be considered compensable unless:

17.7.6.1.1. It occurred after the date of the award of the Contract to Contractor;

17.7.6.1.2. It materially increases the Contract Price or the Contract Time; and

17.7.6.1.3. Contractor notifies the District within 10 days of notice of any a new derivative, strain, or new public health order(s), including the anticipated increase to the Contract Price or Contract Time due to the new derivative, strain, or new public health order(s), and Contractor substantiates those costs with detailed supporting documentation as required for a PCO.

17.7.6.2. If, during the construction of the Project, the applicable and existing federal, state, and/or local statutes, orders, rules, regulations, ordinances, and/or directives relating to construction site safety in connection with Infectious Disease(s), and/or any similar virus or derivative strain, are changed or rescinded (e.g., by the reduction of potential exposure or risk due to vaccinations), the Parties agree to reduce the Contract Price and the Contract Time due to the removal of the required efforts. If the Parties cannot mutually agree on the appropriate reduction, the District may issue a Unilateral Change Order for an amount of time and money it determines to be both reasonable and appropriate. The Parties agree that any dispute related to this provision will be resolved pursuant to the Claims Resolution Process herein.

17.8. Format for Proposed Change Order

17.8.1. The following “Format For Proposed Change For Subcontractor Performed Work” and “Format For Proposed Change For Contractor Performed Work” shall be used as applicable by the District and the Contractor (e.g. Change Orders, PCO’s) to communicate proposed additions and deductions to the Contract, supported by attached documentation.

FORMAT FOR PROPOSED CHANGE FOR SUBCONTRACTOR PERFORMED WORK

	<u>SUBCONTRACTOR PERFORMED WORK</u>	<u>ADD</u>	<u>DEDUCT</u>
(A)	<u>Labor Charge</u> 1. Hours. Attach total itemized hours, by each Subcontractor at each tier. 2. Rate. This shall be no more than the Straight-Time Total Hourly Rate as determined by the Department of Industrial Relations ("DIR") for the applicable labor category.		
(B)	<u>Labor Burden & Worker's Compensation Charge</u> 1. This shall be no more than <u>twenty percent (20%)</u> of item (A) , the Labor Charge. 2. This shall be the total cumulative charge permitted for all Subcontractors or all labor performed by the Subcontractor or Subcontractor's Subcontractor(s) (i.e., all "lower-tier" Subcontractor(s)).		
(C)	<u>Subtotal (A+B)</u>		
(D)	<u>Material Charge</u> Attach itemized quantity and unit cost plus sales tax and invoice(s) from vendor(s).		
(E)	<u>Equipment Charge</u> Attach invoice(s) from supplier(s).		
(F)	<u>Subtotal (C+D+E)</u>		
(G)	<u>Subcontractor's Overhead and Profit Charge</u> 1. This shall be no more than <u>eight percent (8%)</u> of item (F) . 2. This shall be the total cumulative mark-up permitted for the Subcontractor and Subcontractor's Subcontractor(s) (i.e., all "lower-tier" Subcontractor(s)).		
(H)	<u>Subtotal (F+G)</u>		
(I)	<u>Contractor's Overhead, Profit, Bond and Insurance</u> 1. This shall be no more than <u>six percent (6%)</u> of Item (F) . 2. This shall be the total mark-up permitted for Contractor.		
(J)	<u>TOTAL (H+I)</u>		
(K)	<u>Time</u>	_____ Days	

FORMAT FOR PROPOSED CHANGE FOR CONTRACTOR PERFORMED WORK

	<u>CONTRACTOR PERFORMED WORK</u>	<u>ADD</u>	<u>DEDUCT</u>
(A)	<u>Labor Charge</u> 1. Hours. Attach total itemized hours. 2. Rate. This shall be no more than the Straight-Time Total Hourly Rate as determined by the Department of Industrial Relations ("DIR") for the applicable labor category.		
(B)	<u>Labor Burden & Worker's Compensation Charge</u> 1. This shall be no more than <u>twenty percent (20%)</u> of item (A), the Labor Charge. 2. This shall be the total cumulative charge permitted for all labor performed by Contractor.		
(C)	<u>Subtotal (A+B)</u>		
(D)	<u>Material Charge</u> Attach itemized quantity and unit cost plus sales tax and invoice(s) from vendor(s).		
(E)	<u>Equipment Charge</u> Attach invoice(s) from supplier(s).		
(F)	<u>Subtotal (C+D+E)</u>		
(G)	<u>Contractor's Overhead, Profit, Bond and Insurance</u> 1. This shall be no more than <u>six percent (6%)</u> of Item (F). 2. This shall be the total mark-up permitted for Contractor.		
(H)	<u>TOTAL (F+G)</u>		
(I)	<u>Time</u>	_____ Days	

17.8.2. All Proposed Change Order requests by Contractor for a change shall include a complete itemized breakdown with the following detail:

17.8.2.1. Labor. Labor breakdown by trade classification, wage rates, and estimated hours. Labor costs shall only include fringe benefits indicated by governing trade organizations. Wages shall not exceed current prevailing wages in the locality for performance of the changes.

17.8.2.1.1. The Contractor's or Subcontractors' labor burden and Workers' Compensation premium shall only be charged as indicated herein. In no event shall Contractor include any other charges than as indicated herein without the prior written approval of the District.

17.8.2.2. Material. Material quantities, and types of products, and transportation costs, if applicable.

17.8.2.3. Equipment. Equipment breakdown by make, type, size, rental rates (if not owned), equipment hours and transportation costs, if applicable.

17.8.2.3.1. The equipment costs shall not exceed one hundred percent (100%) of the Association of Equipment Distributors (AED) rental rates and delay factors or Caltrans rates and delay factors, whichever is less. Hourly, daily, weekly, or monthly rates shall be used, whichever is lower. Hourly rates including operator shall not be used.

17.8.2.3.2. The time to be paid for equipment shall be the actual time that the equipment is in (1) productive operation on the Work or (2) idled because of the event or circumstance giving rise to the Proposed Change Order.

17.8.2.3.2.1. To calculate the costs of idle equipment, the Contractor must use the applicable idle equipment rate. For example, and clarification purposes only, if the rate for "X" piece of equipment is \$100 and the applicable delay factor is .20 for that piece of equipment, then the hourly rate for idle equipment shall be \$20 (\$100 x .20), which shall be applied against the number of hours idle. In no event shall Contractor charge an amount greater than 50% of the applicable equipment rate for idle equipment.

17.8.2.3.2.2. In computing the hourly rental of equipment, any time less than thirty (30) minutes shall be considered one-half (1/2) hour.

17.8.2.3.2.3. No payment will be made for time while equipment is inoperative due to breakdown, or for non-workdays.

17.8.2.3.2.4. The rental time shall not include the time required to move the equipment to and from the project site. No mobilization or demobilization will be allowed for equipment already on site. If equipment is not moved by its own power, then loading and transportation costs will be paid in lieu of rental time thereof. However, neither moving time nor loading and transportation costs will be paid if the equipment is used on the Project Site in any other way than upon the work directly related to the event or circumstance giving rise to the Proposed Change Order.

17.8.2.3.3. Individual pieces of equipment having a replacement value of one thousand dollars (\$1,000) or less shall be considered to be small tools or small equipment, and no payment will be made since the costs of these tools and equipment is included as part of the markup for overhead and profit defined herein.

17.8.2.3.4. Payment to the Contractor for the use of equipment as set forth above shall constitute full compensation to the Contractor for the cost of fuel, power, oil, lubricants,

supplies, small equipment, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, labor (except for equipment operators), and any and all costs to the Contractor incidental to the use of the equipment.

17.8.2.3.5. Should Contractor, or any of its owners, officers, directors or agents, hold any ownership interest in any company, organization, association or corporation from whom rental equipment is secured. Contractor shall immediately notify District of such and the price set for any such rental shall be agreed upon in advance by the Contractor and the District.

17.8.2.4. Overhead, Profit, Bond and Insurance Costs. Markup for overhead and profit, which shall be used to compensate Contractor for all costs for all administration, general conditions, and supervision, including, without limitation:

17.8.2.4.1. All home office overhead, field office overhead, field office personnel including, but not limited to, principals, project managers, superintendents, supervisory foremen, estimators, project engineers, detailers, draftsmen, schedulers, consultants, watchmen, payroll clerks, administrative assistants, labor compliance costs and secretaries.

17.8.2.4.2. All field and field office expenses including, but not limited to, field trailers, parking, storage sheds, office equipment and supplies, telephone service and long distance telephone calls, computers, fax machines, temporary utilities, sanitary facilities and services, janitorial services, small tools and equipment with a cost under \$1000 each, portable scaffolding, blocking, shores, appliances, job vehicles, security and fencing, conformance to regulatory requirements including compliance to safety regulations, safety programs and meetings, cartage, warranties, As-Built Drawings, as well as any related maintenance costs.

17.8.2.4.3. Administrative functions such as, but not limited to, reviewing, coordinating, distributing, processing, posting, recording, estimating, negotiating, expediting, engineering, drawing, detailing, revising shop drawings, carting, cleaning, protecting the work, and other incidental Work related to the change.

17.8.2.4.4. All other costs and taxes required to be paid, but not included under direct costs as defined above including, without limitation, payroll taxes, social security, etc.

17.8.2.4.5. All costs for Contractor's bonds and insurance.

17.8.2.4.6. Taxes: Federal excise tax shall not be included. District will issue an exemption on request.

17.8.2.5. Contract Time. Justification for any adjustment in Contract Time including a schedule analysis identifying critical schedule activities delayed by the request. Contract Time shall be extended or reduced by Change Orders, Unilateral Change Orders, or Force Account Directives for a period of time commensurate with the time reasonably necessary to perform a Change. This time must be requested in writing by the Contractor with the Price Request, PCO, or expressly in writing as part of its documentation for Unilateral Change Orders, or Force Account Directives. The Contractor shall justify any Contract Time extension by submittal of a schedule analysis as required in this Changes section of these General Conditions accurately portraying the impact of the change on the critical path of the Construction Schedule. Changes performed within available float shall not justify an extension to the Contract Time. The District shall make the final determination of the amount of Contract Time to allocate to any Change.

17.8.2.6. Supporting Documentation. Contractor shall include with each PCO, along with the itemized breakdown as required herein, reasonable documentation substantiating the

requested change in the Contract Price and Contract Time. If the District deems Contractor's supporting documentation incomplete or inadequate to substantiate the requested change to the Contract Price and Contract Time, the District may request that Contractor supplement the PCO with additional, reasonable supporting documentation.

17.9. Change Order Certification

17.9.1. All Change Orders and PCOs shall include the following certification by the Contractor. The Parties acknowledged that if a Change Order is approved that does not include this language, that Change Order shall be deemed to include this certification language:

The Contractor approves the foregoing as to the changes, if any, and the price specified for each item and the extension of time allowed, if any, for completion of the entire Work as stated herein, and agrees to furnish all labor, materials, and service, and perform all work necessary to complete all additional work specified for the consideration stated herein. Submission of sums that have no basis in fact or which Contractor knows are false 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. It is understood that the changes herein to the Contract shall only be effective when approved by the governing board of the District. It is expressly understood that the value of the extra Work or changes includes all of the Contractor's costs, expenses, field overhead, home office overhead, profit, 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.

17.10. Determination of Change Order Cost

17.10.1. The amount of the increase or decrease in the Contract Price from a Change Order, if any, shall be determined in one or more of the following ways as applicable to a specific situation and at the District's discretion:

17.10.1.1. District acceptance of a PCO;

17.10.1.2. By agreement between District and Contractor.

17.10.1.3. By unit prices or alternates contained in Contractor's original bid. If the Bid for the Work included proposal(s) for Alternate Bid Item(s), during Contractor's performance of the Work, the District may elect to add any such Alternate Bid Item(s) if the that item did not form a basis for award of the Contract or delete any such Alternate Bid Item(s) if that item formed a basis for award of the Contract. If the District elects to add or delete an Alternate Bid Item(s) pursuant to the foregoing, the cost or credit for that Alternate Bid Item(s) shall be as set forth in the Contractor's Bid, at the District's discretion. If any Alternate Bid Item is added or deleted from the Work pursuant to the foregoing, the Contract Time shall be adjusted by the number of days allocated for the added or deleted Alternate Bid Item in the Contract Documents; if days are not allocated for any Alternate Bid Item added or deleted pursuant to the foregoing, the Contract Time shall be equitably adjusted.

17.10.1.4. By the District, based upon actual and necessary costs incurred by the Contractor as determined by the District on the basis of the Contractor's records. Promptly upon determining the extent of adjustment to the Contract Price, the District shall notify the Contractor in writing of the same; the Contractor shall be deemed to have accepted the District's determination of the amount of adjustment to the Contract Price on account of a Change to the

Work unless Contractor shall notify the District, in writing, not more than fifteen (15) days from the date of the District's written notice, of any objection to the District's determination. Failure of the Contractor to timely notify the District of Contractor's objections to the District's determination of the extent of adjustment to the Contract Price shall be deemed Contractor's acceptance of the District's determination and a waiver of any right or basis of the Contractor to thereafter protest or otherwise object to the District's determination. Notwithstanding any objection of the Contractor to the District's determination of the extent of any adjustment to the Contract Price pursuant to this provision, Contractor shall diligently proceed to perform and complete any such Change.

17.11. Deductive Change Orders

If Contractor offers a proposed amount for a deductive Change Order(s), Contractor shall include a minimum of five percent (5%) total overhead and profit to be deducted with the amount of the work of the Change Order(s). If Subcontractor work is involved, Subcontractors shall also include a minimum of five percent (5%) overhead and profit to be deducted with the amount of its deducted work, for a total minimum of ten percent (10%) total overhead and profit to be deducted. Any deviation from this provision shall not be allowed.

17.12. 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 omission in the Work as provided herein.

17.13. Accounting Records

With respect to portions of the Work performed by Change Orders, Unilateral Change Orders, or Force Account Directives, Contractor shall keep and maintain cost-accounting records satisfactory to the District, which shall be available to the District on the same terms as any other books and records Contractor is required to maintain pursuant to the Contract Documents.

17.14. Notice Required

If Contractor is seeking an adjustment in the Contract Price, or any extension in the Contract Time for Completion, it shall notify District pursuant to the provisions of the Contract Documents. No adjustment in the Contract Price or Contract Time shall be considered unless made in accordance with the Contract Documents. 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 contract adjustment shall only be authorized by a Change Order.

17.15. Applicability to Subcontractors

Any requirements under this Article shall be equally applicable to Change Orders, Unilateral Change Orders, or Force Account Directives issued to Subcontractors by the Contractor to the extent as required by the Contract Documents.

17.16. Alteration to Change Order Language

Contractor shall not alter Change Orders or reserve time in Change Orders. Contractor shall execute finalized Change Orders and proceed under the provisions herein with proper notice.

17.17. Failure of Contractor to Execute Change Order

Contractor shall be in default of the Contract if Contractor fails to execute a Change Order when the Contractor agrees with the addition and/or deletion of the Work in that Change Order.

18. REQUEST FOR INFORMATION

18.1. Any Request for Information ("RFI") shall reference all applicable Contract Document(s), including Specification section(s), detail(s), page number(s), drawing number(s), and sheet number(s), etc. Contractor shall make suggestions and interpretations of the issue raised by each RFI. An RFI cannot modify the Contract Price, Contract Time, or the Contract Documents.

18.2. Contractor shall be liable to the District for all costs incurred by the District associated with the processing, reviewing, evaluating and responding to any RFI, including without limitation, fees of the Architect and any other design consultant to the Architect or the District, that District reasonably determines:

18.2.1. Does not reflect adequate or competent supervision or coordination by the Contractor or any Subcontractor; or

18.2.2. Does not reflect the Contractor's adequate or competent knowledge of the requirements of the Work or the Contract; or

18.2.3. Requests an interpretation or decision of a matter where the information sought is equally available to the Contractor; or

18.2.4. Is not justified for any other reason.

18.3. Prior to submitting the RFI, Contractor shall diligently review the Contract Documents for information responsive to the RFI, including information incorporated by reference. Contractor should not issue an RFI regarding information contained in or inferable from the Contract Documents, including information incorporated by reference. An RFI is invalid if the RFI response is contained in or inferable from the Contract Documents.

18.4. Contractor shall be responsible for preparing and submitting each RFI so as to not cause delay to the progress of the Work nor to cause any impact to the Contractor's labor productivity. An RFI may be considered untimely if not submitted within **Forty Eight (48) hours** of receipt from a Contractor's subcontractor. Untimely submission of any RFI will preclude Contractor from asserting any claims for delay or for labor impact against the District.

18.5. If the Contractor fails to timely notify the Architect in writing of any Conditions encountered and the Contractor proceeds to perform any portion of the Work containing or affected by such Conditions the Contractor shall bear all costs associated with or required to correct, remove, or otherwise remedy any portion of the Work affected thereby without adjustment of the Contract Time or the Contract Price. In requesting information of the District to address and resolve any conditions, the Contractor shall act with promptness in submitting any written request so as to allow the District a reasonable period of time to review, evaluate and respond to any request, taking into account the then current status of the progress and completion of the Work and the actual or potential impact of any conditions upon the completion of the Work within the Contract Time. The Contract Time shall not be subject to adjustment in the event that the Contractor shall fail to timely request information from the District.

19. PAYMENTS

19.1. Contract Price

19.1.1. The 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 pursuant to the Contract Documents. If all or a portion of the Project is being funded by funds requiring approval by the State Allocation Board (SAB), payment may be subject to that approval being received, funding by the SAB, and funds being released by the Office of Public School Construction (OPSC).

19.2. Applications for Progress Payments

19.2.1. Procedure for Applications for Progress Payments

19.2.1.1. Application for Progress Payment

19.2.1.1.1. Not before the fifth (5th) day of each calendar month during the progress of the Work, Contractor shall submit to the District and the Architect an itemized Application for Payment for Work completed in accordance with the Schedule of Values. The Application for Payment shall be notarized, if required, and supported by the following or each portion thereof unless waived by the District in writing:

19.2.1.1.1.1. The amount paid to the date of the Application for Payment to the Contractor, to all its Subcontractors, and all others furnishing labor, material, or equipment for its Contract;

19.2.1.1.1.2. The amount being requested by the Application for Payment 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;

19.2.1.1.1.3. The balance that will be due to each of the entities after payment is made;

19.2.1.1.1.4. A certification that the As-Built Drawings and annotated Specifications are current;

19.2.1.1.1.5. An Itemized breakdown of Work performed;

19.2.1.1.1.6. An updated and acceptable construction schedule in conformance with the provisions herein;

19.2.1.1.1.7. The additions to and subtractions from the Contract Price and Contract Time;

19.2.1.1.1.8. A total of the retention held;

19.2.1.1.1.9. The material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the District may require from time to time;

19.2.1.1.1.10. The percentage of completion of the Contractor's Work by line item;

19.2.1.1.1.11. The Schedule of Values updated from the preceding Application for Payment;

19.2.1.1.1.12. A duly completed and executed conditional waiver and release upon progress payment compliant with Civil Code section 8132 from each subcontractor of any tier and supplier to be paid from the current progress payment;

19.2.1.1.1.13. A duly completed and executed unconditional waiver and release upon progress payment compliant with Civil Code section 8134 from each subcontractor of any tier and supplier that was paid from the previous progress payment; and

19.2.1.1.1.14. A certification by the Contractor of the following:

The Contractor warrants title to all Work performed as of the date of this payment application. The Contractor further warrants that all Work performed as of the date of this payment application is free and clear of liens, claims, security interests, or encumbrances in favor of the Contractor, Subcontractors, material and equipment suppliers, workers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work, except those of which the District has been informed.

19.2.1.1.1.15. If requested by the District, a third party, or as required by the California Department of Industrial Relations, all requested or required certified payroll record ("CPR(s)") for each journeyman, apprentice, worker, or other employee employed by the Contractor and/or each Subcontractor in connection with the Work for the period of the Application for Payment.

19.2.1.1.2. Except as expressly provided for herein, no payments shall be made by the District on account of any item of the Work, including without limitation, materials or equipment that, at the time of the Contractor's submittal of an Application for Progress Payment, has/have not been incorporated into and made a part of the Work.

19.2.1.1.3. Contractor shall be subject to the False Claims Act set forth under Government Code section 12650 et seq., for information provided with any Application for Progress Payment.

19.2.2. Prerequisites for Progress Payments

19.2.2.1. First Payment Request: The following items, if applicable, must be completed before District will accept and/or process Contractor's first payment request:

19.2.2.1.1. Installation of the Project sign;

19.2.2.1.2. Installation of field office;

19.2.2.1.3. Installation of temporary facilities and fencing;

19.2.2.1.4. Schedule of Values;

19.2.2.1.5. Contractor's Construction Schedule;

19.2.2.1.6. Schedule of unit prices, if applicable;

19.2.2.1.7. Submittal Schedule;

19.2.2.1.8. Receipt by Architect of all submittals due as of the date of the payment application;

19.2.2.1.9. Copies of necessary permits;

- 19.2.2.1.10.** Copies of authorizations and licenses from governing authorities;
- 19.2.2.1.11.** Initial progress report;
- 19.2.2.1.12.** Surveyor qualifications;
- 19.2.2.1.13.** Written acceptance of District's survey of rough grading, if applicable;
- 19.2.2.1.14.** List of all Subcontractors, with names, license numbers, telephone numbers, and Scope of Work;
- 19.2.2.1.15.** All bonds and insurance endorsements; and
- 19.2.2.1.16.** Resumes of Contractor's project manager, and if applicable, job site secretary, record documents recorder, and job site superintendent.

19.2.2.2. Second Payment Request: District will not process the second payment request until and unless all submittals and Shop Drawings have been accepted for review by the Architect.

19.2.2.3. No Waiver of Criteria: Any payment made to Contractor where criteria set forth herein have not been met shall not constitute a waiver of said criteria by District. The approval of any Application for Progress Payment or the disbursement of any Progress Payment to the Contractor shall not be deemed nor constitute acceptance of defective Work or Work not in conformity with the Contract Documents. Instead, such payment shall be construed as a good faith effort by District to resolve differences so Contractor may pay its Subcontractors and suppliers. Contractor agrees that failure to submit such items may constitute a material breach of the Contract by Contractor and may subject Contractor to termination.

19.3. Progress Payments

19.3.1. District's Approval of Application for Payment

19.3.1.1. Upon receipt of an Application for Payment, District shall act in accordance with the following:

19.3.1.1.1. Each Application for Payment shall be reviewed by the District as soon as practicable after receipt for the purpose of determining that the Application for Payment is a proper Application for Payment.

19.3.1.1.2. Any Application for Payment determined not to be a proper Application for Payment suitable for payment shall be returned to the Contractor as soon as practicable, but not later than seven (7) days, after receipt. An Application for Payment returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the Application for Payment is not proper. The number of days available to the District to make a payment without being subject to any applicable statute regarding prompt payment or interest accrual, shall be reduced by the number of days by which the District exceeds this seven-day return requirement.

19.3.1.1.3. An approved Application for Payment shall be considered payable if funds are available for payment after the deduction of amounts allowed by law and/or pursuant to the section herein entitled "Decisions to Withhold Payment,"

19.3.1.2. The District's review of the Contractor's Application for Payment will be based

on the District's and the Architect's observations at the Site and the data comprising the Application for Payment that the Work has progressed to the point indicated and that, to the best of the District's and the Architect's knowledge, information, and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to:

19.3.1.2.1. Observation of the Work for general conformance with the Contract Documents,

19.3.1.2.2. Results of subsequent tests and inspections,

19.3.1.2.3. Minor deviations from the Contract Documents correctable prior to Completion, and

19.3.1.2.4. Specific qualifications expressed by the Architect.

19.3.1.3. District's approval of each Application for Payment shall be based on Contractor complying with all requirements for a fully complete and valid Application for Payment.

19.3.2. Payments to Contractor

19.3.2.1. Within thirty (30) days after District's receipt of each undisputed and properly submitted Application for Payment, Contractor shall be paid a sum equal to ninety-five percent (95%) of the value of the Work performed (as verified by Architect and Inspector and certified by Contractor) up to the last day of the previous month, less the aggregate of previous payments and amount to be withheld. The value of the Work completed shall be Contractor's best estimate. No inaccuracy or error in Contractor's estimate shall operate to release the Contractor, or any Surety upon any bond, from damages arising from such Work, or from the District's right to enforce each and every provision of this Contract, and the District shall have the right subsequently to correct any error made in any estimate for payment.

19.3.2.2. District shall withhold five percent (5%) retention from all Progress Payments.

19.3.2.3. District may withhold ten percent (10%) retention from all Progress Payments pursuant to Public Contract Code section 7201, if the Project is determined to be "substantially complex."

19.3.2.4. 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.

19.3.2.5. In accordance with Public Contract Code §20104.50, in the event that the District shall fail to make any Progress Payment within thirty (30) days after receipt of an undisputed and properly submitted Application for Progress Payment, the District shall pay the Contractor interest on the undisputed amount of such Application for Progress Payment equal to the legal rate of interest set forth in California Code of Civil Procedure §685.010(a).

19.3.3. 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. Notwithstanding any payment, the District may enforce each and every provision of this Contract. The District may correct or require correction of any error subsequent to any payment.

19.3.4. Warranty of Title

19.3.4.1. If a lien or a claim based on a stop notice or stop payment notice of any nature should at any time be filed against the Work or any District property, by any entity that 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 a claim based on a stop notice or stop payment notice to be released or discharged immediately therefrom.

19.3.4.2. If the Contractor fails to furnish to the District within ten (10) calendar days after demand by the District, satisfactory evidence that a lien or a claim based on a stop notice or stop payment notice has been so released, discharged, or secured, the District may discharge such indebtedness and deduct the amount required therefore, 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 pursuant to the Contract.

19.4. Decisions to Withhold Payment

19.4.1. Reasons to Withhold Payment

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 herein cannot be made. 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:

19.4.1.1. Defective Work not remedied within **FORTY-EIGHT (48)** hours of written notice to Contractor;

19.4.1.2. Stop notices, stop payment notices or other liens served upon the District as a result of the Contract;

19.4.1.3. Liquidated damages assessed against the Contractor;

19.4.1.4. The cost to complete the Work if there exists reasonable doubt that the Work can be completed for the unpaid balance of the Contract Price or by the Completion Date;

19.4.1.5. Damage to the District or other contractor(s);

19.4.1.6. Unsatisfactory performance of the Work by Contractor;

19.4.1.7. Failure to store and properly secure materials;

19.4.1.8. Failure of the Contractor to submit, on a timely basis, proper, sufficient, and acceptable documentation required by the Contract Documents, including, without limitation, a Construction Schedule, Schedule of Submittals, Schedule of Values, Monthly Progress Schedules, Shop Drawings, Product Data and samples, Proposed product lists, executed Change Orders, and/or verified reports;

19.4.1.9. Failure of the Contractor to maintain As-Built Drawings;

19.4.1.10. Erroneous estimates by the Contractor of the value of the Work performed, or other false statements in an Application for Payment;

19.4.1.11. Unauthorized deviations from the Contract Documents;

19.4.1.12. Failure of the Contractor to perform the Work in a timely manner in compliance with the Construction Schedule, established progress schedules, and/or completion dates;

19.4.1.13. If requested by the District, or the failure to provide to the DIR, certified payroll records acceptable to the District and the DIR for each journeyman, apprentice, worker, or other employee employed by the Contractor and/or each Subcontractor in connection with the Work for the period of the Application for Payment;

19.4.1.14. Failure to properly pay prevailing wages as defined in Labor Code sections 1720 et seq. and/or failure to comply with any other Labor Code requirements;

19.4.1.15. Failure to properly maintain or clean up the Site;

19.4.1.16. Failure to timely indemnify, defend or hold harmless the District;

19.4.1.17. Any payments due to the District, including but not limited to payments for failed tests, utilities changes, or permits;

19.4.1.18. Failure to pay Subcontractor(s) or supplier(s) as required by law and by the Contract Documents;

19.4.1.19. Failure to pay any royalty, license or similar fees;

19.4.1.20. Failure of the Contractor to submit on a timely basis all Closeout Documentation in a manner and form that is proper, sufficient, and reasonably acceptable to the District, and to not cause a delay in the Completion or approval of the Project; or

19.4.1.21. Failure to perform any implementation and/or monitoring required by any SWPPP for the Project and/or the imposition of any penalties or fines imposed therefore against Contractor or District.

19.4.1.22. Payment is delayed due to an audit inquiry by the State, the County Office of Education, the County, or any entity with jurisdiction related to the Project.

19.4.1.23. Contractor is otherwise in breach, default or in substantial violation of any provision of the Contract;

19.4.2. Reallocation of Withheld Amounts

19.4.2.1. District may, in its discretion, apply any withheld amount to pay outstanding claims or obligations as defined herein. In so doing, District shall make such payments on behalf of Contractor. If any payment is so made by District, then that amount shall be considered a payment made pursuant to the Contract and District shall not be liable to Contractor for any payment made in good faith. These payments may be made without prior judicial determination of claim or obligation. District will render Contractor an accounting of funds disbursed on behalf of Contractor.

19.4.2.2. If Contractor defaults or neglects to perform the Work in accordance with the Contract Documents or fails to perform any provision thereof, District may, after **FORTY-EIGHT (48)** hours written notice to the Contractor and, without prejudice to any other remedy, make good such deficiencies. 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 that is damaged, defective, or not done in accordance with Contract provisions, an

equitable reduction in the Contract Price (of at least one hundred twenty-five percent (125%) of the estimated reasonable value of the nonconforming Work) shall be made therefor.

19.4.3. Payment After Cure

When Contractor cures the grounds for declining approval, payment shall be made for amounts so withheld. No interest shall be paid on any retention or amounts withheld due to the failure of the Contractor to perform in accordance with the terms and conditions of the Contract Documents.

19.5. Subcontractor Payments

19.5.1. Payments to Subcontractors. No later than seven (7) days after receipt, or pursuant to Business and Professions Code section 7108.5 and Public Contract Code section 7107, 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. Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to its Sub-subcontractors in a similar manner.

19.5.2. No Obligation of District for Subcontractor Payment. 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.

19.5.3. Joint Checks. District shall have the right in its sole discretion, 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.

20. COMPLETION OF THE WORK

20.1. Completion

20.1.1. The Project may only be accepted by action of the governing board of the District.

20.1.2. District shall accept the Project and may have a Notice of Completion recorded when Project Completion has been achieved in accordance with the Contract Documents and to the satisfaction of District. For purposes of the payment of Retention, Completion is defined in Public Contract Code section 7107. For purposes of the timely filing of Stop Payment Notices, Completion is defined in California Civil Code section 9200, et seq.

20.1.3. There is no "*substantial completion*" for this Project. Even so, the District, at its sole option, may accept the Project and record a Notice of Completion when Project Completion has been completed to the satisfaction of District, except for minor corrective items, as distinguished from incomplete items. If Contractor fails to complete all minor corrective items within thirty-five (35) days after the date of the District's acceptance of the Project, District shall withhold from the final payment one hundred fifty percent (150%) of an estimate of the amount sufficient to complete the corrective items, as determined by District, until the item(s) are completed.

20.1.4. At the end of the thirty-five (35) day period, if there are any items remaining to be corrected, District may elect to proceed as provided herein related to adjustments to Contract Price, and/or District's right to perform the Work of the Contractor.

20.2. Closeout Procedures

20.2.1. Punch List

Contractor shall notify the Architect when Contractor considers the Work complete. Upon notification, Architect will prepare a list of minor items to be completed or corrected ("Punch List"). Contractor and/or its Subcontractors shall proceed promptly to complete and correct items on the Punch List. Failure to include an item on Punch List does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

20.2.2. Closeout Requirements

20.2.2.1. 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.

20.2.2.2. As-Built Drawings

20.2.2.2.1. In addition to its requirement to provide monthly As-Built Drawings to the District, the Contractor shall provide a final set of As-Built Drawings, sometimes referred to as "Record Drawings," showing all of the Work as actually constructed upon Completion of the Project as indicated in the Specifications.

20.2.2.2.2. Contractor is liable and responsible for any and all inaccuracies in the As-Built Drawings, even if inaccuracies become evident at a future date.

20.2.2.2.3. Upon Completion of the Work and as a condition precedent to approval of final payment, Contractor shall obtain the Inspector's approval of the final set of As-Built Drawings.

20.2.2.3. Operations & Maintenance Manuals: Contractor shall prepare all operation and maintenance manuals and date as indicated in the Specifications.

20.2.2.4. Closeout Documentation: Contractor shall provide all Closeout Documentation, which shall include the following, without limitation:

20.2.2.4.1. A full set of final As-Built Drawings, as further defined herein.

20.2.2.4.2. All Operations & Maintenance Manuals and information, as further defined herein.

20.2.2.4.3. All Warranties, as further defined herein.

20.2.2.4.4. Verified report(s) for all scope(s) of work (DSA 6-C, Rev 03/22/13, or more recent revision if available).

20.3. Final Inspection

20.3.1. Contractor shall comply with Punch List procedures as provided herein, and maintain the presence of Contractor's superintendent and 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 receipt of Contractor's written notice that all of the Punch List items have been fully completed and the Work is ready for final inspection and acceptance, Architect and Project Inspector will inspect the Work and shall submit to Contractor and District a final inspection report noting the Work, if any, required in order to complete in accordance with the Contract

Documents. Absent unusual circumstances, this report shall consist of the Punch List items not yet satisfactorily completed.

20.3.2. Upon Contractor's completion of all items on the Punch List and any other uncompleted portions of the Work, the Contractor shall notify the District and Architect, who shall again inspect such Work. If the Architect finds the Work complete and acceptable under the Contract Documents, the Architect will notify Contractor, who shall then jointly submit to the Architect and the District its final Application for Payment.

20.3.3. Final Inspection Requirements

20.3.3.1. Before calling for final inspection, Contractor shall determine that the following have been performed:

20.3.3.1.1. The Work has been completed.

20.3.3.1.2. All life safety items are completed and in working order.

20.3.3.1.3. Mechanical and electrical Work are complete and tested, fixtures are in place, connected, and ready for tryout.

20.3.3.1.4. Electrical circuits scheduled in panels and disconnect switches labeled.

20.3.3.1.5. Painting and special finishes complete.

20.3.3.1.6. Doors complete with hardware, cleaned of protective film, relieved of sticking or binding, and in working order.

20.3.3.1.7. Tops and bottoms of doors sealed.

20.3.3.1.8. Floors waxed and polished as specified.

20.3.3.1.9. Broken glass replaced and glass cleaned.

20.3.3.1.10. Grounds cleared of Contractor's equipment, raked clean of debris, and trash removed from Site.

20.3.3.1.11. Work cleaned, free of stains, scratches, and other foreign matter, of damaged and broken material replaced.

20.3.3.1.12. Finished and decorative work shall have marks, dirt, and superfluous labels removed.

20.3.3.1.13. Final cleanup, as provided herein.

20.4. Costs of Multiple Inspections

More than two (2) requests of the District to make a final inspection shall be considered an additional service of District, Architect, Construction Manager, and/or Project Inspector, and all subsequent costs will be invoiced to Contractor and if funds are available, withheld from remaining payments.

20.5. Partial Occupancy or Use Prior to Completion

20.5.1. District's Rights to Occupancy. The District may occupy or use any completed or partially completed portion of the Work at any stage. Neither the District's Final Acceptance, the making of Final

Payment, any provision in Contract Documents, nor the use or occupancy of the Work, in whole or in part, by District shall constitute acceptance of Work not in accordance with the Contract Documents nor relieve the Contractor or the Contractor's Performance Bond Surety from liability with respect to any warranties or responsibility for faulty or defective Work or materials, equipment and workmanship incorporated therein. 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. Any dispute as to responsibilities shall be resolved pursuant to the Claims provisions herein, with the added provision that during the dispute process, the District shall have the right to occupy or use any portion of the Work that it needs or desires to use.

20.5.2. Inspection Prior to Occupancy or Use. Immediately prior to 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.

20.5.3. No Waiver. Unless otherwise agreed upon, partial or entire occupancy or use of a portion or portions of the Work shall not constitute beneficial occupancy or acceptance of the Work not complying with the requirements of the Contract Documents.

21. FINAL PAYMENT AND RETENTION

21.1. Final Payment

21.1.1. Upon receipt and approval of a valid and final Application for Payment, the Architect will issue a final Certificate of Payment or similar document indicating Architect's agreement that the Project has reached Completion. The District shall thereupon jointly inspect the Work and either accept the Work as complete or notify the Architect and the Contractor in writing of reasons why the Work has not reached Completion to the satisfaction of the District.

21.1.2. Upon acceptance of the Work of the Contractor as having reached Completion to the satisfaction of the District (that, absent unusual circumstances, will occur when the Punch List items have been satisfactorily completed), the District may record a Notice of Completion with the County Recorder, and the Contractor shall, upon receipt of final payment from the District, pay all the amount(s) due to its Subcontractors.

21.2. Prerequisites for Final Payment

The following conditions must be fulfilled prior to Final Payment:

21.2.1. A full and final waiver or release of all stop notices and stop payment notices in connection with the Work shall be submitted by Contractor, including a release of stop notice or stop payment notice in recordable form, together with (to the extent permitted by law) a copy of the full and final release of all stop notice or stop payment notice rights.

21.2.2. A duly completed and executed conditional waiver and release upon final payment compliant with Civil Code section 8136 from each subcontractor of any tier and supplier to be paid from the current progress payment.

21.2.3. A duly completed and executed unconditional waiver and release upon final payment compliant with Civil Code section 8138 from each subcontractor of any tier and supplier that was paid from the previous progress payment.

21.2.4. Contractor shall have made all corrections to the Work that 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.

21.2.5. Each Subcontractor shall have delivered to the Contractor all written guarantees, warranties, applications, and bonds required by the Contract Documents for its portion of the Work.

21.2.6. Contractor must have completed all requirements set forth under "Closeout Procedures," including, without limitation, submission of an approved set of complete As-Built Drawings.

21.2.7. Architect shall have issued its written approval that final payment can be made.

21.2.8. Contractor shall have delivered to the District all manuals and materials required by the Contract Documents.

21.2.9. Contractor shall have completed final clean up as provided herein.

21.3. Retention

21.3.1. The retention, less any amounts disputed by the District or that the District has the right to withhold pursuant to provisions herein, shall be paid:

21.3.1.1. After approval of the District by the Architect's Certificate of Payment;

21.3.1.2. After the satisfaction of the conditions set forth herein;

21.3.1.3. Within sixty (60) days after Completion;

21.3.1.4. No earlier than thirty-five (35) days of the recording of the Notice of Completion by District, if a Notice of Completion is recorded by the District.

21.3.2. No interest shall be paid on any retention, 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 pursuant to Public Contract Code section 22300.

21.4. Substitution of Securities

The District will permit the substitution of securities in accordance with the provisions of Public Contract Code section 22300.

21.5. Claims Asserted After Final Payment

Any lien, stop payment notice or other claim filed or asserted after the Contractor's acceptance of the Final Payment by any Subcontractor, of any tier, laborer, Material Supplier or others in connection with or for Work performed under the Contract Documents shall be the sole and exclusive responsibility of the Contractor pursuant to the indemnification obligations of the Contract Documents. In the event any lien, stop payment notice or other claim of any Subcontractor, Laborer, Material Supplier or others performing Work under the Contract Documents remain unsatisfied after Final Payment is made, Contractor shall refund to District all monies that the District may pay or be compelled to pay in discharging any lien, stop payment notice or other claim, including, without limitation all costs and reasonable attorneys' fees incurred by District in connection therewith.

22. UNCOVERING WORK, CORRECTION OF WORK AND RIGHT TO TAKEOVER WORK

22.1. Uncovering of Work

If a portion of the Work is covered without Project Inspector or Architect approval or not in compliance with the Contract Documents, it must, if required in writing by the District, the Project Inspector, or the Architect, be uncovered for the Project Inspector's or the Architect's observation and be replaced at the Contractor's expense without change in the Contract Price or Contract Time.

22.2. Rejection of Work

Prior to the District's Acceptance of the Work, any Work or materials or equipment forming a part of the Work or incorporated into the Work that is defective or not in conformity with the Contract Documents may be rejected by the District, the Architect or the Project Inspector and the Contractor shall correct all rejected Work without any adjustment to the Contract Price or the Contract Time, even if the Work, materials or equipment have been previously inspected by the Architect or the Project Inspector or even if they failed to observe the defective or non-conforming Work, materials or equipment.

22.3. Nonconforming Work

22.3.1. Contractor shall promptly remove from Premises all Work identified by District as failing to conform to the Contract Documents whether incorporated or not. Contractor shall promptly replace and re-execute its own Work to comply with the Contract Documents without additional expense to the District and shall bear the expense of making good all work of other contractors destroyed or damaged by any removal or replacement pursuant hereto and/or any delays to the District or other Contractors caused thereby.

22.3.2. If Contractor does not remove Work that District has identified as failing to conform to the Contract Documents within a reasonable time, not to exceed **FORTY-EIGHT (48)** hours, District may remove it and may store any material at Contractor's expense. If Contractor does not pay expense(s) of that removal within ten (10) days' time thereafter, District may, upon ten (10) days' written notice, sell any material at auction or at private sale and shall deduct all costs and expenses incurred by the District and/or District may withhold those amounts from payment(s) to Contractor.

22.4. Correction of Work

22.4.1. Correction of Rejected Work. Pursuant to the notice provisions herein, the Contractor shall promptly correct the Work rejected by the District, the Architect, or the Project Inspector 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 additional testing, inspections, and compensation for the Inspector's or the Architect's services and expenses made necessary thereby.

22.4.2. 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 hereunder, 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. 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 hereunder 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.

22.5. District's Right to Takeover Work

22.5.1. If the Contractor should neglect to prosecute the Work properly or fail to perform any provisions of this Contract, the District, after **FORTY-EIGHT (48)** hours written notice to the Contractor, may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof

from the payment then or thereafter due the Contractor.

22.5.2. If it is found at any time, before or after Completion of the Work, that Contractor has varied from the Drawings and/or Specifications, including, but not limited to, variation in material, quality, form, or finish, or in the amount or value of the materials and labor used, District may require at its option:

22.5.2.1. That all such improper Work be removed, remade or replaced, and all work disturbed by these changes be made good by Contractor at no additional cost to the District;

22.5.2.2. That the District deduct from any amount due Contractor the sum of money equivalent to the difference in value between the work performed and that called for by the Drawings and Specifications; or

22.5.2.3. That the District exercise any other remedy it may have at law or under the Contract Documents, including but not limited to the District hiring its own forces or another contractor to replace the Contractor's nonconforming Work, in which case the District shall either issue a deductive Change Order, a Unilateral Change Order, or invoice the Contractor for the cost of that work. Contractor shall pay any invoices within thirty (30) days of receipt of same or District may withhold those amounts from payment(s) to Contractor.

22.5.3. Acceptance of Defective or Non-Conforming Work. The District may, in its sole and exclusive discretion, elect to accept Work that is defective or that is not in accordance with the requirements of the Contract Documents, instead of requiring its removal and correction, in which case the Contract Price shall be reduced as appropriate and equitable.

23. TERMINATION AND SUSPENSION

23.1. District's Right to Terminate Contractor for Cause

23.1.1. Grounds for Termination. The District, in its sole discretion, may terminate the Contract and/or terminate the Contractor's right to perform the work of the Contract based upon the following:

23.1.1.1. Contractor refuses or fails to execute the Work or any separable part thereof with sufficient diligence as will ensure its completion within the time specified or any extension thereof, or

23.1.1.2. Contractor fails to complete said Work within the time specified or any extension thereof, or

23.1.1.3. Contractor persistently fails or refused to perform Work or provide material of sufficient quality as to be in compliance with Contract Documents; or

23.1.1.4. Contractor files a petition for relief as a debtor, or a petition is filed against the Contractor without its consent, and the petition not dismissed within sixty (60) days; or

23.1.1.5. Contractor makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency; or

23.1.1.6. Contractor persistently or repeatedly refuses fails, except in cases for which extension of time is provided, to supply enough properly skilled workers or proper materials to complete the Work in the time specified; or

23.1.1.7. Contractor fails to make prompt payment to Subcontractors, or for material, or for labor; or

23.1.1.8. Contractor persistently disregards laws, or ordinances, or instructions of District; or

23.1.1.9. Contractor fails to supply labor, including that of Subcontractors, that can work in harmony with all other elements of labor employed or to be employed on the Work; or

23.1.1.10. Contractor or its Subcontractor(s) is/are otherwise in breach, default, or in substantial violation of any provision of this Contract.

23.1.2. Notification of Termination

23.1.2.1. Upon the occurrence at District's sole determination of any of the above conditions, District may, without prejudice to any other right or remedy, serve written notice upon Contractor and its Surety of District's termination of this Contract and/or the Contractor's right to perform the work of the Contract. This notice will contain the reasons for termination. Unless, within three (3) days after the service of the notice, any and all condition(s) shall cease, and any and all violation(s) shall cease, or arrangement satisfactory to District for the correction of the condition(s) and/or violation(s) be made, this Contract and/or the Contractor's right to perform the Work shall cease and terminate. Upon termination, Contractor shall not be entitled to receive any further payment until the entire Work is finished.

23.1.2.2. Upon termination, District may immediately serve written notice of tender upon Surety whereby Surety shall have the right to takeover and perform this Contract only if Surety:

23.1.2.2.1. Within three (3) days after service upon it of the notice of tender, gives District written notice of Surety's intention to takeover and perform this Contract; and

23.1.2.2.2. Commences performance of the Contract within seven (7) days from date of serving of its notice to District.

23.1.2.3. If Surety fails to notify District or begin performance as indicated herein, District may takeover the Work and execute the Work to completion by any method it may deem advisable at the expense of Contractor and/or its Surety. Contractor and/or its Surety shall be liable to District for any excess cost or other damages the District incurs thereby. Time is of the essence in the Contract. If the District takes over the Work as herein provided, District may, without liability for so doing, take possession of and utilize in completing the Work such materials, appliances, plan, and other property belonging to Contractor as may be on the Site of the Work, in bonded storage, or previously paid for.

23.1.2.4. Conversion to Termination for Convenience. In the event the Contract is terminated under this "District's Right to Terminate Contractor for Cause" section 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 this section was defective, deficient, ineffective, invalid or improper for any reason, the termination shall be deemed a termination for convenience of the District under the "Termination of Contractor for Convenience" section herein and thereupon, the rights and obligations of the District and the Contractor shall be determined in accordance with the "Termination of Contractor for Convenience" section herein.

23.1.3. Effect of Termination

23.1.3.1. Contractor shall, only if ordered to do so by the District, immediately remove from the Site all or any materials and personal property belonging to Contractor that have not

been incorporated in the construction of the Work, or which are not in place in the Work. District retains the right, but not the obligation, to keep and use any materials and personal property belonging to Contractor that have not been incorporated in the construction of the Work, or which are not in place in the Work. Contractor and its Surety shall be liable upon the performance bond for all damages caused the District by reason of the Contractor's failure to complete the Contract.

23.1.3.2. In the event that the District shall perform any portion of, or the whole of the Work, pursuant to the provisions of the General Conditions, the District shall not be liable nor account to the Contractor in any way for the time within which, or the manner in which, the Work is performed by the District or for any changes the District may make in the Work or for the money expended by the District in satisfying claims and/or suits and/or other obligations in connection with the Work.

23.1.3.3. In the event that the Contract is terminated for any reason, no allowances or compensation will be granted for the loss of any anticipated profit by the Contractor or any impact or impairment of Contractor's bonding capacity.

23.1.3.4. If the expense to the District to finish the Work exceeds the unpaid Contract Price, Contractor and Surety shall pay difference to District within twenty-one (21) days of District's request.

23.1.3.5. Assignment and Assumption of Subcontracts. District shall have the right (but shall have no obligation) to assume and/or assign to a general contractor or construction manager or other third party who is qualified and has sufficient resources to complete the Work, the rights of the Contractor under its subcontracts with any or all Subcontractors. In the event of an assumption or assignment by the District, no Subcontractor shall have any claim against the District or third party for Work performed by Subcontractor or other matters arising prior to termination of the Contract. The District or any third party, as the case may be, shall be liable only for obligations to the Subcontractor arising after assumption or assignment. Should the District so elect, the Contractor shall execute and deliver all documents and take all steps, including the legal assignment of its contractual rights, as the District may require, for the purpose of fully vesting in the District the rights and benefits of it Subcontractor under Subcontracts or other obligations or commitments. All payments due the Contractor hereunder shall be subject to a right of offset by the District for expenses and damages suffered by the District as a result of any default, acts, or omissions of the Contractor. Contractor must include this assignment provision in all of its contracts with its Subcontractors.

23.1.3.6. The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to District.

23.2. Emergency Termination of Public Contracts Act of 1949

23.2.1. The Contract is subject to termination as provided by sections 4410 and 4411 of the Government Code of the State of California, being a portion of the Emergency Termination of Public Contracts Act of 1949.

23.2.1.1. Section 4410 of the Government Code states:

In the event a national emergency occurs, and public work, being performed by contract, is stopped, directly or indirectly, because of the freezing or diversion of materials, equipment or labor, as the result of an order or a proclamation of the President of the United States, or of an order of any federal authority, and the circumstances or conditions are such that it is impracticable within a reasonable time to proceed with a substantial portion of the work,

then the public agency and the contractor may, by written agreement, terminate said contract.

23.2.1.2. Section 4411 of the Government Code states:

Such an agreement shall include the terms and conditions of the termination of the contract and provision for the payment of compensation or money, if any, which either party shall pay to the other or any other person, under the facts and circumstances in the case.

23.2.2. Compensation to the Contractor shall be determined at the sole discretion of District on the basis of the reasonable value of the Work done, including preparatory work. As an exception to the foregoing and at the District's discretion, in the case of any fully completed separate item or portion of the Work for which there is a separate previously submitted unit price or item on the accepted Schedule of Values, that price shall control. District, in its sole discretion, may adopt the Contract Price as the reasonable value of the Work performed or any portion thereof.

23.3. Termination of Contractor for Convenience

23.3.1. District in its sole discretion may terminate the Contract upon three (3) days written notice to the Contractor. Under a termination for convenience, the District retains the right to all the options available to the District if there is a termination for cause. In case of a termination for convenience, Contractor shall have no claims against the District except:

23.3.1.1. The actual cost for labor, materials, and services performed that is unpaid and can be documented through timesheets, invoices, receipts, or otherwise, and

23.3.1.2. Five percent (5%) of the total cost of work performed as of the date of termination, or five percent (5%) of the value of the Work yet to be performed, whichever is less. This five percent (5%) amount shall be full compensation for all Contractor's and its Subcontractor(s)' mobilization and/or demobilization costs and any anticipated loss profits resulting from termination of the Contractor for convenience.

23.4. Suspension of Work

23.4.1. 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. When the District resumes the Project, the Parties will attempt to negotiate an adjustment in the Contract Price for increases or decreases in the cost of performance of the Project caused by suspense, delay or interruption. If the Parties cannot agree on an adjusted Contract Price, the District may terminate the Contract as permitted herein.

23.4.2. In the event the District shall order suspension of the Work, an adjustment shall be made to the Contract Price for increases in the direct cost of performance of the Work of the Contract Documents, actually caused by suspension, delay or interruption ordered by the District; provided however that no adjustment of the Contract Price shall be made to the extent: (i) that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible under the Contract Documents; or (ii) that an equitable adjustment is made or denied under another provision of the Contract Documents. The foregoing notwithstanding, any adjustment of the Contract Price shall not include any adjustment to increase the Contractor's overhead, general administrative costs or profit, all of which will remain as reflected in the Schedule of Values submitted by the Contractor pursuant to the Contract Documents. In the event of the District's suspension of the Work, the Contract Time shall be equitably adjusted.

23.5. Scope Reduction

In cases of suspension, partial or complete termination, or at the discretion of the District, the District reserves the right to unilaterally approve a deductive Change Order to reduce scope of work or perform work with other forces or its own forces.

24. CLAIMS RESOLUTION

24.1. Exclusive Remedy.

24.1.1. Compliance with the claim resolution process and timelines described in this Claims Resolution section as well as the notice provisions of the Contract are express conditions precedent to Contractor's right to commence litigation or arbitration, file a claim under the California Government Code, or commence any other legal action related to the Project ("Claims Resolution Process").

24.1.2. Contractor acknowledges that its failure, for any reason, to provide written notice and all required supporting documentation to permit the District's review and evaluation within the time frame required by this Claims Resolution Process, shall be deemed Contractor's waiver, release, discharge and relinquishment of any right to assert, request, or demand any entitlement to an adjustment of the Contract Time or the contract Price on account of any instruction, request, drawings, specifications, action, condition, omission, default or other situation.

24.1.3. To the extent any provision(s) of this Claims Resolution Process conflict with or otherwise impair the timeframes and procedures of Public Contract Code section 9204, the provisions of Section 9204 shall control. If provisions of this Claims Resolution Process are supplementary and/or in addition to the requirements of Section 9204, but do not conflict with or otherwise impair the timeframes and procedures of Section 9204, the provisions of this Claims Resolution Process and the Contract shall control.

24.2. Performance during Claim Resolution Process.

The Contractor shall diligently proceed with Work on the Project at the same time that Claims are addressed under the Claims Resolution Process. It is the intent of District to resolve Claims with the Contractor as close to the events giving rise to the Claims as possible, and to avoid stale or late Claims and the late documenting of Claims. Contractor's failure to diligently proceed in accordance with the District's instructions or the Contract terms will be considered a material breach of the Contract and a waiver of Contractor's rights under this Contract.

24.3. Waiver.

If Contractor fails to timely submit any written notices required under the terms of the Contract or in this Claims Resolution section, Contractor waives and releases its rights regarding further review of its Claim, unless Contractor and District mutually agree in writing to other time limits.

24.4. Intention.

The Claims Resolution Process required herein is intended to provide a concise mechanism for resolving Claims as they arise during the Project, while requiring accurate documentation related to contested issues as to those Claims that are not contemporaneously resolved.

24.5. Other Provisions.

If portions of the Contract, other than this Claims Resolution Process, establish a specific process regarding a specific subject, then that process shall govern and control the resolutions of any disagreements thereunder. Otherwise, the provisions in this Claims Resolution Process shall control the resolution of all Claims.

24.6. Claim Presentation

24.6.1. Claim: A claim is a written demand by Contractor (or by Contractor on behalf of a Subcontractor) that the Contractor must submit by **registered mail or certified mail return receipt requested** for:

24.6.1.1. An extension to the Contract Time, including relief from damages or penalties assessed by the District for delay;

24.6.1.2. Payment of money or damages arising from work done by, or on behalf of, the Contractor pursuant to the Contract and payment that is not otherwise expressly provided for in the Contract Documents or the Contractor is not otherwise entitled; or

24.6.1.3. Payment that is disputed by the District.

(“Claim”)

24.6.2. A PCO may be a Claim, but the Parties agree that a PCO shall only be a Claim if:

24.6.2.1. The District states in writing that it disagrees with the terms of a PCO and directs the Contractor to utilize the Claim Resolution Process, or

24.6.2.2. The District rejects in whole or in part a PCO and the Contractor states in writing that it is utilizing the Claim Resolution Process for the portion of the PCO that the District rejected.

24.6.3. Subcontractor Claims.

24.6.3.1. Public Contract Code section 9204(d)(5) states that 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.

24.6.3.2. Contractor is responsible for providing this Claims Resolution Process to its Subcontractors and for ensuring that all Subcontractors or others who may assert Claims by and through Subcontractors and/or the Contractor are informed of this Claims Resolution Process. No Claim submitted by any party that fails to follow the provisions of this Claims Resolution Process will be considered. Contractor shall indemnify, keep and hold harmless the District and its consultants, against all suits, claims, damages, losses, and expenses, including but not limited to attorney’s fees, caused by, arising out of, resulting from, or incidental to, the failure to provide this Claims Resolution Process to its Subcontractors or others who may assert Claims by and through Subcontractors and/or the Contractor.

24.6.4. Contractor Must Timely Identify, Present and Document Any Claim

24.6.4.1. Every Claim shall be stated with specificity in writing and signed by Contractor under penalty of perjury and presented to the District within ten (10) calendar days from the date Contractor discovers or reasonably should discover, that an act, error or omission of District, its agents or employees, or action, condition or other situation has occurred that may entitle

Contractor to make a Claim. This shall include the Contractor's actual or constructive knowledge of any instruction, request, drawings, specifications, action, condition, omission, default or other situation for which the contractor believes there should an adjustment of the Contract Price or Contract Time. Contractor shall provide this writing even if Contractor has not yet been damaged, delayed, or incurred extra cost when Contractor discovers, or reasonably should discover, the act, error, omission, action, condition or situation giving rise to the incidents giving rise to the Claim. The writing shall:

24.6.4.1.1. Identify all of the issues, events, conditions, circumstances and/or causes giving rise to the Claim;

24.6.4.1.2. Identify all pertinent dates and/or durations and all actual and/or anticipated effects on the Contract Price, milestones and/or Contract Time adjustments; and

24.6.4.1.3. Identify in detail line-item costs if the Claim seeks money.

24.6.4.1.4. If the Claim involves extra work, a detailed cost breakdown of the amounts the Contractor is seeking, including actual cost records (including without limitation, payroll records, material and rental invoices and the like) demonstrating that those costs have actually been incurred. To the extent costs have not yet been incurred at the time the Claim is submitted, actual cost records must be submitted on a current basis not less than once a week during any periods costs are incurred. A cost record will be considered current if submitted within seven (7) days of the date the cost reflected in the record is incurred. At the request of District, extra costs may be subject to further verification procedures (such as having an inspector verify the performance of alleged extra work on a daily basis).

24.6.4.1.5. If the Claim involves an error or omission in the Contract Documents:

24.6.4.1.5.1. An affirmative representation under penalty of perjury by Contractor and any affected Subcontractors and suppliers that the error or omission was not discovered prior to submitting a proposal for the Work, and

24.6.4.1.5.2. A detailed statement demonstrating that the error or omission reasonably should not have been discovered, by Contractor, its Subcontractors and suppliers, prior to submitting a proposal for the Work.

24.6.4.1.6. If the Claim involves a request for additional compensation for escalation of materials costs, then this provision exclusively governs those request(s) by Contractor and the following are **all** conditions precedent to Contractor's submission of a Change Order Request or Claim for additional compensation for escalation of materials costs.

24.6.4.1.6.1. Contractor shall not be entitled to submit a request for compensation for escalation of materials unless the actual increase in the cost of the materials in question exceeds ten percent (10%) of the **total** material costs on the Project at the time of bid.

24.6.4.1.6.2. The cost escalation is the result of unusual and unforeseeable market conditions not reasonably foreseeable at the time of award of the Contract and was not an escalated cost resulting from any action or inaction of the Contractor.

24.6.4.1.6.3. Contractor timely ordered and/or purchased the materials at issue, based on (1) Contractor's constructive knowledge of the supply chain for required materials and (2) Contractor's request to utilize the provisions in the Contract Documents related to the District's payment for materials and equipment purchased

and stored on Site or offsite.

24.6.4.1.6.4. Contractor's material costs were reasonable at the time of Contractor's bid for the Project.

24.6.4.1.6.5. Contractor demonstrates an actual increase in the cost of materials in its Contract Price at the time of award of the Contract and/or as reflected in Contractor's escrowed bid documents compared to Contractor's actual material payment cost paid either at time of purchase or delivery, whichever is earlier.

24.6.4.1.6.6. An actual year-to-date price increase has occurred and can be substantiated by the E.N.R. 20-City Average Material Cost Index for the material at issue that demonstrates the claim for an increase in price of the material at the time of delivery of the higher priced material to the Project.

24.6.4.2. The writing shall be accompanied by all documents substantiating Contractor's position regarding the Claim.

24.6.4.3. A Claim that asserts an effect on any schedule milestones and/or Contract Time shall include all pertinent scheduling data demonstrating the impact(s) on the critical path(s), milestone(s) and/or Contract Time.

24.6.4.4. Contractor agrees that it shall not base its damages, its calculations or its Claim on a "total cost" approach, a "modified total cost" approach or a "jury verdict method" approach.

24.6.5. Certification. Each copy of the Claim Documentation shall be certified by a responsible officer of the Contractor in accordance with the requirements of the Contract Documents. This certification shall be under penalty of perjury and must include the following language immediately above or before the Contractor's signature: ***"I declare under penalty of perjury under the laws of the State of California that the information provided and statements made in this Claim are true and correct, substantiated and of merit."*** The Contractor acknowledges that this requirement is not a mere formality but is intended to ensure that the Contractor only submits Claims that it believes are true and correct, substantiated and have merit. Should Contractor fail to submit the foregoing written statement signed under penalty of perjury, Contractor waives and releases its Claim, including all rights and remedies in connection therewith. This certification must include a certification of any portion of the Claim from Subcontractor(s) or others who are asserting Claims by and through Subcontractors and/or the Contractor

24.6.6. District's Written Statement/Decision on Claim. The District shall issue a written statement/decision regarding the Claim to the Contractor within forty-five (45) days of receipt of the written Claim from the Contractor, or three (3) days after the District's first regular governing board meeting after that 45-day period if the District's governing board does not meet within that first 45-day period. If the District fails to timely provide a written statement/decision regarding the Claim, the Claim shall be deemed rejected in its entirety.

24.6.7. Contractor Must Demand an Informal Meet and Confer Conference if Contractor Pursues Any Claim

24.6.7.1. FAILURE OF A CONTRACTOR TO TIMELY DEMAND A MEET AND CONFER CONFERENCE IS A WAIVER OF ITS RIGHT TO PURSUE ALL OR A PORTION OF ITS CLAIM.

24.6.7.2. Where There Is No Agreement: If there is no agreement between Contractor and the District on a Claim, then within ten (10) calendar days of the date of the District's written statement/decision in response to a Claim or PCO, if Contractor pursues that Claim, then

Contractor must demand, by **registered mail or certified mail return receipt requested**, a meet and confer conference with District staff. A meet and confer conference with District staff shall be a condition precedent to Contractor seeking any further relief, including a mediation as indicated below.

24.6.7.3. Where There Is Partial Agreement: If Contractor and the District partially agree on a Claim but do not reach complete agreement, then the Parties shall complete a Change Order, if applicable, for the issues and/or amounts agreed to. For those issues not agreed to, if Contractor pursues those issues from that Claim, then Contractor must demand, by **registered mail or certified mail return receipt requested**, a meet and confer conference with District staff regarding those issues. A meet and confer conference with District staff shall be a condition precedent to Contractor seeking any further relief, including a mediation as indicated below, in connection with the District's rejection.

24.6.7.4. Meet and Confer Conference. District and Contractor shall schedule the meet and confer conference as soon as reasonably possible after Contractor's written demand for a meet and confer conference, but in no case later than thirty (30) days after Contractor's demand.

24.6.7.5. District's Written Decision. Within ten (10) **business** days of the meet and confer conference, the District shall issue a written decision. If the District fails to timely provide a written statement/decision after the meet and confer conference, all Claim issues that were part of the meet and confer conference shall be deemed rejected in their entirety.

24.6.7.5.1. If the District's decision completely resolves the Claim, then the Parties shall complete a Change Order, if applicable, for the issues and/or amounts agreed to.

24.6.7.5.2. If the District rejects the Contractor's Claim in whole or in part or does not issue a timely written response, then the parties shall mediate the remaining issues of the Claim.

24.6.7.5.3. Contractor's costs incurred in seeking relief for Claims are not recoverable from District.

24.6.8. Mediation.

24.6.8.1. At the District's sole discretion, this mediation may be a multiple-party mediation with the Architect, the Construction Manager, the Inspector, and/or other District consultants.

24.6.8.2. The District and Contractor shall mutually agree to a mediator within ten (10) **business** days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

24.6.9. Contractor's Obligation to File a Government Code Claim. Nothing in this Contract, including this Claims Resolution Process, waives, modifies or tolls the Contractor's obligation to present a timely claim under Government Code section 910, et seq. Therefore, in addition to complying with this Claims Resolution Process, the Contractor is required to present claims to the District pursuant to Government Code section 910, et seq. If after the requirements of this Claims Resolution Process are satisfied, and all or a portion of the Claim remains unresolved, and if the Government Code claim is rejected by the District, the Contractor may proceed under the post-mediation provisions of this Claims Resolution Process.

24.6.10. Post Mediation Provisions

24.6.10.1. Claims of \$375,000 or Less: The provisions of Public Contract Code § 20104.4 shall apply. Pursuant to Public Contract Code § 20104.4(a), within sixty (60) days, but no earlier than thirty (30) days, following the filing of responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. Pursuant to Public Contract Code § 9204(d)(2)(D), a mediation conducted pursuant to this Claims Resolution Process shall excuse the obligation under Public Contract Code § 20104.4(a) to mediate after litigation has been commenced unless otherwise agreed to by the parties in writing.

24.6.10.2. Litigation of Claims in Excess of \$375,000. If, after a mediation as indicated above, the Parties have not resolved the Claim, either Party may commence an action in a court of competent jurisdiction to contest that decision within ninety (90) days following the conclusion of that mediation or one (1) year following the accrual of the cause of action, whichever is later. By mutual agreement, the Parties can agree to instead resolve the Claim through arbitration.

24.6.11. The District shall be entitled to remedy any false claims, as defined in California Government Code section 12650 *et seq.*, made to the District by the Contractor or any Subcontractor under the standards set forth in Government Code section 12650 *et seq.* Any Contractor or Subcontractor who submits a false claim shall be liable to the District for three times the amount of damages that the District sustains because of the false claim. A Contractor or Subcontractor who submits a false claim shall also be liable to the District for (a) the costs, including attorney fees, of a civil action brought to recover any of those penalties or damages, and (b) a civil penalty of up to \$11,000 for each false claim. In addition, Contractor may be subject to criminal prosecution under California Penal Code §72 and/or civil liability under False Claims Act. If so, the District may be entitled to recover its costs incurred to investigate any False Claim, including but not limited to attorneys' fees and expert fees incurred in connection with that investigation.

24.7. Documentation of Resolution.

If a Claim is resolved, the District shall determine if that resolution shall be documented in an Agreement and Release of Any and All Claims form or other document, as appropriate.

24.8. Claim Resolution Process – Non-Applicability.

The procedures and provisions in this Claims Resolution section shall **not** apply to:

24.8.1. District's determination of what Work is or will be constructed, or whether the Work complies with the Contract Documents for purposes of accepting the Work;

24.8.2. District's rights and obligations as a public entity, such as, but without limitation, the revocation of prequalified or qualified status, barring a contractor from District contracts, the imposition of penalties or forfeitures prescribed by statute or regulation; provided, however, that penalties imposed against a public entity by statutes such as Public Contract Code section 7107, shall be subject to the mandatory dispute resolution provisions of this Claims Resolution section and the Contract;

24.8.3. Personal injury, wrongful death or property damage claims;

24.8.4. Latent defect or breach of warranty or guarantee to repair;

24.8.5. Stop notices or stop payment notices; or

24.8.6. Any other District rights as set forth herein.

24.9. The District's failure to respond to a Claim from the Contractor within the time periods described herein or to otherwise meet the time requirements of Public Contract Code section 9204 shall automatically result in the Claim being deemed rejected in its entirety, with no admission by the District as to the merits of the Claim.

24.10. If District fails to timely issue payment for any Claim or portion of a Claim as required pursuant to these Claim Resolution Procedures, the Contractor is permitted to assess interest indicated in Public Contract Code section 9204. Notwithstanding this provision, and in accordance with Public Contract Code section 7107, the District is entitled to withhold up to 150% of disputed amounts and the District shall not be liable for payment of interest on such disputed amounts pending final adjudication of such disputes.

25. LABOR, WAGE & HOUR, APPRENTICE AND RELATED PROVISIONS

25.1. Contractor & Subcontractor Registration

25.1.1. Contractor shall comply with the registration and compliance monitoring provisions of Labor Code section 1771.4, including furnishing its CPRs to the Labor Commissioner of California and complying with any applicable enforcement by the Department of Industrial Relations. Labor Code section 1771.1(a) states the following:

"A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to 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."

25.1.2. Contractor acknowledges that, for purposes of Labor Code section 1725.5, all or some of the Work is a public work to which Labor Code section 1771 applies. Contractor shall comply with Labor Code section 1725.5, including without limitation the registration requirements. Additionally, all Contractor's Subcontractors shall comply with Labor Code section 1725.5 to 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 the Contract. Contractor represents that all of its Subcontractors are registered pursuant to Labor Code section 1725.5.

25.1.3. The Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Contractor shall post job site notices, as prescribed by regulation. Contractor shall comply with all requirements of Labor Code section 1771.4, except the requirements that are exempted by the Labor Commissioner for the Project.

25.2. Wage Rates, Travel and Subsistence

25.2.1. Pursuant to the provisions of article 2 (commencing at section 1770), chapter 1, part 7, division 2, of the Labor Code of California, the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this public work is to be performed for each craft, classification, or type of worker needed to execute this Contract are on file at the District's principal office and copies will be made available to any interested party on request and are available to any interested party on request or at www.dir.ca.gov/oprl/statistics_and_databases.html. Contractor shall obtain and post a copy of these wage rates at the job site.

25.2.2. Holiday and overtime work, when permitted by law, shall be paid for at a rate of at least one and one-half times the above specified rate of per diem wages, unless otherwise specified. The holidays upon

which those rates shall be paid need not be specified by the District, but shall be all holidays recognized in the applicable collective bargaining agreement. If the prevailing rate is not based on a collectively bargained rate, the holidays upon which the prevailing rate shall be paid shall be as provided in Section 6700 of the Government Code.

25.2.3. Contractor shall pay and shall cause to be paid each worker engaged in Work on the Project not less than the general prevailing rate of per diem wages determined by the Director of the Department of Industrial Relations ("DIR") ("Director"), regardless of any contractual relationship which may be alleged to exist between Contractor or any Subcontractor and such workers.

25.2.4. If during the period this bid is required to remain open, the Director determines that there has been a change in any prevailing rate of per diem wages in the locality in which the Work under the Contract is to be performed, such change shall not alter the wage rates in the Invitation to Bid or the Contract subsequently awarded.

25.2.5. Pursuant to Labor Code section 1775, Contractor shall, as a penalty to District, forfeit the statutory amount, (currently not to exceed two hundred dollars (\$200) for each calendar day, or portion thereof), for each worker paid less than the prevailing rates, as determined by the District and/or the Director, for the work or craft in which that worker is employed for any public work done under Contract by Contractor or by any Subcontractor under it.

25.2.5.1. The amount of the penalty shall not be less than forty dollars (\$40) for each calendar day, or portion thereof, unless the failure of Contractor was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of Contractor.

25.2.5.2. The amount of the penalty shall not be less than eighty dollars (\$80) for each calendar day or portion thereof, if Contractor has been assessed penalties within the previous three (3) years for failing to meet Contractor's prevailing wage obligations on a separate contract, unless those penalties were subsequently withdrawn or overturned.

25.2.5.3. The amount of the penalty may not be less than one hundred twenty dollars (\$120) for each calendar day, or portion thereof, if the Labor Commissioner determines the Contractor willfully violated Labor Code section 1775.

25.2.5.4. The difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate, shall be paid to each worker by Contractor.

25.2.6. Any worker employed to perform Work on the Project, which Work is not covered by any classification listed in the general prevailing wage rate of per diem wages determined by the Director, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to Work to be performed by him, and such minimum wage rate shall be retroactive to time of initial employment of such person in such classification.

25.2.7. Pursuant to Labor Code section 1773.1, per diem wages are deemed to include employer payments for health and welfare, pension, vacation, travel time, subsistence pay, and apprenticeship or other training programs authorized by section 3093, and similar purposes.

25.2.8. Contractor shall post at appropriate conspicuous points on the Site of Project, a schedule showing all determined minimum wage rates and all authorized deductions, if any, from unpaid wages actually earned. In addition, Contractor shall post a sign-in log for all workers and visitors to the Site, a list of all subcontractors of any tier on the Site, and the required Equal Employment Opportunity poster(s).

25.3. Hours of Work

25.3.1. As provided in article 3 (commencing at section 1810), chapter 1, part 7, division 2, of the Labor Code, eight (8) hours of labor shall constitute a legal days work. The time of service of any worker employed at any time by Contractor or by any Subcontractor on any subcontract under this Contract upon the Work or upon any part of the Work contemplated by this Contract shall be limited and restricted by Contractor to eight (8) hours per day, and forty (40) hours during any one week, except as hereinafter provided. Notwithstanding the provisions hereinabove set forth, Work performed by employees of Contractor in excess of eight (8) hours per day and forty (40) hours during any one week, shall be permitted upon this public work upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half times the basic rate of pay.

25.3.2. Contractor shall keep and shall cause each Subcontractor to keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed by Contractor in connection with the Work or any part of the Work contemplated by this Contract. The record shall be kept open at all reasonable hours to the inspection of District and to the Division of Labor Standards Enforcement of the DIR.

25.3.3. Pursuant to Labor Code section 1813, Contractor shall as a penalty to the District forfeit the statutory amount (believed by the District to be currently twenty five dollars (\$25)) for each worker employed in the execution of this Contract by Contractor or by any Subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of the provisions of article 3 (commencing at section 1810), chapter 1, part 7, division 2, of the Labor Code.

25.3.4. Any Work necessary to be performed after regular working hours, or on Sundays or other holidays shall be performed without additional expense to the District.

25.4. Payroll Records

25.4.1. Contractor and all Subcontractors must comply with the compliance monitoring provisions of Labor Code section 1771.4, including furnishing its certified payroll records ("CPR(s)") to the Labor Commissioner of California and complying with any applicable enforcement by DIR. Labor Code section 1771.4 requires Contractor and Subcontractors to provide electronic copies of CPRs to the Labor Commissioner of California at least once every thirty (30) days, and within thirty (30) days of Project Completion. The failure to timely provide the CPRs could result in penalties as determined by Labor Code section 1771.4, applicable laws, and regulations

25.4.2. If requested by the District, Contractor shall provide to the District and shall cause each Subcontractor performing any portion of the Work to provide the District and an accurate CPR(s), showing the name, address, social security number, work classification, straight time, and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by the Contractor and/or each Subcontractor in connection with the Work.

25.4.3. In addition to any other requirements pursuant to Labor Code sections 1770, et seq., the CPRs enumerated hereunder shall be certified and shall be provided to the District on a weekly basis. The CPRs from the Contractor and each Subcontractor for each week shall be provided on or before Wednesday of the week following the week covered by the CPRs. District shall not make any payment to Contractor until:

25.4.3.1. Contractor and/or its Subcontractor(s) provide CPRs acceptable to the District, and

25.4.3.2. The District is given sufficient time to review and/or audit the CPRs to

determine their acceptability. Any delay in Contractor and/or its Subcontractor(s) providing CPRs to the District in a timely manner will directly delay the District's review and/or audit of the CPRs and Contractor's payment.

25.4.4. All CPRs shall be available for inspection at all reasonable hours at the principal office of Contractor on the following basis:

25.4.4.1. A certified copy of an employee's CPR shall be made available for inspection or furnished to the employee or the employee's authorized representative on request.

25.4.4.2. CPRs shall be made available for inspection or furnished upon request to a representative of District, Division of Labor Standards Enforcement, Division of Apprenticeship Standards, and/or the Department of Industrial Relations.

25.4.4.3. CPRs shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the District, Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested CPRs have not been provided pursuant to the provisions herein, the requesting party shall, prior to being provided the records reimburse the costs of preparation by Contractor, Subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of Contractor.

25.4.5. The form of certification for the CPRs shall be as follows:

I, _____ (Name-Print), the undersigned, am the _____
_____ (Position in business) with the authority to act for and on behalf of _____
_____ (Name of business and/or Contractor), certify under penalty of perjury that the records or copies thereof submitted and consisting of _____
(Description, number of pages) are the originals or true, full, and correct copies of the originals which depict the payroll record(s) of actual disbursements by way of cash, check, or whatever form to the individual or individual named, and (b) we have complied with the requirements of sections 1771, 1811, and 1815 of the Labor Code for any work performed by our employees on the Project.

Date: _____ Signature: _____
(Section 16401 of Title 8 of the California Code of Regulations)

25.4.6. Each Contractor shall file a certified copy of the CPRs with the entity that requested the records within ten (10) days after receipt of a written request.

25.4.7. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by District, Division of Apprenticeship Standards, or Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of Contractor awarded Contract or performing Contract shall not be marked or obliterated.

25.4.8. Contractor shall inform District of the location of the records enumerated hereunder, including the street address, city, and county, and shall, within five (5) Business Days, provide a notice of change of location and address.

25.4.9. In the event of noncompliance with the requirements of this section, Contractor shall have ten (10) days in which to comply subsequent to receipt of written notice specifying in what respects Contractor must comply with this section. Should noncompliance still be evident after the ten (10) day period, Contractor shall, as a penalty to District, forfeit one hundred dollars (\$100) for each calendar day,

or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of Division of Apprenticeship Standards or Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due.

25.4.10. It shall be the responsibility of Contractor to ensure compliance with the provisions of Labor Code section 1776.

25.5. Apprentices

25.5.1. Contractor acknowledges and agrees that, if this Contract involves a dollar amount greater than or a number of working days greater than that specified in Labor Code section 1777.5, then this Contract is governed by the provisions of Labor Code Section 1777.5. It shall be the responsibility of Contractor to ensure compliance with this Article and with Labor Code section 1777.5 for all apprenticeship occupations.

25.5.2. Apprentices of any crafts or trades may be employed and, when required by Labor Code section 1777.5, shall be employed provided they are properly registered in full compliance with the provisions of the Labor Code.

25.5.3. Every apprentice shall be paid the standard wage paid to apprentices under the regulations of the craft or trade at which the apprentice is employed, and shall be employed only at the work of the craft or trade to which the apprentice is registered.

25.5.4. Only apprentices, as defined in section 3077 of the Labor Code, who are in training under apprenticeship standards and written apprentice agreements under chapter 4 (commencing at section 3070), division 3, of the Labor Code, are eligible to be employed. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which the apprentice is training.

25.5.5. Pursuant to Labor Code section 1777.5, if that section applies to this Contract as indicated above, Contractor and any Subcontractors employing workers in any apprenticeable craft or trade in performing any Work under this Contract shall apply to the applicable joint apprenticeship committee for a certificate approving the Contractor or Subcontractor under the applicable apprenticeship standards and fixing the ratio of apprentices to journeymen employed in performing the Work.

25.5.6. Pursuant to Labor Code section 1777.5, if that section applies to this Contract as indicated above, Contractor and any Subcontractor may be required to make contributions to the apprenticeship program.

25.5.7. If Contractor or Subcontractor willfully fails to comply with Labor Code section 1777.5, then, upon a determination of noncompliance by the Administrator of Apprenticeship, it shall:

25.5.7.1. Be denied the right to bid on any subsequent project for one (1) year from the date of such determination;

25.5.7.2. Forfeit as a penalty to District the full amount as stated in Labor Code section 1777.7. Interpretation and enforcement of these provisions shall be in accordance with the rules and procedures of the California Apprenticeship Council and under the authority of the Chief of the Division of Apprenticeship Standards.

25.5.8. Contractor and all Subcontractors shall comply with Labor Code section 1777.6, which section forbids certain discriminatory practices in the employment of apprentices.

25.5.9. Contractor shall become fully acquainted with the law regarding apprentices prior to commencement of the Work. Special attention is directed to sections 1777.5, 1777.6, and 1777.7 of the

Labor Code, and title 8, California Code of Regulations, section 200 et seq. Questions may be directed to the State Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, California 94102.

25.5.10. Contractor shall ensure compliance with all certification requirements for all workers on the Project including, without limitation, the requirements for electrician certification in Labor Code sections 108, et seq.

25.6. Non-Discrimination

25.6.1. Contractor herein agrees not to discriminate in its recruiting, hiring, promotion, demotion, or termination practices on the basis of race, religious creed, national origin, ancestry, sex, age, or physical handicap in the performance of this Contract and to comply with the provisions of the California Fair Employment and Housing Act as set forth in part 2.8 of division 3 of the California Government Code, commencing at section 12900; the Federal Civil Rights Act of 1964, as set forth in Public Law 88-352, and all amendments thereto; Executive Order 11246, and all administrative rules and regulations found to be applicable to Contractor and Subcontractor.

25.6.2. Special requirements for Federally Assisted Construction Contracts: During the performance of this Contract, Contractor agrees to incorporate in all subcontracts the provisions set forth in Chapter 60-1.4(b) of Title 41 published in Volume 33 No. 104 of the Federal Register dated May 28, 1968.

25.7. Labor First Aid

Contractor shall maintain emergency first aid treatment for Contractor's workers on the Project which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C. § 651 et seq.) the California Occupational Safety and Health Act of 1973, and all related regulations, including without limitation section 330 et seq. of Title 8 of the California Code of Regulations.

26. MISCELLANEOUS

26.1. Assignment of Antitrust Actions

26.1.1. Section 7103.5(b) of the Public Contract Code states:

In entering into a public works contract or subcontract to supply goods, services, or materials pursuant to a public works contract, the Contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgment by the parties.

26.1.2. Section 4552 of the Government Code states:

In submitting a bid to a public purchasing body, the bidder offers and agrees that if the bid is accepted, it will assign to the purchasing body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, materials, or services by the bidder for sale to the purchasing body pursuant to the bid. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the bidder.

26.1.3. Section 4553 of the Government Code states:

If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under this chapter, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery.

26.1.4. Section 4554 of the Government Code states:

Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under this part if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action.

26.1.5. Under this Article, “public purchasing body” is District and “bidder” is Contractor.

26.2. **Excise Taxes**

If, under Federal Excise Tax Law, any transaction hereunder constitutes a sale on which a Federal Excise Tax is imposed and the sale is exempt from such Federal Excise Tax because it is a sale to a State or Local Government for its exclusive use, District, upon request, will execute documents necessary to show (1) that District is a political subdivision of the State for the purposes of such exemption, and (2) that the sale is for the exclusive use of District. No Federal Excise Tax for such materials shall be included in any Contract Price.

26.3. **Taxes**

Contract Price is to include any and all applicable sales taxes or other taxes that may be due in accordance with section 7051 of the Revenue and Taxation Code; Regulation 1521 of the State Board of Equalization or any other tax code that may be applicable.

26.4. **Shipments**

All shipments must be F.O.B. destination to Site or sites, as indicated in the Contract Documents. There must be no charge for containers, packing, unpacking, drayage, or insurance. The total Contract Price shall be all inclusive (including sales tax) and no additional costs of any type will be considered.

26.5. **Compliance with Government Reporting Requirements**

If this Contract is subject to federal or other governmental reporting requirements because of federal or other governmental financing in whole or in part for the Project which it is part, or for any other reason, Contractor shall comply with those reporting requirements at the request of the District at no additional cost.

END OF DOCUMENT

DOCUMENT 00 71 00

SPECIAL CONDITIONS

1. **Project Description**

The information provided here is a summary only. All bidders must thoroughly review the Plans and Specifications and the other Contract Documents for a full understanding of the scope of the Work of the Project.

a. **Scope.**

Transitional and Kinder Play Yard Replacement including : Replacement of flatwork including Asphalt, Rubber surfacing and Sandbox in Play Area. Install of two new play structure (OFCl-owner furnished, contractor installed) over poured-in-place safety surfacing, Replacement of fences and gates, Addition of wood fence at the toe of the hill, The addition of Trees, Plants and associated irrigations, 18" concrete Seat walls, Installation of Site Furniture.

b. The contractor will be responsible for receiving, as well as staging and safe keeping of OFCl items until they are ready for installation.

c. **Preliminary (Tentative) Schedule.** These dates are subject to change, at the District's discretion.

- (1) The District anticipates awarding the Project, if it awards it at all, at its Board meeting on **April 13, 2026.**
- (2) The District anticipates issuing a Notice to Proceed to the successful Contractor in **April, 2026.**
- (3) Based on this, the District expects Project Completion on **July 31, 2026.**

2. **Prequalification**

"Not Applicable"

3. **Mitigation Measures**

Contractor shall comply will all applicable mitigation measures, if any, adopted by any public agency with respect to this Project pursuant to the California Environmental Quality Act. (Public Resources Code section 21000 et. seq)

4. **Site Specific Conditions**

- a. **Access.** Access to the school buildings and entry to buildings, classrooms, restrooms, mechanical rooms, electrical rooms, or other rooms, for construction purposes, must be coordinated with District and onsite District personnel before Contractor commences Work. Unless agreed to otherwise in writing, only a school custodian will be allowed to unlock and lock doors in existing building(s). The custodian will be available only while school is in session. If a custodian is required to arrive before 7:00 a.m. or leave after 3:30 p.m. to accommodate Contractor's Work, the overtime wages for the custodian will be paid by Contractor, unless, at the discretion of District, other arrangements are made in advance.
- b. **Master Key.** Upon request, District may, at its own discretion, provide a master key to the school site for the convenience of Contractor. Contractor agrees to pay all expenses to re-key the entire school site and all other affected District buildings if the master key is lost or stolen or if any unauthorized party obtains a copy of the key or access to the school.

- c. **Maintaining Services.** Contractor is advised that Work is to be performed in spaces regularly scheduled for instruction. Interruption and/or periods of shutdown of public access, electrical service, water service, lighting, or other utilities shall be only as arranged in advance with District. Contractor shall provide temporary services to all facilities interrupted by Contractor's Work.
- d. **Maintaining Utilities.** Contractor shall maintain in operation during term of Contract, drainage lines, storm drains, sewers, water, gas, electrical, steam, and other utility service lines within working area.
- e. **Work During Instructional Time.** By submitting its bid, Contractor affirms that Work may be performed during ongoing instruction in existing facilities. If so, Contractor agrees to cooperate to the best of its ability to minimize any disruption to the school up to, and including, rescheduling specific work activities, at no additional cost to District.
- f. **No Work During Student Testing.** Contractor shall, at no additional cost to District and at District's request, coordinate its Work to not disturb District students including, without limitation, not performing any Work when students at the Site are taking State-required tests.
- g. **Badge and Vest Policy for Contractors.** Contractor shall provide their workers and all of Subcontractors' workers, and delivery personnel or others entering the Site, with identification badges and a brightly colored construction vest. These badges and vests shall be worn by all persons who are working on the Project Site.

(1) Badges must be filled out in full and contain the following information:

- a) Name of Contractor
- b) Name of Employee
- c) Contractor's address and phone number

(2) Badges must be worn by all these persons when on Site and must be visible at all times. Contractors must inform these persons that they are required to allow District employees, the Architect, the Construction Manager, the Program Manager, or the Project Inspector to review the information on the badges upon request to, without limitation, confirm a person's identity and a person's right to be on Site, and in any particular area on the Site, at any time.

(3) Failure to display an identification badge and/or to wear a vest as required by this policy may result in the assessment of fines against the Contractor.

5. **Fingerprinting**

The Contractor must comply with the Criminal Background Investigation / Fingerprinting Certification (Doc. 00 45 85) by utilizing only the following method indicated (checked) and not any other method.

☒ **All Workers Fingerprinted.** The Contractor has complied with the fingerprinting requirements of Education Code section 45125.1 with respect to all Contractor's employees and all of its subcontractors' employees who interact with pupils, outside of the immediate supervision and control of the pupil's parent or guardian or a school employee, has a valid criminal records summary as described in Education Code Section 44237 (Contractor shall "require each applicant for employment in a position requiring contact with minor pupils to submit two sets of fingerprints prepared for submittal by the employer to the Department of Justice for the purpose of obtaining criminal record summary information from the Department of Justice and the Federal Bureau of Investigation."). A complete and accurate list of Contractor's employees and of all of its subcontractors' employees who may interact with District pupils during the course and scope of the Contract is attached hereto; and/or

☐ **Physical Barrier.** Pursuant to Education Code section 45125.2, Contractor has installed or will

install, prior to commencement of work, a physical barrier at the Project site, that will limit contact between Contractor's employees and District pupils at all times; and/or

☐ **Continual Supervision by Fingerprinted Employee.** Pursuant to Education Code section 45125.2, Contractor certifies that all employees will be under the continual supervision of, and monitored by, an employee of the Contractor who the California Department of Justice has ascertained has not been convicted of a violent or serious felony. The name and title of the employee who will be supervising Contractor's employees and its subcontractors' employees is:

Name: _____ Title: _____

☐ **Unoccupied Site.** The Work on the Contract is at an unoccupied school site and no employee and/or subcontractor or supplier of any tier of Contract shall come in contact with the District pupils.

6. **Substitutions for Specified Items**

Requests for substitutions after award of the Contract shall be submitted within **THIRTY-FIVE (35)** days of the date of the Notice of Award. This time period may be extended by the District only, in its sole discretion.

7. **Weather Days**

Delays due to Adverse Weather conditions will only be permitted in compliance with the provisions in the General Conditions and only if the number of days of Adverse Weather exceeds the following parameters:

NORTHERN CALIFORNIA: 3 Days (as applicable)

8. **Insurance Policy Limits.** Contractor's insurance shall be with insurance companies with an A.M. Best rating of no less than A++. The limits of insurance shall not be less than:

Commercial General Liability	Includes: Bodily Injury, Property Damage, Personal & Advertising Injury, Product Liability and Completed Operations	\$2,000,000 each occurrence; \$4,000,000 general aggregate
Automobile Liability – Any Auto	Combined Single Limit	\$2,000,000 per occurrence
Excess Liability (Umbrella)		\$6,000,000 per occurrence; \$6,000,000 aggregate
Workers Compensation		Statutory limits pursuant to State law
Employers' Liability		\$2,000, 000 each incident, each disease; \$2,000,000 policy limit
Sexual Abuse / Molestation		\$1,000,000 each incident; \$2,000,000 policy limit
Builder's Risk (Course of Construction)		Issued for the value and scope of Work indicated herein.
Property of Others	Combined Single Limit General Aggregate	Issued for the value and scope of Work stored off-site.

a. **Builder's Risk Insurance:**

Not applicable for this project.

9. **Permits, Certificates, Licenses, Fees, Approval**

a. **Approvals, Certificates, Fees, Inspections, Licenses, Permits, Etc.**

(1) **Permits in Bid Price.** Contractor shall include in its Bid the cost of any approvals, certificates, fees, excavations, licenses, permits or similar requirements necessary for the performance of the Work ("Permits").

a) "Permits" includes, without limitation, any of the following if required: temporary or permanent building, mechanical, electrical or plumbing permits; certificates of occupancy; curb-breaking permits, highway entrance permits; water permits; etc.

b) "Permits" does not include Project Inspector fees (which will be paid by the District unless otherwise indicated herein), professional licensing, or contractors' licensing.

c) The Contractor shall be required to obtain all Permits. The Contractor shall ensure sufficient time in its Construction Schedule to secure and obtain all permits and shall not be permitted to claim a delay in the Project due to a delay in obtaining a Permit.

b. **Certain Fees Not Part of Permits.** Notwithstanding the above requirements, District shall oversee the obtaining and payment of the following permits, fees or charges, but Contractor shall assist in those efforts as requested by the District at no additional cost to District, if required.

c. **Storm Water Permits**

(1) Contractor shall perform the Work of the Project related to being District's Qualified SWPPP (Storm Water Pollution Prevention Plan) Practitioner ("QSP").

(2) As District's QSP, Contractor shall be responsible for storm water and non-storm water visual observations, sampling, and analysis per the District's SWPPP.

(3) Contractor shall strictly follow the requirements to implement all the provisions of the SWPPP including, without limitation, preparation of monitoring and recording reports and providing those to District.

(4) Contractor's indemnity obligations are applicable to any damages, penalties, fees, charges, or related expenses assessed or charged to the District by any water boards or agencies with jurisdiction related to compliance with the Storm Water Permits.

10. **Project Inspection**

In addition to the requirements in the Contract Documents related to cooperation with and authority of the DSA Project Inspector(s) for the Project, Contractor must comply with the requirements of the most recent versions of DSA document PR 13-01. Below are provisions of this document from PR 13-01 (rev 08/21/17).

(1) The contractor shall carefully study the DSA-approved documents and shall plan a schedule of operations well ahead of time.

(2) If at any time it is discovered that work is being done which is not in accordance with the DSA-approved construction documents, the contractor shall correct the work immediately.

- (3) Verify that DSA 152 and, when applicable, DSA 152-IPI forms were issued for the project prior to the commencement of construction.
- (4) Meet with the design team, the Laboratory of Record and the project inspector to mutually communicate and understand the structural/material and fire/life safety testing and inspection program, and the methods of communication appropriate for the project.
- (5) Notify the project inspector and, when applicable, in-plant inspector, in writing, of the commencement of construction of each and every aspect of the work at least 48 hours in advance by submitting Commencement/Completion of Work Notification (form DSA 156), or other agreed-upon written documents, to the project inspector.
- (6) Notify the project inspector and, when applicable, the in-plant inspector, of the completion of construction of each and every aspect of the work by submitting form DSA 156 (or other agreed-upon written documents) to the project inspector.
- (7) Consider the relationship of the signed-off blocks and sections of the form DSA 152 and the commencement of subsequent work. Until the project inspector has signed off applicable blocks and sections of the form DSA 152, the contractor may be prohibited from proceeding with subsequent construction activities that cover up the unapproved work. Any subsequent construction activities that cover up the unapproved work will be subject to a "Stop Work Order" from DSA or the school district (see IR A-13 for additional information), and are subject to removal and remediation if found to be in noncompliance with the DSA-approved construction documents.
- (8) Submit the final verified report. All prime contractors are required to submit final Contractor Verified Reports (form DSA 6-C).

11. **Health & Safety.** This provision includes additional requirements related to the Contractor's responsibility related to the health of its workers and to the procedures it must follow related to COVID-19, and is in addition to the requirements already indicated in the Contract Documents including, without limitation, in the Agreement and the General Conditions.

END OF DOCUMENT

DOCUMENT 01 11 00

SUMMARY OF WORK

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Submittals; and
- 1.1.5. Temporary Facilities and Controls.

1.2. SUMMARY OF WORK COVERED BY CONTRACT DOCUMENTS

The Work may consist of the following:

Transitional and Kinder Play Yard Replacement including: Replacement of flatwork including Asphalt, Rubber surfacing and Sandbox in Play Area. Install of two new play structure (OFCl-owner furnished, contractor installed) over poured-in-place safety surfacing, Replacement of fences and gates, Addition of wood fence at the toe of the hill, The addition of Trees, Plants and associated irrigations, 18" concrete Seat walls, Installation of Site Furniture and Alternates maybe selected by District.

The contractor will be responsible for receiving, as well as staging and safe keeping of OFCl items until installation.

1.3. CONTRACTS

Perform the Work under a single, fixed-price Contract.

1.4. DEFERRED APPROVAL ITEMS

- 1.4.1. All items that are subject to subsequent review and approval by the Division of the State Architect shall be as indicated below. No deferred approval items shall be installed until the Contractor has complied with all the processes in the Contract Documents, including Division 01 Document "Submittals."
- 1.4.2. Deferred approval items for this Project are the following:
"None"

1.5. SPECIAL PROJECT REQUIREMENTS

- 1.5.1. Hours of Work: Work is to be performed during regular work hours. Contractor shall coordinate its operations with activities taking place at each campus such as summer school. Contractor shall ensure that there are no disruptions to such activities.

1.6. WORK BY OTHERS

- 1.6.1. Work to be performed and completed prior to the start of the Project:
Delivery of OFCI equipment.

1.7. CODES, REGULATIONS AND STANDARDS

- 1.7.1. The codes, regulations, and standards adopted by the State and federal agencies having jurisdiction shall govern minimum requirements for the Project. Where codes, regulations, and standards conflict with the Contract Documents, these conflicts shall be brought to the immediate attention of the District and the Architect.
- 1.7.2. Codes, regulations, and standards are as published effective as of date of bid opening, unless otherwise specified or indicated.

1.8. EXAMINATION OF EXISTING CONDITIONS

- 1.8.1. Contractor shall be held to have examined the Project Site and acquainted itself with the conditions of the Site and of the streets and roads approaching the Site.
- 1.8.2. Prior to commencement of Work, Contractor shall survey the Site and existing buildings and improvements to observe existing damage and defects such as cracks, sags, broken, missing or damaged glazing, other building elements and Site improvements, and other damage.
- 1.8.3. Should Contractor observe cracks, sags, and other damage to and defects of the Site and adjacent buildings, paving, and other items not indicated in the Contract Documents, Contractor shall immediately report same to the District and the Architect.
- 1.8.4. Should any existing conditions such as deterioration or noncomplying construction be discovered that is not covered by the DSA approved documents wherein the finished work will not comply with Title 24, California Code of Regulations, a construction change document, or a separate set of plans and specifications, detailing and specifying the required repair work shall be submitted to and approved by DSA before proceeding with the repair work. "

1.9. CONTRACTOR'S USE OF PREMISES

- 1.9.1. Contractor shall take all reasonable precautions for the safety of the students and the school employees throughout the duration of the Project.
- 1.9.2. If unoccupied and only with District's prior written approval, Contractor may use the building(s) at the Project Site without limitation for its operations, storage, and office facilities for the performance of the Work. If the District chooses to beneficially occupy any building(s), Contractor must obtain the District's written approval for Contractor's use of spaces and types of operations to be performed within the building(s) while so occupied. Contractor's access to the building(s) shall be limited to the areas indicated.

- 1.9.3. If the space at the Project Site is not sufficient for Contractor's operations, storage, office facilities and/or parking, Contractor shall arrange and pay for any additional facilities needed by Contractor, at no expense to District.
- 1.9.4. Contractor shall not interfere with others use of or access to occupied portions of the building(s) or adjacent property.
- 1.9.5. Contractor shall maintain corridors, stairs, halls, and other exit-ways of building clear and free of debris and obstructions at all times.
- 1.9.6. No one other than those directly involved in the demolition and construction or specifically designated by the District or the Architect shall be permitted in the areas of Work during demolition and construction activities.

1.10. PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- 1.10.1. The Drawings show above-grade and below-grade structures, utility lines, and other installations that are known or believed to exist in the area of the Work. Contractor shall locate these existing installations before proceeding with excavation and other operations that could damage same; maintain them in service, where appropriate; and repair damage to them caused by the performance of the Work. Should damage occur to these existing installations, the costs of repair shall be at the Contractor's expense and made to the District's satisfaction.
- 1.10.2. Contractor shall be alert to the possibility of the existence of additional structures and utilities. If Contractor encounters additional structures and utilities, Contractor will immediately report to the District for disposition of same as indicated in the General Conditions.

1.11. UTILITY SHUTDOWNS AND INTERRUPTIONS

- 1.11.1. Contractor shall give the District a minimum of three (3) days written notice in advance of any need to shut off existing utility services or to effect equipment interruptions. District will set exact time and duration for shutdown, and will assist Contractor with shutdown. Work required to re-establish utility services shall be performed by the Contractor.
- 1.11.2. Contractor shall obtain District's written approval as indicated in the General Conditions in advance of deliveries of material or equipment or other activities that may conflict with District's use of the building(s) or adjacent facilities.

1.12. STRUCTURAL INTEGRITY

- 1.12.1. Contractor shall be responsible for and supervise each operation and work that could affect structural integrity of various building elements, both permanent and temporary.
- 1.12.2. Contractor shall include structural connections and fastenings as indicated or required for complete performance of the Work.

DOCUMENT 01 12 10

CONTRACT FORMS AND SUBMITTALS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Submittals; and
- 1.1.5. Construction Schedule.

2. REQUIREMENTS OF THE DISTRICT

2.1. Contractor shall utilize the District's forms as indicated below [**AND AS ATTACHED HERETO**]. This requirement also applies to submittals, including the requirement that the Contractor and its Subcontractors, as indicated, utilize the software, internet and specific programs on this Project as indicated herein.

2.2. DISTRICT FORMS

All forms identified below shall utilize District forms available at the above referenced link. Contractor must only utilize these forms, including the programs, processes and software indicated below.

- 2.2.1. **Request for Information.** Contractor shall comply with all applicable provisions in Contract Documents relating to Requests for Information. Contractor shall submit all of its Requests for Information using District's Form attached hereto.
- 2.2.2. **Construction Directive.** Contractor shall comply with all applicable provisions in Contract Documents relating to Changes in the Work. All Construction Directives shall be issued using District's Form attached hereto.
- 2.2.3. **Price Request.** Contractor shall comply with all applicable provisions in Contract Documents relating to Price Requests. All Price Requests shall be issued using District's Form attached hereto.
- 2.2.4. **Proposed Change Order.** Contractor shall comply with all applicable provisions in Contract Documents relating to Changes in the Work. Contractor shall submit all of its Proposed Change Orders using District's Form attached hereto.
- 2.2.5. **Change Order.** Contractor shall comply with applicable provisions in Contract Documents relating to Changes in the Work. All Change Orders shall be issued using District's Form attached hereto.

2.3. CONTRACTOR SUBMITTALS

All submittals required by the Contract Documents shall be submitted using the programs, processes and software indicated below. If no specific program or format is indicated, then Microsoft Word or Microsoft Excel is acceptable.

2.3.1. Preliminary Construction Schedule

2.3.2. Schedule of Values

2.3.2.1. Utilize Primavera or another program if pre-approved by the District.

2.3.3. Contractor's Completed Subcontractor List

2.3.4. Contractor's Safety Plan

2.3.5. Schedule of Submittals

2.3.5.1. Utilize PCM or another program if pre-approved by the District.

2.3.6. Operations and Maintenance Manual & Instructions

END OF DOCUMENT

DOCUMENT 01 20 00

PRICE AND PAYMENT PROCEDURES

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any).

1.2. DESCRIPTION

- 1.2.1. This Document contains procedures to be followed by the Contractor to request payment.
- 1.2.2. **IF THERE IS ANY INCONSISTENCY IN THIS DOCUMENT WITH THE PROVISIONS IN THE GENERAL CONDITIONS AND THE SPECIAL CONDITIONS THAT THE CONTRACTOR SHALL COMPLY WITH RELATED TO CHANGES AND/OR REQUESTS FOR CHANGES (e.g., "PAYMENTS," "SCHEDULE OF VALUES"), THOSE PROVISIONS IN THE GENERAL CONDITIONS AND THE SPECIAL CONDITIONS SHALL TAKE PRECEDENCE.**

1.3. SECTION INCLUDES

- 1.3.1. Schedule of Values.
- 1.3.2. Application for Payment.

1.4. SCHEDULE OF VALUES

- 1.4.1. Provide a breakdown of the Contract Price with enough detail to facilitate continued evaluation of Applications for Payment and Progress Reports.
- 1.4.2. Contractor must update and resubmit the Schedule of Values before the next Invoice or Application for Payment when Change Orders or Construction Change Directives result in a change in the Contract Price.
- 1.4.3. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule. Comply with the provisions in the General Conditions regarding the Schedule of Values.
 - 1.4.3.1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - 1.4.3.1.1. Application for Payment forms.

- 1.4.3.1.2. Submittal Schedule.
- 1.4.3.1.3. Contractor's Construction Schedule.
- 1.4.3.2. Submit the Schedule of Values to District as indicated in the Contract Documents and, if an updated Schedule of Values is needed, then no later than ten (10) days before the date scheduled for submittal of the next Application(s) for Payment.
- 1.4.3.3. Subschedules: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values correlated with each phase of payment.
- 1.4.4. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
 - 1.4.4.1. Identification: Include the following Project identification on the Schedule of Values:
 - 1.4.4.1.1. Project name and location.
 - 1.4.4.1.2. Name of District's Representative.
 - 1.4.4.1.3. District's contract number (Bid No. 20-49).
 - 1.4.4.1.4. District's name and address.
 - 1.4.4.1.5. Date of submittal.
 - 1.4.4.2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - 1.4.4.2.1. Related Specification document, section or division.
 - 1.4.4.2.2. Description of the Work.
 - 1.4.4.2.3. Name of subcontractor.
 - 1.4.4.2.4. Name of manufacturer or fabricator.
 - 1.4.4.2.5. Name of supplier.
 - 1.4.4.2.6. Change Orders (numbers) that affect value.
 - 1.4.4.2.7. Dollar value.
 - 1.4.4.2.7.1. Percentage of the Contract Price to nearest one-hundredth percent, adjusted to total 100 percent.
 - 1.4.4.3. Provide a breakdown of the Contract Price in enough detail to facilitate continued evaluation of Applications for Payment and progress reports.

Provide several line items for principal subcontract amounts, where appropriate. Include separate line items under required principal subcontracts for operation and maintenance manuals, punch list activities, Project Record Documents, and demonstration and training.

1.4.4.4. Round amounts to nearest whole dollar; total shall equal the Contract Price.

1.4.4.5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

1.4.4.6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

1.4.4.7. Allowances (if any): Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.

1.4.4.8. Each item in the Schedule of Values and Applications for Payments shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

1.4.5. Schedule Updating: Update and resubmit the Schedule of Values before the next Application for Payment if there is a change in the Contract Price.

1.5. APPLICATIONS FOR PAYMENT

1.5.1. **Form:** Contractor shall utilize AIA Form G702 - Application and Certificate for Payment and AIA Form G703 - Continuation Sheet, or District-approved form with the same information as these AIA forms.

1.5.2. **Content and Format:** District shall use Schedule of Values for listing items in its Application for Payment.

1.5.3. Each Application for Payment shall be consistent with previous applications and payments as certified and paid for by District.

END OF DOCUMENT

DOCUMENT 01 21 00

ALLOWANCES

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISION

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions including without limitation, Contract Terms and Definitions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Agreement; and
- 1.1.5. Bid Form.

1.2. SUMMARY

- 1.2.1. **THE SPECIFIC ALLOWANCES FOR THIS PROJECT ARE AS LISTED IN THE AGREEMENT.**
- 1.2.2. This Document includes administrative and procedural requirements governing Allowances.
- 1.2.3. Certain items are specified in the Contract Documents by Allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements may be issued by Change Order or similar document.

1.3. SELECTION AND PURCHASE

- 1.3.1. At the earliest practical date after award of the Contract, Contractor shall advise District of the date when final selection and purchase of each product or system described by an Allowance must be completed to avoid delaying the Work.
- 1.3.2. At District's request, obtain proposals for each Allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- 1.3.3. Purchase products and systems selected by District from the designated supplier.

1.4. SUBMITTALS

- 1.4.1. Submit proposals for purchase of products or systems included in Allowances, in the form specified for Change Orders.
- 1.4.2. Submit invoices or delivery slips to show actual quantities of materials delivered to the Site for use in fulfillment of each Allowance.

- 1.4.3. Coordinate and process submittals for Allowance items in same manner as for other portions of the Work.

1.5. COORDINATION

Coordinate Allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.6. PAYMENT FOR ALLOWANCES

- 1.6.1. Allowance shall include all-inclusive cost to Contractor of specific products and materials under Allowance and Contractor may bill its time, materials, and other items in the identical structure as a Change Order.

1.7. UNUSED MATERIALS

- 1.7.1. Return unused materials purchased under an Allowance to manufacturer or supplier for credit to District, after installation has been completed and accepted.
- 1.7.2. If requested, prepare and deliver unused material for storage by District when it is not economically practical (as determined by District) to return the material for credit. If directed, deliver unused material to District's storage space. Otherwise, disposal of unused material is Contractor's responsibility.

2. EXECUTION

2.1. EXAMINATION

Examine products covered by an Allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

2.2. PREPARATION

Coordinate materials and their installation for each Allowance with related materials and installations to ensure that each Allowance item is completely integrated and interfaced with related work.

END OF DOCUMENT

DOCUMENT 01 23 00

ALTERNATES AND UNIT PRICING

1. ALTERNATES AND UNIT PRICES

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Bid Form and Proposal; and
- 1.1.5. Instruction to Bidders.

2. ALTERNATES

2.1. DESCRIPTION

An amount proposed by Contractor and stated in its Bid Form for certain work defined in the Instruction to Bidders, Bid Form or Contract Documents that may be added to or deducted from the Base Bid amount. The acceptance or rejection of any of the alternates is strictly at the option of the District and subject to District's acceptance of Contractor's stated prices contained in this Proposal.

The cost or credit for each alternate is the net addition to or deduction from the Contract Price to incorporate the alternate into the Work. No other adjustments are made to the Contract Price.

2.2. GENERAL:

- 2.2.1. Coordination: Contractor shall modify or adjust adjacent work as necessary to completely integrate work of the alternate into the Project.
 - 2.2.1.1. Include as part of each alternate, miscellaneous devices, accessories and similar items incidental to or required for a complete installation whether or not indicated as part of the alternate.
 - 2.2.1.2. Include as part of each alternate, the costs of related coordination, modification, or adjustments.
- 2.2.2. If District accepts an alternate, Contractor shall perform the work of the alternate under the same conditions as other Work required by Contract Documents.
- 2.2.3. Notification: Immediately following award of the Contract, Contractor shall notify all of its Subcontractor(s) in writing of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.

- 2.2.4. Schedule of Alternates: A Schedule of Alternates is included at the end of this Document. Specifications referenced in the Schedule of Alternates contain requirements for materials necessary to achieve the Work described under each alternate.

3. UNIT PRICING

3.1. DESCRIPTION

An amount proposed by Contractor and stated in its Bid Form for certain work defined in the Instruction to Bidders and Bid Form that may be priced by unit. The acceptance or rejection of any of the unit prices is strictly at the option of the District and subject to District's acceptance of Contractor's stated prices contained in the Bid Form and may be subsequently negotiated prior to incorporation on Change Order(s).

3.2. GENERAL

Contractor shall completely state all required figures based on Unit Prices required in the Bid Form. Where scope of Work is decreased, all Work pertaining to the item, whether specifically stated or not, shall be omitted and where scope of Work is increased, all work pertaining to that item required to render same ready for use on the Project in accordance with intention of Drawings and Specifications shall be included in an agreed upon price amount.

3.3. UNIT PRICES

Furnish unit prices for each of the named items on a square foot, lineal foot, or per each basis, as requested and applicable. Unit prices shall include all labor, materials, services, profit, overhead, insurance, bonds, taxes, and all other incidental costs of Contractor, subcontractors, and supplier(s).

4. EXECUTION

4.1. SCHEDULE OF ALTERNATES

- 4.1.1. Alternate 1: Furniture such as pebble seat, picnic tables, twig bench, S.L.D.. for complete list
- 4.1.2. Alternate 2: Additional play structures, S.L.D.. Note that the additional structures will be contractor furnished and contractor installed.
- 4.1.3. Alternate 3: Landscape wall, S.L.D.
- 4.1.4. Alternate 4: Asphalt paint, S.L.D.

END OF DOCUMENT

DOCUMENT 01 25 10

PRODUCT OPTIONS AND SUBSTITUTIONS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any); and
- 1.1.4. Instructions to Bidders.

1.2. DOCUMENT INCLUDES

- 1.2.1. Product options.
- 1.2.2. Limitations on Substitutions.
- 1.2.3. Regulatory Requirements.
- 1.2.4. Substitution Representation.
- 1.2.5. Submittal Procedure.
- 1.2.6. District's Review.

1.3. DEFINITIONS

- 1.3.1. Requests for changes in products, materials, or equipment required by Contract Documents proposed by the Contractor prior to and after award of the Contract are considered requests for substitutions. Contractor must refer to the Instructions to Bidders, the General Conditions and the Special Conditions for limitations on when requests for substitution(s) are permitted on Project. The following are not considered substitutions:
 - 1.3.1.1. Revisions to Contract Documents requested by the District or Architect.
 - 1.3.1.2. Specified options of products, materials, and equipment included in Contract Documents.
- 1.3.2. Whenever in the Specifications any material, product, thing, or service is indicated or specified by grade, patent, or proprietary name, or by name of manufacturer, that Specification shall be deemed to be used for the purpose of facilitating the description

of the material, product, thing, or service, and shall be deemed to be followed by the words "or equal," except:

1.3.2.1. When designated to match other material, product, thing, or service in use on a particular public improvement either completed or in the course of completion;
or

1.3.2.2. When designated as a field test or experiment.

1.4. PRODUCT OPTIONS

1.4.1. **Products Specified by Reference Standards or by Description Only:** Any Product meeting those standards or description.

1.4.2. **Products Specified by Naming One or More Manufacturers with or without Provision for Substitution:** Products of manufacturers named and meeting specifications with substitution of Products or manufacturer only when submitted under provisions of this section.

1.5. LIMITATIONS ON SUBSTITUTIONS

1.5.1. **Requests for substitution prior to bid or after bid, shall only be permitted as indicated in and in accordance with requirements specified in the Instructions to Bidders and the Special Conditions.**

1.5.2. The Bid shall be based upon the standards of quality established by those items of equipment and/or materials which are specifically identified in the Contract Documents.

1.5.3. Burden of proof of merit of requested substitution is the responsibility of the Contractor.

1.5.4. It is the sole responsibility of Contractor to submit the proper content of any requests for substitutions. Incomplete submittals will be rejected.

1.6. REGULATORY REQUIREMENTS

1.6.1. It shall be the responsibility of Contractor to obtain all regulatory approvals required for proposed substitutions.

1.6.2. All regulatory approvals shall be obtained for proposed substitutions prior to submittal of substitution request to Architect.

1.6.3. All costs incurred by the District in obtaining regulatory approvals for proposed substitutions to include the costs of the Architect and any authority having jurisdiction over the Project shall be reimbursed to the District. Costs of these services shall be reimbursed regardless of final acceptance or rejection of substitution.

1.6.4. Substitutions of materials or work procedures which affect the health, safety and welfare of the public shall have prior approval of the Division of the State Architect (DSA) field representative.

1.7. SUBSTITUTION REPRESENTATION

- 1.7.1. In submitting a request for substitution, Contractor makes the representation that:
- 1.7.2. Contractor has investigated the proposed substitution and determined that it meets or exceeds the quality level of the specified product;
- 1.7.3. Contractor has determined that all components of the proposed substitution are identical and fully interchangeable with the product name and number specified;
- 1.7.4. Contractor will provide the same warranty or guarantee for the substitution as for the specified product;
- 1.7.5. Contractor will coordinate installation and make changes to other work which may be required for the work to be completed with no additional cost to the District;
- 1.7.6. Contractor waives claims for additional cost or time extension which may subsequently become apparent; and
- 1.7.7. Contractor will reimburse District for the cost of District's and Architect's review or redesign services associated with substitution request.

1.8. SUBMITTAL PROCEDURE

- 1.8.1. Submit six (6) copies of each request.
- 1.8.2. Submit request using District's Substitution Request Form as indicated in Contract Forms and Submittals. Substitution requests that are not on District's required form shall be returned without review.
- 1.8.3. Limit each request to one proposed substitution.
- 1.8.4. Request to include sufficient data so that direct comparison of proposed substitution can be made.
- 1.8.5. Provide complete documentation for each request. Documentation shall include the following information, as appropriate, as a minimum:
 - 1.8.5.1. Statement of cause for substitution request.
 - 1.8.5.2. Identify product by specification section and article number.
 - 1.8.5.3. Provide manufacturer's name, address, and phone number. List fabricators, suppliers, and installers as appropriate.
 - 1.8.5.4. List similar projects where proposed substitution has been used, dates of installation and names of Architect and District.
 - 1.8.5.5. List availability of maintenance services and replacement materials.
 - 1.8.5.6. Documented or confirmation of regulatory approval.

- 1.8.5.7. Product data, including drawings and descriptions of products.
- 1.8.5.8. Fabrication and installation procedures.
- 1.8.5.9. Samples of proposed substitutions.
- 1.8.5.10. Itemized comparison of significant qualities of the proposed substitution with those of the product specified. Significant qualities may include size, weight, durability, performance requirements and visual effects.
- 1.8.5.11. Coordination information, including a list of changes or modifications needed to other items of work that will become necessary to accommodate proposed substitution.
- 1.8.5.12. Statement on the substitutions effect on the Construction Schedule.
- 1.8.5.13. Cost information including a proposal of the net reduction in cost to the Contract Price if the proposed substitution is accepted.
- 1.8.5.14. Certification that the substitution is equal to or better in every respect to that required by the Contract Documents and that substitution will perform adequately in the application intended.
- 1.8.5.15. Waiver of right to additional payment or time that may subsequently become necessary because of failure of substitution to perform adequately.
- 1.8.6. Inadequate warranty, vagueness of submittal, failure to meet specified requirements, or submittal of insufficient data will be cause for rejection of substitution request.

1.9. DISTRICT'S REVIEW

- 1.9.1. The District will accept or reject proposed substitution within a reasonable amount of time.
- 1.9.2. If a request is made prior to bid opening and the District has not completed its review, Contractor shall base its bid on the product specified only.
- 1.9.3. There shall be no claim for additional time for review of proposed substitutions.
- 1.9.4. Final acceptance of a substitution submitted prior to the date established for the receipt of bids will be in the form of an addendum.

END OF DOCUMENT

DOCUMENT 01 26 00

CONTRACT MODIFICATION PROCEDURES

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Allowances;
- 1.1.5. Product Options and Substitutions; and
- 1.1.6. Project Coordination.

1.2. DESCRIPTION

- 1.2.1. This Document contains procedures to be followed by the Contractor to request changes in the Contract Time of the Contract Price.
- 1.2.2. **IF THERE IS ANY INCONSISTENCY IN THIS DOCUMENT WITH THE PROVISIONS IN THE GENERAL CONDITIONS AND THE SPECIAL CONDITIONS THAT THE CONTRACTOR SHALL COMPLY WITH RELATED TO CHANGES AND/OR REQUESTS FOR CHANGES (e.g., "Change in the Work"), THOSE PROVISIONS IN THE GENERAL CONDITIONS AND THE SPECIAL CONDITIONS SHALL TAKE PRECEDENCE.**

1.3. SUMMARY

This Document specifies administrative and procedural requirements for handling and processing Contract modifications.

1.4. CONSTRUCTION CHANGE DIRECTIVE

The District may as provided by law, by Construction Directive and without invalidating the Contract, order changes in the Work consisting of additions, deletions, or other revisions.

1.5. PRICE REQUESTS

- 1.5.1. Do not consider Price Requests to be instructions either to stop work in progress or to execute the proposed change.
- 1.5.2. Within time specified in Price Request after receipt of Price Request, submit a quotation estimating cost adjustments to the Contract Price and the Contract Time necessary to execute the change.

- 1.5.2.1. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
- 1.5.2.2. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
- 1.5.2.3. Include costs of labor and supervision directly attributable to the change.
- 1.5.2.4. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

1.6. PROPOSED CHANGE ORDERS

Contractor may propose changes by submitting a request for a change on District's Proposed Change Order form (PCO) to District.

- 1.6.1. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- 1.6.2. Comply with Contract Document requirements if the proposed change requires substitution of one product or system for product or system specified.

END OF DOCUMENT

DOCUMENT 01 26 10

REQUESTS FOR INFORMATION

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Documentation Requirements;
- 1.1.5. Electronic Data Transfer;
- 1.1.6. Submittals;
- 1.1.7. Contract Closeout and Final Cleaning;
- 1.1.8. Operation and Maintenance Data;
- 1.1.9. Warranties; and
- 1.1.10. Record Documents;

1.2. DESCRIPTION

This Document contains procedures to be followed by the Contractor to request Architect provide additional information necessary to clarify or amplify an item in the Contract Documents that Contractor thinks is not clearly shown or called for in the Drawings or Specifications or other portions of the Contract Documents, or to address issues that have arisen under field conditions.

1.3. PROCEDURES

- 1.3.1. Notification by Contractor:
 - 1.3.1.1. Submit all requirements for clarification or additional information, whether originated by the Contractor, a Subcontractor, or supplier at any tier, in writing to District as required by the Contract Documents.
 - 1.3.1.2. Number RFIs sequentially. Follow RFI number with sequential alphabetical suffix as necessary for each resubmission. For example, the first RFI would be "001." The second RFI would be "002."
 - 1.3.1.3. All RFIs shall reference all applicable Contract Document(s), including Specification section(s), detail(s), page number(s), drawing number(s), and sheet number(s), etc. Contractor shall make suggestions and interpretations of

the issue raised by each RFI. An RFI cannot modify the Contract Price, Contract Time, or the Contract Documents.

1.3.1.4. Limit each RFI to one subject.

1.3.1.5. Submit a RFI if one of the following conditions occurs:

1.3.1.5.1. Contractor discovers an unforeseen condition or circumstance that is not described in the Contract Documents.

1.3.1.5.2. Contractor discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents.

1.3.2. Contractor shall not:

1.3.2.1. Submit an RFI as a request for substitution.

1.3.2.2. Submit an RFI as a submittal.

1.3.2.3. Submit an RFI without first having thoroughly reviewed the Contract Documents.

1.3.2.4. Submit an RFI in a manner that suggests that specific portions of the Contract Documents are assumed to be excluded or by taking an isolated portion of the Contract Documents in part rather than whole.

1.3.2.5. Submit an RFI in an untimely manner without proper coordination and scheduling of Work related trades.

1.3.2.6. If Contractor submits an RFI contrary to the above, Contractor shall pay the cost of any review, which cost shall be deducted from the Contract Price.

1.3.3. Contractor shall be liable to the District for all costs incurred by the District associated with the processing, reviewing, evaluating and responding to any RFI, including without limitation, fees of the Architect and any other design consultant to the Architect or the District, that District reasonably determines:

1.3.3.1. Does not reflect adequate or competent supervision or coordination by the Contractor or any Subcontractor; or

1.3.3.2. Does not reflect the Contractor's adequate or competent knowledge of the requirements of the Work or the Contract Documents;

1.3.3.3. Requests an interpretation or decision of a matter where the information sought is equally available to the Contractor; or

1.3.3.4. Is not justified for any other reason.

1.4. RESPONSE TIME

- 1.4.1. Architect shall review RFIs and issue a response and instructions to Contractor within a reasonable time frame from the date the RFI is received and dated by the District.
- 1.4.2. Responses from the District will not change any requirement of the Contract unless so noted by the District in the response to the RFI. Should the Contractor contend that a response to an RFI causes a change to the Contract that requires a Change Order, the Contractor shall, before proceeding, give written notice to the District, indicating that the Contractor considers the District's response to the RFI to be a Change Order, as required by the Contract Documents.
- 1.4.3. Should Contractor direct its Subcontractors to proceed with the Work affected before receipt of a response from Architect, any portion of the Work which is not done in accordance with the Architect's ultimate interpretations, clarifications, instructions, or decisions is subject to removal or replacement at Contractor's sole expense and responsibility.

END OF DOCUMENT

DOCUMENT 01 31 00

COORDINATION AND PROJECT MEETINGS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS:

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any); and
- 1.1.4. Technical Specifications.

1.2. SECTION INCLUDES

- 1.2.1. Coordination Responsibilities of the Contractor.
- 1.2.2. Field Engineering Responsibilities of the Contractor.
- 1.2.3. Preconstruction Conference.
- 1.2.4. Progress Meetings.
- 1.2.5. Pre-Installation Conferences.
- 1.2.6. Post Construction Dedication.

1.3. COORDINATION RESPONSIBILITIES OF THE CONTRACTOR

- 1.3.1. Coordinate scheduling, submittals, and Work of the Specifications to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- 1.3.2. Prior to commencement of a particular type or kind of Work examine relevant information, contract documents, and subsequent data issued to the Project.
- 1.3.3. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate Work of various sections having interdependent responsibilities for installing, connecting to, and placing in service such equipment.
- 1.3.4. Closing up of holes, backfilling, and other covering up operations shall not proceed until all enclosed or covered Work and inspections have been completed. Verify before proceeding.
- 1.3.5. Coordinate space requirements and installation of mechanical and electrical Work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and

conduit as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

- 1.3.6. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- 1.3.7. In locations where several elements of mechanical and electrical Work must be sequenced and positioned with precision in order to fit into available space, prepare coordination drawings showing the actual conditions required for the installation. Prepare coordination drawings prior to purchasing, fabricating, or installing any of the elements required to be coordinated.
- 1.3.8. Closing up of walls, partitions or furred spaces, backfilling, and other covering up operations shall not proceed until all enclosed or covered Work and inspections have been completed. Verify before proceeding.
- 1.3.9. Coordinate completion and cleanup of Work of separate sections in preparation for completion and for portions of Work designated for District's occupancy.
- 1.3.10. After District occupancy of Project, coordinate access to Site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of District's activities.
- 1.3.11. Coordinate all utility company Work in accordance with the Contract Documents.
- 1.3.12. Key Personnel Names: Within fifteen (15) days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.4. FIELD ENGINEERING RESPONSIBILITIES OF THE CONTRACTOR

- 1.4.1. Contractor shall employ a Land Surveyor registered in the State of California and acceptable to the Architect.
- 1.4.2. Control datum for survey is that established by District provided survey. Contractor to locate and protect survey control and reference points.
- 1.4.3. Replace dislocated survey control points based on original survey control.
- 1.4.4. Provide field engineering services. Establish elevations, lines, and levels utilizing recognized engineering survey practices.
- 1.4.5. Upon completion of Work, submit certificate signed by the Land Surveyor that elevations and locations of Work are in conformance with Contract Documents. Record deviations on Record Drawings.

1.5. PRECONSTRUCTION CONFERENCE

- 1.5.1. Architect will schedule a conference immediately after, and in no case more than fifteen (15) days after, receipt of fully executed Contract Documents prior to Project mobilization.
- 1.5.2. Mandatory Attendance: Construction Manager, Project Engineer, Project Inspector, Architect of Record, Contractor, Contractor's Project Manager, and Contractor's Job/Project Superintendent.
- 1.5.3. Optional Attendance: Architect's consultants, and utility company representatives.
- 1.5.4. Construction Manager shall preside at conference and the Project Architect shall prepare and record minutes and distribute copies.
- 1.5.5. Agenda:
 - 1.5.5.1. Execution of Owner-Contractor Agreement.
 - 1.5.5.2. Issue Notice to Proceed.
 - 1.5.5.3. Submission of executed bonds and insurance certificates.
 - 1.5.5.4. Distribution of Contract Documents.
 - 1.5.5.5. Submission of list of Subcontractors, list of Products, Schedule of Values, and Progress Schedule.
 - 1.5.5.6. Designation of responsible personnel representing the parties.
 - 1.5.5.7. Procedures for processing Change Orders.
 - 1.5.5.8. Procedures for Request for Information.
 - 1.5.5.9. Procedures for testing and inspecting.
 - 1.5.5.10. Procedures for processing applications for payment.
 - 1.5.5.11. Procedures for Project closeout.
 - 1.5.5.12. Use of Premises.
 - 1.5.5.13. Work restrictions.
 - 1.5.5.14. District's occupancy requirements or options.
 - 1.5.5.15. Responsibility for temporary facilities and controls.
 - 1.5.5.16. Construction waste management and recycling.
 - 1.5.5.17. Parking availability.

1.5.5.18. Office, work and storage areas.

1.5.5.19. Equipment deliveries and priority.

1.5.5.20. Security.

1.5.5.21. Progress cleaning.

1.5.5.22. Review required submittals and (if applicable) LEED Certification requirements.

1.6. PROGRESS MEETINGS

1.6.1. Architect shall schedule and administer meetings throughout progress of the Work at a minimum of every week.

1.6.2. Architect will make arrangements for meetings, prepare agenda, and preside at meetings. Project Architect shall record minutes (Field Reports), and distribute copies.

1.6.3. Attendance Required: Job Superintendent, Construction Manager, Project Engineer, Project Inspector, Architect of Record, Subcontractors, and suppliers as appropriate to agenda topics for each meeting.

1.6.4. Agenda:

1.6.4.1. Review minutes of previous meetings (Field Reports).

1.6.4.2. Review of Work progress.

1.6.4.3. Field observations, problems, and decisions.

1.6.4.4. Identification of problems which impede planned progress.

1.6.4.5. Review of submittals schedule and status of submittals.

1.6.4.6. Review of off-site fabrication and delivery schedules.

1.6.4.7. Maintenance of construction schedule.

1.6.4.8. Corrective measures to regain projected schedules.

1.6.4.9. Planned progress during succeeding work period.

1.6.4.10. Coordination of projected progress.

1.6.4.11. Maintenance of quality and work standards.

1.6.4.12. Effect of proposed changes on progress schedule and coordination.

1.6.4.13. Other business relating to Work.

1.6.5. District has authority to schedule mandatory meetings other than those listed, as necessary.

1.7. PRE-INSTALLATION CONFERENCES

- 1.7.1. When required in individual specification section, Contractor shall convene a pre-installation conference prior to commencing Work of the section. Refer to individual specification section for timing requirements of conference.
- 1.7.2. Contractor shall require its Subcontractors and suppliers directly affecting, or affected by, Work of the specific section to attend.
- 1.7.3. Notify the Construction Manager, Project Engineer, Project Inspector, and Architect of Record four (4) days in advance of meeting date.
- 1.7.4. A pre-installation conference may coincide with a regularly scheduled progress meeting.
- 1.7.5. Contractor shall prepare agenda, preside at conference, record minutes, and distribute copies within two (2) days after conference to participants.
- 1.7.6. The purpose of the meeting will be to review Contract Documents, conditions of installation, preparation and installation procedures, and coordination with related Work and manufacturer's recommendations.
- 1.7.7. Pre-installation Schedule: As a minimum, Work being installed under the Contract Documents technical sections will require pre-installation conferences. Contractor shall review the technical specifications and add all additional requirements for pre-installation meetings contained in those sections.

1.8. POST CONSTRUCTION DEDICATION

- 1.8.1. Attendance Required: Project Superintendent, Contractor, Project Manager, major Subcontractors, Construction Manager, Project Engineer, Project Inspector, and Architect of Record.
- 1.8.2. Preparation prior to Dedication: Contractor and appropriate Subcontractors and suppliers shall:
- 1.8.3. Assist District in operation of mechanical devices and systems.
 - 1.8.3.1. Verify operation and adjust controls for communication systems.
 - 1.8.3.2. Assist District in operation of lighting systems.

END OF DOCUMENT

DOCUMENT 01 32 16

CONSTRUCTION SCHEDULE – NETWORK ANALYSIS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISION

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Coordination and Meetings; and
- 1.1.5. Submittals.

1.2. REFERENCES

- 1.2.1. Construction Planning and Scheduling Manual - A Manual for General Contractors and the Construction Industry, The Associated General Contractors of America (AGC).
- 1.2.2. CSI - Construction Specifications Institute MP-2-1 Master Format.
- 1.2.3. U.S. National Weather Service - Local Climatological Data.

1.3. PERFORMANCE REQUIREMENTS

- 1.3.1. Ensure adequate scheduling during construction activities so Work may be prosecuted in an orderly and expeditious manner within stipulated Contract Time.
- 1.3.2. Ensure coordination of Contractor and Subcontractors at all levels.
- 1.3.3. Ensure coordination of submittals, fabrication, delivery, erection, installation, and testing of products, materials and equipment.
- 1.3.4. Ensure on-time delivery of District furnished products, materials and equipment.
- 1.3.5. Ensure coordination of jurisdictional reviews.
- 1.3.6. Prepare applications for payment.
- 1.3.7. Monitor progress of Work.
- 1.3.8. Prepare proper requests for changes to Contract Time.
- 1.3.9. Prepare proper requests for changes to Construction Schedule.
- 1.3.10. Assist in detection of schedule delays and identification of corrective actions.

1.4. QUALITY ASSURANCE

- 1.4.1. Perform scheduling work in accordance with Construction Planning and Scheduling Manual published by the AGC.
- 1.4.2. Maintain one copy of Construction Planning and Scheduling Manual on Site.
- 1.4.3. In the event of discrepancy between the AGC publication and the Contract Documents, provisions of the Contract Documents shall govern.

1.5. QUALIFICATIONS

1.5.1. Scheduler:

- 1.5.1.1. Contractor shall retain a construction scheduler to work in enough capacity to perform all of the Contractor's requirements to prepare the Construction Schedule. The Scheduler shall plan, coordinate, execute, and monitor a cost/resource loaded CPM schedule as required for Project and have a minimum of five (5) years direct experience using Primavera Project Management.
- 1.5.1.2. Scheduler will cooperate with District and shall be available on site for monitoring, maintaining and updating schedules in a timely manner.
- 1.5.1.3. District has the right to reject the Scheduler based upon a lack of experience as required by this Document or based on lack of performance and timeliness of schedule submittals/fragnets on past projects. Contractor shall within seven (7) calendar days of District's rejection, propose another scheduler who meets the experience requirements stated above.

- 1.5.2. **Administrative Personnel:** Five (5) years minimum experience in using and monitoring schedules on comparable projects.

1.6. SUBMITTALS

- 1.6.1. Submit Short Interval Schedule at each Construction Progress Meeting.
- 1.6.2. Submit Time Adjustment Schedule within five (5) days of commencement of a claimed delay.
- 1.6.3. Submit Recovery Schedules as required for timely completion of Work or when demanded by the District.
- 1.6.4. Submit job cost reports when demanded by the District.
- 1.6.5. Submit one (1) reproducible and two (2) copies of each schedule and cost report.
- 1.6.6. Submit large format plotted schedules monthly or at the request of the District or Construction Manager.

1.7. REVIEW AND EVALUATION

- 1.7.1. Contractor shall participate in joint review of Construction Schedule and Reports with District and Architect.
- 1.7.2. Within seven (7) days of receipt of District and/or Architect's comments provide satisfactory revision to Construction Schedule or adequate justification for activities in question.
- 1.7.3. In the event that an activity or element of Work is not detected by District or Architect review, such omission or error shall be corrected by next scheduled update and shall not affect Contract Time.
- 1.7.4. Acceptance by District of corrected Construction Schedule shall be a condition precedent to making any progress payments.
- 1.7.5. Cost-loaded values of Construction Schedule shall be basis for determining progress payments.
- 1.7.6. Review and acceptance by District and Architect of Preliminary Construction Schedule or Construction Schedule does not constitute responsibility whatsoever for accuracy or feasibility of schedules nor does such acceptance expressly or impliedly warrant, acknowledge or admit reasonableness of activities, logic, duration, manpower, cost or equipment loading stated or implied on schedules.

1.8. FORMAT

- 1.8.1. Prepare diagrams and supporting mathematical analyses using Precedence Diagramming Method, under concepts and methods outlined in AGC Construction Planning and Scheduling Manual, or other method pre-approved by District.
- 1.8.2. **Listings:** Reading from left to right, in ascending order for each activity.
- 1.8.3. **Diagram Size:** 42 inches maximum height x width required.
- 1.8.4. **Scale and Spacing:** To allow for legible notations and revisions.
- 1.8.5. Illustrate order and interdependence of activities and sequence of Work.
- 1.8.6. Illustrate complete sequence of construction by activity.
- 1.8.7. Provide legend of symbols and abbreviations used.

1.9. COST AND SCHEDULE REPORTS

- 1.9.1. **Activity Analysis:** Tabulate each activity of network diagram and identify for each activity:
 - 1.9.1.1. Description.
 - 1.9.1.2. Interface with outside contractors or agencies.

- 1.9.1.3. Number.
- 1.9.1.4. Preceding and following number.
- 1.9.1.5. Duration.
- 1.9.1.6. Earliest start date.
- 1.9.1.7. Earliest finish date.
- 1.9.1.8. Actual start date.
- 1.9.1.9. Actual finish date.
- 1.9.1.10. Latest start date.
- 1.9.1.11. Latest finish date.
- 1.9.1.12. Total and free float.
- 1.9.1.13. Identification of critical path activity.
- 1.9.1.14. Monetary value keyed to Schedule of Values.
- 1.9.1.15. Manpower requirements.
- 1.9.1.16. Responsibility.
- 1.9.1.17. Percentage complete.
- 1.9.1.18. Variance positive or negative.

1.9.2. **Cost Report:** Tabulate each activity of network diagram and identify for each activity:

- 1.9.2.1. Description.
- 1.9.2.2. Number.
- 1.9.2.3. Total cost.
- 1.9.2.4. Percentage complete.
- 1.9.2.5. Value prior to current period.
- 1.9.2.6. Value this period.
- 1.9.2.7. Value to date.

1.9.3. **Required Sorts:** List activities in sorts or groups:

- 1.9.3.1. By activity number.

- 1.9.3.2. By amount of float time in order of early start.
- 1.9.3.3. By responsibility in order of earliest start date.
- 1.9.3.4. In order of latest start dates.
- 1.9.3.5. In order of latest finish dates.
- 1.9.3.6. Application for payment sorted by Schedule of Values.
- 1.9.3.7. Listing of activities on critical path.
- 1.9.4. Listing of basic input data which generates schedule.

1.10. CONSTRUCTION SCHEDULE

- 1.10.1. Contractor shall develop and submit a cost loaded preliminary schedule of construction (or Preliminary Construction Schedule) as required by this Document and the Contract Documents. It shall be submitted in computer generated network format and shall be organized by Activity Codes representing the intended sequencing of the Work, and with time scaled network diagrams of activities. The Preliminary Construction Schedule shall include activities such as mobilization, preparation of submittals, specified review periods, procurement items, fabrication items, milestones, and all detailed construction activities.
- 1.10.2. Upon District's acceptance of the Preliminary Construction Schedule, Contractor shall update the accepted Preliminary Construction Schedule until Contractor's Construction Schedule is fully developed and accepted. Since updates to the Construction Schedule are the basis for payment to Contractor, submittal and acceptance of the Construction Schedule and updates shall be a condition precedent to making of monthly payments, as indicated in the General Conditions.
- 1.10.3. Failure to submit an adequate or accurate Preliminary Construction Schedule, Construction Schedule, updates thereto or failure to submit on established dates, will be considered a breach of Contract.
- 1.10.4. Failure to include any activity shall not be an excuse for completing all Work by required Completion Date.
- 1.10.5. Activities of long intervals shall be broken into increments no longer than fourteen (14) days or a value over \$20,000.00, unless approved by the District or it is a non-construction activity for procurement and delivery.
- 1.10.6. The Construction Schedule shall comply with the following and include the following:
 - 1.10.6.1. Provide a written narrative describing Contractor's approach to mobilization, procurement, and construction during the first thirty (30) calendar days including crew sizes, equipment and material delivery, Site access, submittals, and permits.
 - 1.10.6.2. Shall designate critical path or paths.

- 1.10.6.3. Procurement activities to include mobilization, shop drawings and sample submittals.
- 1.10.6.4. Identification of key and long-lead elements and realistic delivery dates.
- 1.10.6.5. Construction activities in units of whole days limited to fourteen (14) days for each activity except non-construction activities for procurement and delivery.
- 1.10.6.6. Approximate cost and duration of each activity.
- 1.10.6.7. Shall contain seasonal weather considerations.
- 1.10.6.8. Indicate a date for Project Completion that is no later than Completion Date subject to any time extensions processed as part of a Change Order.
- 1.10.6.9. Conform to mandatory dates specified in the Contract Documents.
- 1.10.6.10. Contractor shall allow for inclement weather in the Proposed Baseline Schedule by incorporating an activity titled "Rain Day Impact Allowance" as the last activity prior to the Completion Milestone. No other activities may be concurrent with it. The duration of the Rain Day Impact Allowance activity will be in accordance with the Special Conditions and will be calculated from the Notice to Proceed until the Completion.
- 1.10.6.11. Level of detail shall correspond to complexity of work involved.
- 1.10.6.12. Indicate procurement activities, delivery, and installation of District furnished material and equipment.
- 1.10.6.13. Designate critical path or paths.
- 1.10.6.14. Subcontractor work at all levels shall be included in schedule.
- 1.10.6.15. As developed, shall show sequence and interdependence of activities required for complete performance of Work.
- 1.10.6.16. Shall be logical and show a coordinated plan of Work.
- 1.10.6.17. Show order of activities and major points of interface, including specific dates of completion.
- 1.10.6.18. Duration of activities shall be coordinated with Subcontractors and suppliers and shall be best estimate of time required.
- 1.10.6.19. Shall show description, duration and float for each activity.
- 1.10.7. **Activity.** An activity shall meet the following criteria:
 - 1.10.7.1. Any portion or element of Work, action, or reaction that is precisely described, readily identifiable, and is a function of a logical sequential process.

- 1.10.7.2. Descriptions shall be clear and concise. Beginning and end shall be readily verifiable. Starts and finishes shall be scheduled by logical restraints.
- 1.10.7.3. Responsibility shall be identified with a single performing entity.
- 1.10.7.4. Additional codes shall identify building, floor, bid opening and/or District's receipt of proposals, whichever is acceptable and CSI classification.
- 1.10.7.5. Assigned dollar value (cost-loading) of each activity shall cumulatively equal total contract amount. Mobilization, bond and insurance costs shall be separate. General requirement costs, overhead, profit, shall be prorated throughout all activities. Activity costs shall correlate with Schedule of Values.
- 1.10.7.6. Each activity shall have manpower-loading assigned.
- 1.10.7.7. Major construction equipment shall be assigned to each activity.
- 1.10.7.8. Activities labeled start, continue or completion are not allowed.
- 1.10.8. **Equipment and Materials.** For major equipment and materials show a sequence of activities including:
 - 1.10.8.1. Preparation of shop drawings and sample submissions.
 - 1.10.8.2. Review of shop drawings and samples.
 - 1.10.8.3. Finish and color selection.
 - 1.10.8.4. Fabrication and delivery.
 - 1.10.8.5. Erection or installation.
 - 1.10.8.6. Testing.
- 1.10.9. Include a minimum of fifteen (15) days prior to Completion Date for punch lists and clean up. No other activities shall be scheduled during this period.

1.11. SHORT INTERVAL SCHEDULE

- 1.11.1. The Four-Week Rolling Schedule shall be based on the most recent District Accepted Construction Schedule or Update. It shall include weekly updates to all construction, submittal, fabrication/procurement, and separate Work Contract activities. Contractor shall ensure that it accurately reflects the current progress of the Work.
- 1.11.2. Shall be fully developed horizontal bar-chart-type schedule directly derived from Construction Schedule.
- 1.11.3. Prepare schedule on sheet of sufficient width to clearly show data.
- 1.11.4. Provide continuous heavy vertical line identifying first day of week.

- 1.11.5. Provide continuous subordinate vertical line identifying each day of week.
- 1.11.6. Identify activities by same activity number and description as Construction Schedule.
- 1.11.7. Show each activity in proper sequence.
- 1.11.8. Indicate graphically sequences necessary for related activities.
- 1.11.9. Indicate activities completed or in progress for previous two (2) week period.
- 1.11.10. Indicate activities scheduled for succeeding three (3) week period.
- 1.11.11. Further detail should be added if necessary to monitor schedule or if requested by District.

1.12. REQUESTED TIME ADJUSTMENT SCHEDULE

- 1.12.1. Updated Construction Schedule shall not show a Completion Date later than the Contract Time, subject to any time extensions processed as part of a Change Order.
- 1.12.2. If an extension of time is requested, a separate schedule entitled "Requested Time Adjustment Schedule" shall be submitted to District and Architect.
- 1.12.3. Indicate requested adjustments in Contract Time which are due to changes or delays in completion of Work.
- 1.12.4. Extension request shall include forecast of Project Completion date and actual achievement of any dates listed in Contract Documents.
- 1.12.5. To the extent that any requests are pending at time of any Construction Schedule update, Time Adjustment Schedule shall also be updated.
- 1.12.6. Schedule shall be a time-scaled network analysis.
- 1.12.7. Accompany schedule with formal written time extension request and detailed impact analysis justifying extension.
- 1.12.8. Time impact analysis shall demonstrate time impact based upon date of delay, and status of construction at that time and event time computation of all affected activities. Event times shall be those as shown in latest Construction Schedule.
- 1.12.9. Activity delays shall not automatically constitute an extension of Contract Time.
- 1.12.10. Failure of Subcontractors shall not be justification for an extension of time.
- 1.12.11. Float is not for the exclusive use or benefit of any single party. Float time shall be apportioned according to needs of Project, as determined by the District.
- 1.12.12. Float suppression techniques such as preferential sequencing, special lead/lag logic restraints, extended activity durations, or imposed dates shall be apportioned according to benefit of Project.

- 1.12.13. Extensions will be granted only to extent that time adjustments to activities exceed total positive float of the critical path and extends Completion date.
- 1.12.14. District shall not have an obligation to consider any time extension request unless requirements of Contract Documents, and specifically, but not limited to these requirements, are complied with.
- 1.12.15. District shall not be responsible or liable for any construction acceleration due to failure of District to grant time extensions under Contract Documents should requested adjustments in Contract Time not substantially comply with submission and justification requirements of Contract for time extension requests.
- 1.12.16. In the event a Requested Time Adjustment Schedule and Time Impact Analysis are not submitted within ten (10) days after commencement of a delay it is mutually agreed that delay does not require a Contract Time extension.

1.13. RECOVERY SCHEDULE

- 1.13.1. When activities are behind Construction Schedule a supplementary Recovery Schedule shall be submitted.
- 1.13.2. Contractor shall prepare and submit to the District a Recovery Schedule whenever activities are behind Construction Schedule or at any time requested by the District, at no cost to the District.
- 1.13.3. Form and detail shall be sufficient to explain and display how activities will be rescheduled to regain compliance with Construction Schedule and to complete the Work by the Completion Date.
- 1.13.4. Maximum duration shall be one (1) month and shall coincide with payment period.
- 1.13.5. Ten (10) days prior to expiration of Recovery Schedule, Contractor shall have to show verification to determine if activities have regained compliance with Construction Schedule. Based upon this verification the following will occur:
 - 1.13.5.1. Supplemental Recovery Schedule will be submitted to address subsequent payment period.
 - 1.13.5.2. Construction Schedule will be resumed.

1.14. UPDATING SCHEDULES

- 1.14.1. Review and update schedules at least ten (10) days prior to submitting an Application for Payment.
- 1.14.2. Maintain schedules to record actual prosecution and progress.
- 1.14.3. Approved Change Orders which affect schedules shall be identified as separate new activities.
- 1.14.4. Change Orders of less than \$5,000.00 value or less than three (3) days duration need not be shown unless critical path is affected.

- 1.14.5. No other revisions shall be made to schedules unless authorized by District.
- 1.14.6. **Schedule Narrative Report:** Contractor shall include a written report to explain the Monthly Schedule Update. The narrative shall, at a minimum, include the following headings with appropriate discussions of each topic:
 - 1.14.6.1. Activities or portions of activities completed during previous reporting period.
 - 1.14.6.2. Actual start dates for activities currently in progress.
 - 1.14.6.3. Deviations from critical path in days ahead or behind.
 - 1.14.6.4. List of major construction equipment used during reporting period and any equipment idle.
 - 1.14.6.5. Number of personnel by trade engaged on Work during reporting period.
 - 1.14.6.6. Progress analysis describing problem areas.
 - 1.14.6.7. Current and anticipated delay factors and their impact.
 - 1.14.6.8. Proposed corrective actions and logic revisions for Recovery Schedule.
 - 1.14.6.9. Proposed modifications, additions, deletions and changes in logic of Construction Schedule.
 - 1.14.6.10. In updating the Schedule, Contractor shall not modify Activity ID numbers, schedule calculation rules/criteria, or the Activity Coding Structure required.
- 1.14.7. Schedule update will form basis upon which progress payments will be made.
- 1.14.8. District will not be obligated to review or process Application for Payment until the Construction Schedule and Schedule Narrative Report have been submitted.

1.15. DISTRIBUTION

- 1.15.1. Following joint review and acceptance of updated schedules distribute copies to District, Architect, and all other concerned parties.
- 1.15.2. Instruct recipients to promptly report in writing any problem anticipated by projections shown in schedules.

2. PRODUCTS

2.1. SCHEDULING SOFTWARE

Contractor shall utilize District-approved software and shall employ the Critical Path Method (CPM) in the development and maintenance of the Construction Schedule. The scheduling software shall be capable of being resource loaded with manpower, costs and materials. It shall also be capable of generating time-scaled logic diagrams, resource histograms and profiles, bar charts, layouts and reports with any and/or all activity detail.

2.2. ELECTRONIC DATA

Provide compact disk(s) that contain a back-up of the Proposed Baseline Schedule data on it and in a format approved by the District.

END OF DOCUMENT

DOCUMENT 01 33 00

SUBMITTALS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISION

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions;
- 1.1.3. Instructions to Bidders;
- 1.1.4. Summary of Work;
- 1.1.5. Contract Forms and Submittals;
- 1.1.6. Product Options and Substitutions;
- 1.1.7. Requests for Information;
- 1.1.8. Contract Closeout and Final Cleaning;
- 1.1.9. Operation and Maintenance Data;
- 1.1.10. Warranties;
- 1.1.11. Record Documents;
- 1.1.12. Demonstration and Training;

1.2. DOCUMENT INCLUDES

- 1.2.1. Submittal procedures – Use of Primavera.
- 1.2.2. Shop drawings.
- 1.2.3. PCM (or other pre-approved program) Electronic Submittal Process
- 1.2.4. Product data.
- 1.2.5. Samples.
- 1.2.6. Manufacturers' Instructions.
- 1.2.7. Manufacturers' Certificates.
- 1.2.8. Mock-Up.

- 1.2.9. Deferred approval requirements.

1.3. SUBMITTAL PROCEDURES – USE OF PRIMAVERA OR ANOTHER PRE-APPROVED PROGRAM

Contractor shall utilize District-approved software for the submittal process.

- 1.3.1. Contractor shall transmit each submittal in conformance with requirements of this Document. For each submittal, Contractor shall:
 - 1.3.1.1. Sequentially number the transmittal forms. Resubmitted submittals must have the original number with an alphabetic suffix;
 - 1.3.1.2. Identify Project and Architect's project number, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate;
 - 1.3.1.3. Apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the Work and Contract Documents. Submittals without Contractor's stamp and signature will be returned without review.
- 1.3.2. Coordinate preparation and processing of submittals with performance of Work. Transmit each submittal sufficiently in advance of performance of Work to avoid delay.
 - 1.3.2.1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 1.3.2.2. Coordinate transmittal of different types of submittals for related parts of Work so processing will not be delayed because of the need to review submittals concurrently for coordination.
 - 1.3.2.3. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- 1.3.3. Comply with Contract Documents for list of submittals and time requirements for scheduled performance of Work.
- 1.3.4. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.
- 1.3.5. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- 1.3.6. Provide space for Contractor and Architect review stamps.
- 1.3.7. Revise and resubmit submittals as required, identify all changes made since previous submittal.
- 1.3.8. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- 1.3.9. Submittals not requested will not be recognized or processed. Submittals not requested

will be returned without review.

1.4. SHOP DRAWINGS

- 1.4.1. Prepare Project-specific information, drawn accurately to scale. Do not reproduce Contract Documents or copy standard information as the basis of shop drawings. Standard information prepared without specific reference to the Project is not a shop drawing.
- 1.4.2. Do not use or allow others to use Shop Drawings which have been submitted and have been rejected.
- 1.4.3. Preparation: Fully illustrate requirements in Contract Documents. Include the following information, as applicable:
 - 1.4.3.1. Dimensions.
 - 1.4.3.2. Identification of products.
 - 1.4.3.3. Fabrication and installation drawings.
 - 1.4.3.4. Roughing-in and setting diagrams.
 - 1.4.3.5. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - 1.4.3.6. Shop work manufacturing instructions.
 - 1.4.3.7. Templates and patterns.
 - 1.4.3.8. Schedules.
 - 1.4.3.9. Design calculations.
 - 1.4.3.10. Compliance with specified standards.
 - 1.4.3.11. Notation of coordination requirements.
 - 1.4.3.12. Notation of dimensions established by field measurements.
 - 1.4.3.13. Relationship to adjoining construction clearly indicated.
 - 1.4.3.14. Seal and signature of professional engineer if specified.
 - 1.4.3.15. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 - 1.4.3.16. All deviations from the Contract Documents, clearly indicated.
 - 1.4.3.17. Copy of letter indicating acceptance of deviations indicated on the submittal.
- 1.4.4. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop

Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 40 inches (750 by 1000 mm).

- 1.4.5. Do not use Shop Drawings without an appropriate final stamp from the Contractor and District indicating action taken in connection with construction.
- 1.4.6. Deviations from Contract Documents require specific written acceptance by the District of the noted deviation and clear indication on the submittal.

1.5. ELECTRONIC SUBMITTAL PROCESS

1.5.1. Submittal Procedure for Large Format Shop Drawings.

- 1.5.1.1. Contractor shall provide six (6) paper copies of the large format Shop Drawings directly to the District and the Construction Manager (CM) and Contractor will upload/post an electronic transmittal (with a detailed description of the submittal including the subject, specification number and number of drawings) on PCM (or other pre-approved program).
- 1.5.1.2. Contractor shall verify that the Schedule of Submittals and all submittal log(s) on PCM (or other pre-approved program) are accurate and up to date.
- 1.5.1.3. The District and Architect will review and markup each Submittal and provide changes to Contractor for Contractor's incorporation into the Submittal.
- 1.5.1.4. This process will continue until the Contractor has provided a Submittal that is acceptable to the District and the Architect.
- 1.5.1.5. Once a Submittal is accepted, the District will provide a final accepted Submittal to the Contractor and the Contractor will closeout that one Submittal.
- 1.5.1.6. Contractor shall send one (1) copy of the completed record submittal of the large format documents to a vendor (Ford Graphics is suggested) for scanning and posting on PCM (or other pre-approved program).

1.5.2. Product Data, Calculations and Small Format Drawings

- 1.5.2.1. Contractor shall upload/post one (1) electronic copy (from manufacturer's website or pre-scanned) of the product literature, data, calculations, and/or small format shop drawings to PCM (or other pre-approved program) with a Transmittal (with a detailed description of the submittal) directly to the CM.
- 1.5.2.2. The District and Architect will review and markup each Submittal and provide changes to Contractor for Contractor's incorporation into the Submittal.
- 1.5.2.3. This process will continue until the Contractor has provided a Submittal that is acceptable to the District and the Architect.
- 1.5.2.4. Once a Submittal is accepted, the District will provide a final accepted Submittal to the Contractor and the Contractor will closeout that one Submittal.

- 1.5.2.5. Contractor shall send one (1) copy of the completed record submittal of the large format documents to a vendor (Ford Graphics is suggested) for scanning and posting on PCM (or other pre-approved program).

1.5.3. Sample Submittal Procedure – (Product / Assembly Samples)

- 1.5.3.1. Contractor shall provide four (4) physical samples directly to the District and the CM and Contractor will upload/post an electronic transmittal (with a detailed description of the submittal including the subject, specification number and number of drawings) on PCM (or other pre-approved program).
- 1.5.3.2. The District and Architect will review and markup each Submittal and provide changes to Contractor for Contractor's incorporation into the Submittal.
- 1.5.3.3. This process will continue until the Contractor has provided a Submittal that is acceptable to the District and the Architect.
- 1.5.3.4. Once a Submittal is accepted, the District will provide a final accepted Submittal to the Contractor and the Contractor will closeout that one Submittal.
- 1.5.3.5. Contractor shall send one (1) copy of the completed record submittal of the large format documents to a vendor (Ford Graphics is suggested) for scanning and posting on PCM (or other pre-approved program).

1.6. PRODUCT DATA

- 1.6.1. In addition to the above requirements, mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- 1.6.2. After review, distribute in accordance with the above provisions and provide copies for Record Documents described in the Contract Documents.

1.7. SAMPLES

- 1.7.1. In addition to the above requirements, submit samples to illustrate functional and aesthetic characteristics of the Product in accordance with this Document, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- 1.7.2. Where specific colors or patterns are not indicated, provide materials and products specified in the full range of color, texture and pattern for selection by District. Range shall include standard stocked color/texture/pattern, standard color/texture/pattern not stocked, but available from manufacturer, and special color/ texture/pattern available from manufacturer as advertised in product data and brochures. Unless otherwise indicated in individual specification sections, District may select from any range at no additional cost to District.
- 1.7.3. Include identification on each sample, with full Project information.
- 1.7.4. Submit the number of samples that Contractor requires, plus one that will be retained

by Architect and one by District.

- 1.7.5. Reviewed samples which may be used in the Work are indicated in individual specification Sections.

1.8. MANUFACTURERS' INSTRUCTIONS

- 1.8.1. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.
- 1.8.2. Identify conflicts between manufacturers' instructions and Contract Documents.

1.9. MANUFACTURERS' CERTIFICATES

- 1.9.1. When specified in individual specification Sections, submit manufacturers' certificates to Architect for review, in quantities specified for Product Data.
- 1.9.2. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference date, affidavits, and certifications as appropriate.
- 1.9.3. Certificates may be recent or previous test results on material or Product, but must be acceptable to District.

1.10. MOCK-UP

- 1.10.1. Where indicated, provide mock-ups as required. Mock-ups shall be prepared per the specifications and shall accurately and reasonably represent the quality of construction the Contractor will provide. If the mock-up or portions thereof do not adequately represent the quality of the work specified, the Contractor shall modify the mock-up as needed.
- 1.10.2. Once completed to the District's satisfaction, the mock-up shall serve as the standard of quality for the work.
- 1.10.3. All mock-ups, at District's option, shall remain the property of the District. If not required by the District, Contractor shall remove and dispose of the mock-up.
- 1.10.4. Where indicated, on-site mock-ups, if accepted, may be integrated into the Work.

1.11. ARCHITECT'S REVIEW OF SUBMITTALS

- 1.11.1. Submittals will be reviewed and stamped by the Architect "No exceptions taken," "Submit specified item" or "Make corrections noted" to indicate full or conditioned approval or "Revise and resubmit" or "Rejected" to indicate disapproval. Terms are defined as follows:
 - 1.11.1.1. No Exceptions Taken: Accepted subject to its compatibility with future submittals and additional partial submittals for portions of the work not covered in this submittal. Does not constitute approval or deletion of specified or required items not shown in the partial submittal.

- 1.11.1.2. Submit specified item: Submit to the Architect the items indicated for review.
- 1.11.1.3. Correct as noted: Same as 1., except that minor corrections as noted shall be made by the Contractor. No resubmittal required.
- 1.11.1.4. Revise and resubmit: Rejected because of major inconsistencies or errors which shall be resolved or corrected by the Contractor prior to subsequent review by the Architect.
- 1.11.1.5. Rejected: Submitted material does not conform to plans and specifications in major respect. For example, wrong size, model, capacity or material. Resubmit.
- 1.11.1.6. Receipt Acknowledged. Received, recorded and distributed without further action.
- 1.11.2. Submittals reviewed by the Architect which have been stamped shall be deemed to have the following language affixed and made a part thereof, regardless of the initial or subsequent readability of the actual stamp.
 - 1.11.2.1. Corrections or comments made on submittals during this review do not relieve the contractor from compliance with the requirements of the drawings and specifications. This check is for review of general conformance with the design concept of the project and general compliance with information given in the Contract Documents. The contractor is responsible for confirming and correlating all quantities and dimensions, selection of fabrication processes and techniques of construction, coordinating the work of the trades; and performing the work in a safe and satisfactory manner.
- 1.11.3. Architect's review of submittals shall be completed within ten working days of the date of submission. Any requests by Architect for additional time shall not be unreasonably withheld.
- 1.11.4. Architect's review of submittals has, as a primary objective, to assist in the completion of the project on time and in conformance with the Contract requirements by permitting review of material and fabricated items prior to ordering. Architect's review of submittals is based only on the data presented and extends only to conformance with general design intent and information contained in the Contract Documents.
- 1.11.5. Architect's approval of submittals does not constitute final acceptance or unqualified approval of items or work proposed or put in place, nor does it constitute acceptance of responsibility for the accuracy, coordination or completeness of submittals. Architect's approval of submittals does not relieve the Contractor from the responsibility for errors, omissions, or compliance with all the requirements of the Contract Documents.
- 1.11.6. Reimbursement of the Architect's costs for review:

1.11.6.1. Architect will record all time and expenses incurred to review submittals requiring more than two reviews.

1.11.6.2. Contractor shall reimburse the District through deduction from amounts due the Contractor upon receipt of the Architect's billing and that of the Architect's consultants at standard billing rates for all time and expenses incurred in unanticipated reviews.

1.11.7. Architect's review of submittals does not change the Contract in any manner.

1.12. RESUBMITTAL

1.12.1. Make all corrections or revisions required by reviewer's comments at Contractor's expense and resubmit as initially specified above. No additional costs will be authorized for corrections or revisions.

1.12.2. Product data and shop drawings:

1.12.2.1. Revise initial drawings or data and resubmit as initially specified.

1.12.2.2. Indicate changes which have been made other than those requested by reviewer.

1.12.3. Submit new samples as initially specified.

1.13. DISTRIBUTION

1.13.1. Distribute only submittals with Architect/Engineer (and DSA as applicable) stamps of review. Contractor is responsible for coordination of submittals and comments following review. Contractor to provide all additional reproduction costs for copies required by the Contractor at its expense. No additional costs will be authorized for Contractor costs pertaining to submittals.

1.14. DEFERRED APPROVAL REQUIREMENTS

1.14.1. Installation of deferred approval items shall not be started until detailed plans, specifications, and engineering calculations have been accepted and signed by the Architect or Engineer in general responsible charge of design and signed by a California registered Architect or professional engineer who has been delegated responsibility covering the work shown on a particular plan or specification and approved by the agency having authority (e.g., State Fire Marshall, Division of the State Architect, gas company, electrical utility company, water district, etc.). Deferred approval items for this Project are as indicated in the Summary of Work.

1.14.2. Unless otherwise indicated in the Contract Documents or if District provides written approval of a longer time period, Contractor shall submit all deferred approval items for approval within thirty (30) days of the notice to proceed with the Construction Phase.

1.14.3. Deferred approval drawings and specifications become part of the approved documents for the Project when they are submitted to and approved by DSA.

1.14.4. Submit material using electronic submittal process as defined above.

- 1.14.5. Identify and specify all supports, fasteners, spacing, penetrations, etc., for each of the deferred approval items, including calculations for each and all fasteners.
- 1.14.6. Submit documents to Architect for review prior to forwarding to DSA.
- 1.14.7. Documents shall bear the stamp and signature of the Structural, Mechanical, or Electrical Engineer licensed in the State of California who is responsible for the work shown on the documents.
- 1.14.8. Architect and its subconsultants will review the documents only for conformance with design concept shown on the documents. The Architect will then forward the Submittal to agency having authority for approval.
- 1.14.9. Contractor shall respond to review comments made by DSA and revise and resubmit submittal to the Architect for re-submittal to DSA.
- 1.14.10. Contractor is notified that significant lead time is required for deferred approval review by DSA and shall schedule work accordingly. No extension of Contract Time will be allowed for delays incurred by deferred approval review. The Architect is not responsible for DSA delays in deferred approval review.

END OF DOCUMENT

DOCUMENT 01 35 45

SPECIAL ENVIRONMENTAL REQUIREMENTS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISION

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Materials and Equipment; and
- 1.1.5. General Commissioning Requirements.

1.2. SUMMARY

- 1.2.1. **Special Environmental Requirements.** Work includes special environmental, sustainable, and “green” building practices related to energy conservation and efficiency, indoor air quality, and resource efficiency, including the following:

- 1.2.1.1. Special Requirements:

- 1.2.1.1.1. Require practices to ensure healthy indoor air quality.
 - 1.2.1.1.2. Maximize use of durable Products.
 - 1.2.1.1.3. Maximize use of Products easy to maintain, repair, and that can be cleaned using non-toxic substances.
 - 1.2.1.1.4. Maximize recycled content in materials, Products, and systems.
 - 1.2.1.1.5. Require use of wood that is certified sustainably harvested by the Forest Stewardship Council (FSC).
 - 1.2.1.1.6. Maximize use of reusable and recyclable packaging.
 - 1.2.1.1.7. Maximize use of Products with low embodied energy (production, manufacturing, and transportation).
- 1.2.1.2. is required to comply with sustainable building practices during construction and when considering materials for substitutions.

1.3. DESIGN REQUIREMENTS

- 1.3.1. **General.** District has established general environmental goals for design and construction of Project; Contractor, subcontractors, suppliers, and manufacturers are encouraged to participate where possible to achieve District's environmental goals.
 - 1.3.1.1. Environmental goals should be achieved in manner that ultimately provides safe and healthy environment for building occupants with minimal impact on local, regional and global environment.
 - 1.3.1.2. Contract Documents are not intended to limit alternative means of achieving environmental goals.
 - 1.3.1.2.1. Suggestions from Contractor for implementing goals are encouraged.
- 1.3.2. **Environmental Goals.**
 - 1.3.2.1. Refer to Specifications for more detailed construction requirements related to specific materials and systems.
 - 1.3.2.1.1. **Energy Efficiency (Operations through Project).** Materials and systems are intended to maximize energy efficiency for operation of Project through service life.
 - 1.3.2.1.2. **Indoor Environmental and Air Quality.** Materials are selected and processes specified, such as preconditioning and temporary ventilation, to maximize healthy indoor air quality. Cleaning, surface coating, and renewal or replacement of interior materials should be feasible with lowest practical use of toxic, irritating, or odorous compounds. Ventilation system design, construction, and commissioning ensure adequate outside air supply under all anticipated conditions of use. Documentation of system design assumptions is included in Project Manual to enable District to use and modify the system as required to provide continued assurance of indoor air quality. Additionally, materials are selected to sustain healthy indoor environmental qualities.
 - 1.3.2.1.3. **Resource Efficiency (Project Construction):** Materials and systems are to maximize environmentally benign construction techniques, including construction waste recycling, reusable delivery packaging, and reusability of selected materials.
- 1.3.3. **Energy Conservation.** Maximize energy conservation strategies in order to reduce life-cycle energy requirements.
 - 1.3.3.1. Reduce undesirable heat gain and heat loss through exterior envelope.
 - 1.3.3.2. Use daylight as the primary lighting source in classrooms and supplement with integrated and energy-efficient electrical lighting systems.
 - 1.3.3.3. Choose equipment with high-end energy performance characteristics, including lighting, HVAC systems, appliances, and office equipment.

1.3.3.4. Where appropriate, use thermal storage strategies such as thermal mass of building or ground to minimize total energy consumption.

1.3.3.5. Design mechanical systems for efficient operation throughout the typical operating range, from minimum to peak load.

1.3.4. **Sustainable Site Planning and Landscape.**

1.3.4.1. Maximize erosion and sedimentation control.

1.3.4.2. Minimize Site disturbance.

1.3.4.3. Maximize planted areas.

1.3.4.4. Reduce heat islands.

1.3.4.5. Where possible, reduce or eliminate light pollution from site lighting.

1.3.4.6. Reduce or eliminate use of pesticides.

1.3.4.7. Rely on indigenous, dry or xeriscape planting. Maintain existing planting on Site to reduce costs.

1.3.4.8. Implement seasonal plant and soil maintenance schedule to maintain healthy soil and landscaping.

1.3.4.9. Maximize use of storm water runoff.

1.3.4.10. Reduce water use with water efficient irrigation systems and local vegetation.

1.3.5. **Durable Materials.**

1.3.5.1. Select materials with longest useful service life.

1.3.5.2. Select materials that deteriorate minimally under installed conditions, exposures, and uses.

1.3.5.3. Select materials with surfaces that require minimal or no refinishing or resurfacing.

1.3.5.4. Select materials with protective coating requirements that do not involve frequent application of toxic or odorous components for materials that require surface renewal or protection.

1.3.5.5. Select materials that can be re-used after their service life in this building.

1.3.5.6. Select materials that can be recycled at the end of their useful lives for materials that cannot be re-used.

1.3.6. **Resource Efficient Materials.** Use resource efficient materials; consider energy use over life cycle of material including harvesting, mining, manufacturing, transport, installation, use, operations, recycling and disposal.

- 1.3.6.1. Where possible and allowable, re-use existing Project materials to extent feasible within design concept expressed in Contract Documents.
- 1.3.6.2. Select materials that efficiently use resources such as energy, water, and component materials.
- 1.3.6.3. Use construction practices such as material reduction and dimensional planning that maximize efficient use of resources and materials.
- 1.3.6.4. Provide materials that utilize recycled content to maximum degree possible without being detrimental to product performance or indoor air quality.
- 1.3.6.5. Where possible and feasible, provide for non-destructive removal and re-use of materials after their service life in this building.
- 1.3.6.6. Select materials that use less embodied energy to manufacture.
 - 1.3.6.6.1. Exceptions might include materials that result in net energy conservation during their useful life in building and building's life cycle.
- 1.3.6.7. Select materials that conserve energy during building operations.
- 1.3.6.8. Where possible, select materials harvested and manufactured regionally, within a 500-mile radius of the Project Site.

1.3.7. **Scarce, Irreplaceable, and Endangered Resources.**

- 1.3.7.1. Select materials from abundant resources.
 - 1.3.7.1.1. For natural resources, determine abundance based on ratio of removal rate from existing stocks to natural replacement/renewal rate, where this information is available.
 - 1.3.7.1.2. For mineral resources, determine abundance based on ratio of removal rate from terrestrial storage minus amount re-entering commerce through recycling or resource recovery compared to total in terrestrial storage, where this information is available.
- 1.3.7.2. Select renewable materials, and materials which can be replenished.
- 1.3.7.3. Select materials that create minimal or no damage to natural habitats and natural environment.
- 1.3.7.4. Select materials that can be easily refinished, repaired or refurbished to extend their useful life.

- 1.3.8. **Pollution.** Select materials that generate least amount of pollution during mining, manufacturing, transport, installation, use, and disposal.

- 1.3.8.1. Avoid materials that emit greenhouse gases.
- 1.3.8.2. Avoid materials that require energy intensive extraction, manufacturing, processing, transport, installation, maintenance, or removal.
- 1.3.8.3. Avoid materials that contain ozone-depleting chemicals (e.g., CFCs or HCFCs).
- 1.3.8.4. Avoid materials that emit potentially harmful volatile organic chemicals (VOCs).
- 1.3.8.5. Employ construction practices that minimize dust production and combustion by-products.
- 1.3.8.6. Avoid materials that can leach harmful chemicals into ground water; do not allow potentially harmful chemicals to enter sewers or storm drains.
- 1.3.8.7. Protect soil against erosion and topsoil depletion.
- 1.3.8.8. Minimize noise generation during construction; screen mechanical equipment to block noise.
- 1.3.8.9. Select materials that can be reused or recycled and materials with significant percentage of recycled content; conform with or exceed specified Project recycled content percentages for individual materials; avoid materials difficult to recycle.
- 1.3.8.10. Protect natural habitats; restore natural habitats where feasible within scope of Project.

1.3.9. **Wood Products.**

- 1.3.9.1. Use woods from Forest Stewardship Council (FSC) accredited certified sustainably harvested sources and verify that the material itself is FSC-certified.
- 1.3.9.2. Composite wood products with high-recycled content, which meet the indoor air quality data requirements, are acceptable.

1.3.10. **Water Efficiency.**

- 1.3.10.1. Reduce the use of municipally supplied potable water.
- 1.3.10.2. Reduce dependence on municipal storm water system for plumbing fixtures and irrigation. Eliminate irrigation or use micro-irrigation. Use no moisture sensors or clock timers on irrigation systems.
- 1.3.10.3. Maintain natural aquifer conditions.
- 1.3.10.4. Consider roofwater or groundwater collection system.
- 1.3.10.5. Consider graywater collection system for irrigation systems.
- 1.3.10.6. Commission irrigation, graywater, roofwater collection systems. Provide measurement and verification for these systems. Train maintenance staff on performance of all water collection and distribution systems.

1.3.11. Resource Efficient Product Data.

1.3.11.1. Environmental Issues Data: Submit following information, including manufacturer's certifications, verifying information, and test data, where Specifications sections require data relating to environmental issues including but not limited to:

- 1.3.11.1.1. Project Recyclability. Submit information to assist District and Contractor in recycling materials involved in shipping, handling, and delivery, and for temporary materials necessary for installation of products.
- 1.3.11.1.2. Recycled Content. Submit information regarding product post-industrial recycled and post-consumer recycled content.
 - 1.3.11.1.2.1. Use the "Recycled Content Certification Form", attached as Appendix A to this Section, signed by a corporate office holder (i.e., Chairman of the Board, President, Vice President, Secretary, or similar position of authority).
- 1.3.11.1.3. Product Recyclability. Submit information regarding product and product's component's recyclability including potential sources accepting recyclable materials.
- 1.3.11.1.4. Provide certification for all wood products provided by a Forest Stewardship Council (FSC) accredited certifier.
- 1.3.11.1.5. Provide final certification of well-managed forest of origin to provide final documentation of FSC-certified sustainably harvested status: Acceptable wood "certified sustainably harvested" certifications shall include:
 - 1.3.11.1.5.1. Wood suppliers' certificate issued by one of the Forest Stewardship Council-accredited certifying agencies, such as Smart wood (800-434-5491) or Forest Conservation Program (510-832-1415);
 - 1.3.11.1.5.2. Suppliers' invoice detailing the quantities of certified wood products for project; and
 - 1.3.11.1.5.3. Letter from a certifying agency corroborating that the products on the wood supplier's invoice originate from FSC-certified well-managed forests.

1.3.12. Indoor Air Quality (IAQ) Data.

1.3.12.1. Environmental Issues. Submit emission test data produced by acceptable testing laboratory listed in Quality Assurance Article for materials as required in each specific Specification section.

- 1.3.12.1.1. Laboratory reports shall contain emissions test data on VOCs including total VOCs (TVOC), specific individual VOCs,

formaldehyde and other aldehydes as described in this Specification Section.

- 1.3.12.1.2. In special cases it may be necessary to identify other specific chemicals for listing based on known quantity present or on known odor, irritation or toxicity.
- 1.3.12.1.3. Identify all VOCs emitted by each material as required in these Specifications.
- 1.3.12.1.4. Specific test conditions and requirements are set forth in this Section. For required tests, submit documentation of sample acquisition, handling, and test specimen preparation, as well as test conditions, methods, and procedures. The tests consist of a ten (10) day conditioning period followed by a 96-hour test period.
 - 1.3.12.1.4.1. Samples collected during the test period at 24, 48, and 96 hours shall be analyzed for TVOC and formaldehyde.
 - 1.3.12.1.4.2. VOC samples collected at 96 hours shall be identified and quantified for all compounds that are Chemicals of Concern as indicated herein.

1.3.12.2. Cleaning and Maintenance Products. Provide data on manufacturers' recommended maintenance, cleaning, refinishing and disposal procedures for materials and products. These procedures are for final Contractor cleaning of the Project prior to Completion and for provided materials and products as required by the specific specification sections.

- 1.3.12.2.1. Where chemical products are recommended for these procedures, provide documentation to indicate that no component present in the cleaning product at more than one percent (1%) of the total mass of the cleaning product is a carcinogen or reproductive toxicant as defined in the lists in this specification section.
- 1.3.12.2.2. For purposes of reporting, identification of product VOC contents shall not be limited to those regulated under Clean Air Act (CAA) but shall also include compounds exempted from the CAA definition and listing of VOCs.
- 1.3.12.2.3. California EPA and local air district definitions of VOCs based on CAA are not sufficient as they exempt compounds based on non-reactivity for outdoor air pollution control but still important for indoor air quality.
- 1.3.12.2.4. Avoid cleaning products containing alpha-pinene, d-limonene or other unsaturated carbon double bond alkenes due to chemical reactions with ozone to form aldehydes, acidic aerosols, and ultra-fine particulate matter in indoor air. DGS has published specifications for Environmentally Preferable

Janitorial Chemicals and a list of cleaning/maintenance products meeting these specifications. Both are available on the internet.

1.3.13. Certificates.

1.3.13.1. Environmental Issues Certifications.

- 1.3.13.1.1. Submit documentation certifying accuracy of post-industrial and post-consumer recycled content, and recyclability.
- 1.3.13.1.2. Prior to Completion, submit certificate signed by corporate office holder (i.e., Chairman of the Board, President, Vice President, Secretary, or similar position of authority) of Contractor, subcontractor, supplier, vendor, installer or manufacturer, provided they are primarily responsible for manufacture of product, indicating:
 - 1.3.13.1.2.1. Post-industrial and post-consumer recycled content of materials installed are same as those required by Project requirements;
 - 1.3.13.1.2.2. Product recyclability of materials installed is the same as those required by Project requirements; and
 - 1.3.13.1.2.3. Indoor air quality requirements. Certification shall state products and materials provided are essentially same and contain essentially same components as products and materials tested.
- 1.3.13.1.3. Comply with requirements specified in Document 01 77 00 – Closeout Procedures.

1.3.14. Closeout Submittals. Submit data relating to environmental issues.

1.3.14.1. Submit environmental product certifications, in two (2) forms:

- 1.3.14.1.1. Two (2) CD-ROMs, two (2) thumb drives, or electronic transfer organized by CSI 16 Division Format.
- 1.3.14.1.2. Four (4) three-ring binders organized by CSI 16 Division Format with Table of Contents and with dividers for each division.

1.4. QUALITY ASSURANCE

1.4.1. Environmental Project Management and Coordination. Contractor to identify one person on Contractor's staff to be responsible for environmental issues compliance and coordination.

- 1.4.1.1. Experience. Environmental project manager to have experience relating to sustainable building construction.

1.4.1.2. Responsibilities. Carefully review Contract Documents for environmental issues, coordinate work of trades, subcontractors, and suppliers; instruct workers relating to environmental issues; and oversee Project Environmental Goals.

1.4.1.3. **Meetings.** Discuss Environmental Goals at following meetings:

1.4.1.3.1. Pre-construction meeting.

1.4.1.3.2. Pre-installation meetings.

1.4.1.3.3. Regularly scheduled job-site meetings.

1.4.1.3.4. Special sustainability issues meetings.

1.4.2. **Environmental Issues Criteria:**

1.4.2.1.1. Comply with requirements listed in various Specification sections.

1.4.3. **Acceptable Indoor Air Emissions Testing Laboratories.**

1.4.3.1. **Berkeley Analytical Associates.** 815 Harbour Way South, Suite 6, Richmond, California 94804; telephone 510.236.2325; fax 510.236.2335; e-mail info@berkeleyanalytical.com.

1.4.3.2. **Air Quality Sciences, Inc.** 2211 New Market Parkway, Atlanta, Georgia 30067; telephone 770.933.0638; fax 770.933.0641; e-mail info@aqgs.com.

1.4.3.3. **Other Laboratories.**

1.4.3.3.1. Selection of testing laboratories shall include assessment of prior experience in conducting indoor source emissions tests.

1.4.3.3.2. Many laboratories participate in and are certified by American Industrial Hygiene Association laboratory accreditation program; <http://www.aiha.org/>.

1.4.3.3.2.1. These laboratories are accredited to do analysis for hazards at levels of concern for industrial workplaces and not necessarily accredited, organized, or able to perform analysis for chemicals and particulate matter at concentrations of concern for indoor air.

1.4.3.3.3. The proposed laboratory shall be an independent company or organization not related to manufacturer of product to be tested.

1.4.3.3.4. Submit documentation on proposed laboratory for review and approval by District.

1.4.4. **Indoor Air Emissions Tests:**

- 1.4.4.1. Provide environmental chamber test data from tests based on most recent ASTM Standard. (Refer to ASTM, Annual Book of Standards; <http://www.astm.org>.)
- 1.4.4.2. Tests shall be conducted according to guidance contained in ASTM Standard D5116-17 on material test specimens pre-conditioned in clean air prior to testing.
- 1.4.4.2.1. Review test specimen collection, documentation, collection, preparation and shipping procedures with testing laboratory prior to preparing and shipping sample.
- 1.4.4.2.2. Test specimens shall be packaged in the normal manner at the factory and shipped directly to testing laboratory by the manufacturer. For materials that are not packaged in convenient consumer units, alternate procedures to preserve the chemical integrity of the specimen are required. Obtain test laboratory procedure sheet covering the handling and shipping of materials. If such information is not provided by the laboratory, then wrap the specimen in a manner that will eliminate direct contact with air or packaging materials other than an inert air barrier such as foil or laboratory grade plastic sheet wrapping material.
- 1.4.4.2.3. **Conditioning.** Condition all test specimens for ten (10) days in clean air. Clean air should be free from the Chemicals of Concern. Hold in clean vessels approximately the size of the test chambers and ventilated at the same air flow rate to be used in the test period. Suspend or place specimens on wire racks so that air freely circulates around all sides during the conditioning period. The air temperature and relative humidity during the conditioning period shall be $23\pm 2^{\circ}\text{C}$ and $50\pm 10\%$ RH. Otherwise, the material must be held in an environmental chamber for the entire period.
- 1.4.4.2.4. For wet-applied products and material assemblies, a realistic test specimen shall be prepared using the substrate material on which it will be applied in the building. Alternately, it may be necessary to use a substrate material that closely simulates the actual building substrate.
- 1.4.4.2.5. For material assemblies (e.g., floor and wall systems where the finish material is placed over a substrate, either with or without the use of adhesives), individual components of the assembly system shall be tested separately. If all components meet the emissions criteria established herein, no further testing shall be required. For assemblies where one component, such as a floor or wall covering adhesive, does not meet the criteria, the assembled system may be tested with specimen preparation following the manufacturer's recommended procedures for application of wet components and assembly of the system. If there is a difference between

the manufacturers' recommended procedures and procedures required by the project specifications, the project specifications shall be followed.

1.4.4.2.6. Wall and other types of paints shall be tested according to the specifications for the particular material. For example, if two coats are to be applied over a primer coat, then the test specimen shall be prepared accordingly, dried between coats per manufacturer's label instructions, and tested as a complete assembly after required conditioning. The total quantity of paint applied shall be reported based on the weight of the assembly immediately before and after the application of each coat.

1.4.4.3. The maximum concentration for any chemical emitted at 96 hours in emissions tests shall not result in a modeled indoor air concentration greater than one half ($\frac{1}{2}$) the chronic inhalation REL concentration of California Office of Environmental Health Hazard Assessment (OEHHA) Chronic Reference Exposure Limit (REL), with the exception of formaldehyde.

1.4.4.4. **Formaldehyde.** No single product shall contribute more than one half ($\frac{1}{2}$) the OEHHA staff recommended indoor air limit of 33 $\mu\text{g}/\text{m}^3$ (27 ppb) for formaldehyde. The calculated concentration of formaldehyde shall not exceed 16.5 $\mu\text{g}/\text{m}^3$. Same modeling procedure as described above shall be used for formaldehyde. This concentration limit shall apply to all building and occupancy types.

1.4.4.5. Construction adhesives used in Work shall comply with following requirement: no component present in adhesive at more than one percent (1%) of total mass of adhesive shall be a carcinogen or reproductive toxicant as defined in the Chronic Reference Exposure Levels for organic chemicals with possible indoor sources, based on the California OEHHA list as of November 2019 (The most recent list shall be used for this specification as published <http://www.oehha.ca.gov/air/allrels.html>).

1.4.4.6. Provide calculations of modeled concentrations based on emissions test results.

1.4.4.6.1. Calculations shall be submitted with all other documentation. This requires the calculation of emission factors based on emissions tests, then application of the emission factors, product loading factors in the building, and building parameters in a steady state mass-balance model. The model assumes zero outdoor concentrations, perfect mixing and no sink effects. Alternatively, follow procedures in the most recent applicable ASTM standards and submit assumptions and calculations.

1.4.4.6.2. The concentration of a compound in the building shall be calculated using the following Equation: N/A

- 1.4.4.6.3. **Calculation of emission rate.** Determine the emission rate by multiplying the emission factor by the amount of the material to be used in the building or air handler zone being evaluated. Multiply the emission factor by the area of the material in the building zone being assessed. Note that in some cases a length or mass may be the appropriate unit for emission factor that must then be multiplied by the length or mass of the emission source.
- 1.4.4.6.4. Provide to the laboratory the total area of the zone being assessed by consulting the Contract Documents or the design engineer, to identify the total area served by the air handler that serves the area(s) within it where the material will be applied. If the material is used in multiple zones, then calculations shall be made to determine the concentration in the zone with the highest loading ratio of material to volume or material to weekly average minimum air change rate, whichever is greater.
- 1.4.4.6.5. Provide to the laboratory the volume of the space served by the air handler by multiplying the floor area by the floor-to-floor clear height (top of finish floor to bottom of structure of floor above) and multiply by 0.9 (to take account of the portion of the volume that is occupied by solid objects). This value represents the ventilated volume for purposes of the calculations required here.
- 1.4.4.6.6. Determine the air change rate by dividing the volume of outside air introduced into the space per hour by the ventilated volume of the space.
- 1.4.4.6.7. Determine the weekly average air change rate by adding the minimum design air change rate during ventilation system operating hours times the number of hours the system is operated to an assumed air change rate from infiltration during ventilation system non-operational hours times the number of hours the system is off; then divide the total by one hundred sixty-eighty (168), the number of hours in a week. Where no values are available from the Contact Documents, use default values as follows:

1.4.4.6.7.1. **Offices.**

- 1.4.4.6.7.1.1. Where design data are not available to calculate the weekly average air change rate, the modeling shall assume a weekly average air change rate for office buildings of 0.75 air changes per hour (ach). This “default” office air exchange rate is based on a typical weekly office building fifty-five (55) hour operating schedule and an assumed off-hours air change rate of 0.3 ach (assumed air change rate during normal

operating hours is in excess of 1.0 per hour).

- 1.4.4.6.7.1.2. Where specific information is available, the Project specific data should be used to calculate the weekly average air change rate. A default building air change rate of 0.2 per hour during non-HVAC operations should be used.

1.4.4.6.7.2. **Schools.**

- 1.4.4.6.7.2.1. Modeling shall assume weekly average air change rate for school buildings of 0.9 per hour. This air change rate is based on an assumed forty (40) hours per week of ventilation system operation at 3.0 ach and one hundred twenty-eight (128) hours per week of 0.2 ach through infiltration.

- 1.4.4.6.7.2.2. Where specific information is available, the Project specific data should be used to calculate the weekly average air change rate. A default building air exchange rate of 0.2 per hour during non-HVAC operations should be used.

- 1.4.4.6.7.3. Other building types or occupancy types: Use ASHRAE Standard 62.1 2001 default occupant densities and ventilation rates for hours of operation and 0.2 ach for non-operating hours unless actual rates are known in which case the actual rates and hours of operation are to be used.

1.4.4.7. **Environmental Chamber Testing.** Indoor Air Emissions Testing Laboratories may use a range of acceptable loading ratios in order to make use of various size chambers, since these are not standardized across laboratories. Loading ratios ranging from 0.25 m²/m³ to 0.45 m²/m³ will be acceptable.

- 1.4.4.7.1. For dry products, loading ratios within reasonable limits are not critical for determining emission factors; conditioning of test specimens prior to testing will reduce or eliminate differences that may occur in unconditioned samples due to evaporation-limited emissions and sink effects from adsorption of VOCs during final stages of manufacturing or while in packaging during transport to and storage at the laboratory.

- 1.4.4.7.2. Higher loading ratios lower expected emission factor; however, the relationship is not linear, especially at higher concentrations. Therefore, where strong formaldehyde (or other chemical) sources are known or expected to be present, loading ratios should be selected to represent a

median value for the plausible range of actual building loading ratios.

1.4.4.7.3. Loading ratios used shall be included in test report.

1.4.4.7.4. Contractor shall provide to product manufacturers information on actual quantity of material to be used in Project. The product manufacturers will then forward this information to Indoor Air Emissions Testing Laboratory so loading ratios can be adjusted toward actual loading ratio of Project. However, for most low-emitting materials used in construction, actual loading ratio will not significantly affect emission rates except for strong formaldehyde sources, primarily products using urea-formaldehyde resins.

1.4.4.8. Sample Preparation Requirements.

1.4.4.8.1. Substrates for environmental chamber emissions tests of individual Products or materials (materials tested separately):

1.4.4.8.1.1. Dry solid sheet type products.

1.4.4.8.1.1.1. Sheet stainless steel or aluminum tray to provide tight fit at edges and reduce emissions from edge of material specimen. If material does not fit very snugly, then use aluminized, low-emitting, clean room tape to seal edges. Dry fabric type products:

1.4.4.8.1.1.2. No substrate necessary.

1.4.4.8.1.2. Wet products such as adhesives and sealers:

1.4.4.8.1.2.1. Sheet stainless steel, aluminum, or glass unless product is to be applied to gypsum board or other highly absorbent material. If substrate is a highly absorbent material, use a sample the substrate pre-conditioned for 24 hours to the temperature and humidity of the test chamber.

1.4.4.8.1.3. Substrates for specific products.

1.4.4.8.1.3.1. Composite wood products (Section 06400): sample to be suspended or supported in chamber with all edges exposed and no edge masking.

1.4.4.8.1.3.2. Gypsum Board (Section 09260): no substrate (testing required ONLY if recycled content gypsum board or if water resistant types are used).

- 1.4.4.8.1.3.3. Acoustical Ceiling Panels (Section 09510): no substrate, sample to be suspended or supported in chamber with no edge masking.
- 1.4.4.8.1.3.4. Resilient flooring (Section 09650): stainless steel tray, fitted tightly so that only the upper surface is exposed. Alternately, cover back of flooring with sheet stainless steel and seal edges with low-VOC emitting aluminized clean room tape so only wear surface of flooring is exposed.
- 1.4.4.8.1.3.5. Carpet Tile and Broadloom Carpet (Section 09680): stainless steel tray, fitted tightly so that only the upper surface is exposed.
- 1.4.4.8.1.3.6. Flat and eggshell Paints (Section 09900): 5/8" gypsum board.
- 1.4.4.8.1.3.7. Semi-gloss paints (Section 09900): Where applied to metal, use sheet stainless steel. Where applied to gypsum board, use gypsum board conditioned as described in subsection c below.
- 1.4.4.8.1.3.8. Joint Sealers (Section 07900): Steel channel 0.64 cm by 0.64 cm by 25.4 cm Channel shall be filled with sealant.
- 1.4.4.8.2. Substrates for environmental chamber emissions tests of assemblies of products or materials (materials tested in an assembly):
 - 1.4.4.8.2.1. Laminates or wood veneers applied with adhesives (Section 06400): Medium density fiberboard (MDF).
 - 1.4.4.8.2.2. Resilient flooring applied with adhesives (Section 09650): Sheet stainless steel or glass plate.
 - 1.4.4.8.2.3. Carpet Tile/Broadloom Carpet applied with adhesives and adhesives (Section 09685/Section 09680): Sheet stainless steel or glass plate.
 - 1.4.4.8.2.4. Wall Coverings applied with adhesives (Section 09700 Series): 5/8" gypsum board. Prior to preparation of the test specimen, Gypsum board substrate shall be pre-conditioned for at least 24 hours at $23 \pm 2^{\circ}\text{C}$ and $50 \pm 10\% \text{ RH}$ while ventilated with clean air. [Ventilation rate is not important.]
- 1.4.4.8.3. Protocol for Paint Testing: Preparation and handling of paint test specimen.

1.4.4.8.3.1. Flat and Eggshell Paints.

- 1.4.4.8.3.1.1. Apply paints to 5/8" thick gypsum board. Hold Gypsum board substrate for at least 24 hours at $23 \pm 2^{\circ}\text{C}$ and $50 \pm 10\%$ RH while ventilated with clean air. Accurately weigh substrate just prior to painting, mask borders to avoid paint dripping on edges and leave center area for paint. Alternative approaches to protecting the edges are acceptable and shall be reported if used.
- 1.4.4.8.3.1.2. Apply paint using standardized roller procedure that simulates application of paint in building. For most wall paint applications use a 4" wide 3/8" nap roller intended for smooth surfaces.
- 1.4.4.8.3.1.3. Stir paint in container and transfer 100 mL of paint to heavy-duty aluminum foil disposable tray.
- 1.4.4.8.3.1.4. Saturate roller cover with paint by running back and forth in tray.
- 1.4.4.8.3.1.5. Apply paint to substrate using four strokes, two in vertical direction and two in horizontal direction, so entire area is uniformly covered.
- 1.4.4.8.3.1.6. Remove tape from substrate and re-weigh substrate.
- 1.4.4.8.3.1.7. Difference in weight determines amount of applied paint and coverage in grams of wet paint per square meter of substrate surface.
- 1.4.4.8.3.1.8. Place substrate on 6" by 6" piece of sheet stainless steel to cover entirely the back surface. Attach substrate to stainless steel with strips of low VOC aluminized clean room tape so only painted surface is exposed. For a blank specimen, similarly prepare an unpainted piece of gypsum. Alternate procedures to cover unpainted surfaces of gypsum board may be used and must be adequately described in the laboratory report if used.
- 1.4.4.8.3.1.9. Place sample in conditioning environment immediately and hold for ten (10) days.

- 1.4.4.8.3.1.10. Where multiple coats, which may include primer, are being tested, apply paints and follow manufacturers' instructions for drying time between coats. Report weight of test specimen prior to and after each coat of paint is applied. Hold specimen in conditioning environment between coats. The ten (10) day conditioning period begins after application of final coat. Apply semi-gloss paint to clean steel sheet following same procedure as above for "flat and eggshell paints." No tape should be used. Sheet should be weighed immediately before and after painting.

1.4.4.9. Chemical Analyses.

- 1.4.4.9.1. VOC Analysis: Make multi-point calibrations using pure compounds whenever such compounds are available from commercial suppliers (such as Aldrich Chemical Company, Sigma Aldrich). Quantitative analyses performed using surrogate compounds shall be indicated in reported test results. Identify EPA and ASTM standard methods and practices, and testing laboratory calibration procedures, which should include a calibration at least once every three (3) months.
- 1.4.4.9.2. Formaldehyde and Acetaldehyde Analysis: Formaldehyde and Acetaldehyde analysis shall be performed following ASTM Standard D 5197-09e1 "Standard Test Method for Formaldehyde and other Carbonyl Compounds in Air (Active Sampler Methodology)."

1.4.4.10. Reporting Requirements. In addition to reporting requirement stated elsewhere in Specifications, reports shall include: (a) all compounds emitted from sample that are on the most recent Chronic Reference Exposure Level- Air Toxicology and Epidemiology list as published by the California Office of Environmental Health Hazard Assessment and listed in their website (<https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary>), (b) all compounds on the California Proposition 65 list (<https://oehha.ca.gov/media/downloads/proposition-65/p65list12182020.pdf>), and (c) all compounds on the California Toxic Air Contaminant list (<https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants>). In addition, the ten (10) most abundant compounds shall be reported separately if not listed on any of these lists. For these compounds, report following:

- 1.4.4.10.1. Measured chamber concentrations at each required time point;
- 1.4.4.10.2. Calculated emission factors; and

1.4.4.10.3. Calculated building concentrations and assumptions used to make calculation.

1.4.5. State Agency Buy Recycled Campaign (SABRC) Recycled Content (<http://www.calrecycle.ca.gov/BuyRecycled/StateAgency/>). Implement the SABRC recycled-content goals for specific building Products, including but not limited to:

1.4.5.1. Paper products;

1.4.5.2. Glass products (windows, glazing, fiberglass, tile, construction blocks, loose-grain abrasives);

1.4.5.3. Plastic products (carpet, plastic lumber, furniture made from plastic, fencing, parking bumpers, toilet partitions, entry mats, signage, sheet plastic and other plastic-containing building products);

1.4.5.4. Solvents;

1.4.5.5. Tire-derived products (entry-mats, resilient flooring, wheelchair and other ramps, playground surfacing, parking bumpers, speed bumps, tree ties, road surfacing);

1.4.5.6. Steel products (structural steel, steel framing, architectural metal, reinforcing bars, sheet metal, metal siding, metal roofing, lockers, toilet partitions, office furniture for filing and storage);

1.4.5.7. Paint (allowed only in exterior installations); and

1.4.5.8. Compost.

1.5. DELIVERY, STORAGE, AND HANDLING

1.5.1. Packaging. Deliver materials in recyclable or in reusable packaging such as cardboard, wood, paper, or reusable blankets, which will be reclaimed by supplier or manufacturer for recycling.

1.5.1.1. General. Minimize packaging materials to maximum extent possible while still ensuring protection of materials during delivery, storage, and handling.

1.5.1.1.1. Unacceptable Packaging Materials: Polyurethane, polyisocyanate, polystyrene, polyethylene, and similar plastic materials such as “foam” plastics and “shrink-fit” plastics.

1.5.1.2. Reusable Blankets. Deliver and store materials in reusable blankets and mats reclaimed by manufacturers or suppliers for reuse where program exists or where program can be developed for such reuse.

1.5.1.3. Pallets. Where pallets are used, suppliers shall be responsible to ensure pallets are removed from Site for reuse or for recycling.

1.5.1.4. Corrugated Cardboard and Paper. Where paper products are used, recycle as part of construction waste management recycling program, or return to material’s manufacturer for use by manufacturer or supplier.

- 1.5.1.5. Sealants, Paint, Primers, Adhesives, and Coating Containers. Return to supplier or manufacturer for reuse where such program is available.

1.6. PROJECT CONDITIONS

1.6.1. Certifications.

1.6.1.1. Environmental Product Certification.

- 1.6.1.1.1. Include manufacturer certification indicating product contains maximum recycled content possible without being detrimental to product performance.
- 1.6.1.1.2. Include certification indicating cleaning materials comply with requirements of these Specifications.

1.6.2. Construction Ventilation and Preconditioning.

- 1.6.2.1. Temporary Construction Ventilation. Maintain sufficient temporary ventilation of areas where materials are being used that emit VOCs. Maintain ventilation continuously during installation, and until emissions dissipate after installation. If continuous ventilation is not possible via building's HVAC system(s) then ventilation shall be supplied via open windows and temporary fans, sufficient to provide no less than three air changes per hour.

- 1.6.2.1.1. Period after installation shall be sufficient to dissipate odors and elevated concentrations of VOCs. Where no specific period is stated in these Specifications, a time period of 72 hours shall be used.

- 1.6.2.1.2. Ventilate areas directly to outside; ventilation to other enclosed areas is not acceptable.

- 1.6.2.2. During dust producing activities (e.g., drywall installation and finishing) turn ventilation system off, and openings in supply and return HVAC system shall be protected from dust infiltration. Provide temporary ventilation as required.

- 1.6.2.3. Preconditioning. Prior to installation, allow products which have odors and significant VOC emissions to off-gas in dry, well-ventilated space for fourteen (14) calendar days to allow for reasonable dissipation of odors and emissions prior to delivery to Project site.

- 1.6.2.3.1. Condition Products without containers and packaging to maximize off-gassing of VOCs.

- 1.6.2.3.2. Condition Products in ventilated warehouse or other building. Comply with substitution requirements for consideration of other locations.

1.6.3. Protection.

1.6.3.1. Moisture Stains. Materials with evidence of moisture damage, including stains, are not acceptable, including both stored and installed materials; immediately remove from Site and properly dispose. Take special care to prevent accumulation of moisture on installed materials and within packaging during delivery, storage, and handling to prevent development of molds and mildew on packaging and on Products.

1.6.3.1.1. Immediately remove from Site and properly dispose of materials showing signs of mold and signs of mildew, including materials with moisture stains.

1.6.3.1.2. Replace moldy materials with new, undamaged materials.

1.6.3.2. Ducts. Seal ducts during transportation, delivery, and construction to prevent accumulation of construction dust and construction debris inside ducts.

1.7. SEQUENCING

1.7.1. Environmental Issues.

1.7.1.1. On-Site Application. Where odorous and/or high VOC emitting Products are applied on-site, apply prior to installation of porous and fibrous materials. Where this is not possible, protect porous materials with polyethylene vapor retarders.

1.7.1.2. Complete interior finish material installation no less than fourteen (14) days prior to Completion to allow for building flush out.

2. PRODUCTS

2.1. CHEMICALS OF CONCERN

2.1.1. **Chemicals of Concern.** Chemicals listed below as toxic air contaminants, carcinogens, teratogens, reproductive toxins, and chemicals with established Chronic Reference Exposure Levels (REL).

2.1.2. **Carcinogens.** Chemicals listed as probable or known human carcinogens in the latest published edition of the following two (2) lists:

2.1.2.1. California Environmental Protection Agency, Air Resources Board (ARB), list of Toxic Air Contaminants (California Air Toxics):
<https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants>.

2.1.2.2. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA), Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
http://www.oehha.ca.gov/prop65/prop65_list/Newlist.html.

2.1.3. **Reproductive Toxicants.** Chemicals known to cause reproductive toxicity including birth defects or other reproductive harm in the latest published edition of the following list:

2.1.3.1. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA), Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): <https://oehha.ca.gov/media/downloads/proposition-65//p65list12182020.pdf>.

2.1.4. **Chemicals with established Chronic Reference Exposure Levels (REL).** Chronic RELs have been developed for hazardous airborne substances as of December 2008. A chronic REL is an airborne concentration level that would pose no significant health risk to individuals indefinitely exposed to that level. RELs are based solely on health considerations and are developed from the best available data in the scientific literature. The California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA) establishes and publishes RELs. The most recent list shall be used for this Specification as published at <https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary>.

2.2. SUBSTITUTIONS

2.2.1. Substitutions Environmental Issues: Requests for substitutions shall comply with requirements specified in the Contract Documents and with the following additional information required where environmental issues are specified:

2.2.1.1. Indicate each proposed substitution complies with requirements for VOCs;

2.2.1.2. District reserves the right to reject proposed substitutions where data for VOCs is not provided or where emissions of individual VOCs are higher than for specified Products; and

2.2.1.3. Comply with specified recycled content and other environmental requirements.

3. EXECUTION

Architect: HKIT ARCHITECTS
538 9th St #240
Oakland, CA 94607
Tel: (510) 625-9800
Attn: MELISSA REGAN-BYERS
Email: mregan@hkit.com

Civil Engineer: SANBELL
2290 DIAMOND BLVD.
CONCORD, CA 94520
Tel: (925) 685-4569
Attn: ROBERT BROESTL
Email: rbroestl@sanbell.com

Landscape Architect: GATES STUDIO
1655 MAIN STREET SUITE 365
WALNUT CREEK, CA 94596
Tel: (925) 736-8176
Attn: CASEY CASE
Email: casey@gates-studio.com

3.1. FIELD QUALITY CONTROL

- 3.1.1. Building Flush Out: Just prior to Completion, flush out building continuously (i.e., 24 hours per day, seven (7) days a week) using maximum tempered outside air (or maximum amount of outside air while achieving reasonable indoor temperature) for at least fourteen (14) calendar days. If interruptions of more than a few hours are required for testing and balancing purposes, extend flush out period accordingly.
 - 3.1.1.1. When Contractor is required to perform touch-up work, provide temporary construction ventilation during installation and extend building flush-out by a minimum of four (4) days after touch-up installation with maximum tempered outside air for 24 hour per day.
 - 3.1.1.2. If construction schedule permits, extend flush-out period beyond fifteen (15) days.
 - 3.1.1.3. Return ventilation system to normal operation following flush-out period to minimize energy consumption.

3.2. CLEANING

3.2.1. Final Cleaning Environmental Issues.

- 3.2.1.1. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains, and foreign substances; polish transparent and glossy surfaces using cleaning and maintenance products as described in Part 1 of this Section.
- 3.2.1.2. Clean equipment and fixtures to sanitary condition using cleaning and maintenance products as described in Part 1 of this Document.
- 3.2.1.3. Vacuum carpeted and soft surfaces with high efficiency particulate arrestor (HEPA) vacuum.
- 3.2.1.4. If ducts were not sealed during construction, and contain dust or dirt, clean ducts using HEPA vacuum immediately prior to Completion and prior to using ducts to circulate air. Oil film on sheet metal shall be removed before shipment to Site. However, ducts shall be inspected to confirm that no oil film is present. If present, remove oil.
- 3.2.1.5. Replace all air filters (i.e., pre and final filters) just prior to Completion.
- 3.2.1.6. Remove and properly dispose of recyclable materials using construction waste management program described in the Specifications.

3.3. PROTECTION

- 3.3.1. Environmental Issues.
 - 3.3.1.1. Protect interior materials from water intrusion or penetration; where interior Products not intended for wet applications are exposed to moisture, immediately remove from Site and dispose of properly.
 - 3.3.1.2. Protect installed Products using methods that do not support growth of molds and mildews.
 - 3.3.1.2.1. Immediately remove from Site Products with mold or mildew.

DOCUMENT 01 40 00

QUALITY REQUIREMENTS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Drawings;
- 1.1.5. Construction Schedule – Network Analysis;
- 1.1.6. General Definitions and References.

1.2. SUMMARY

- 1.2.1. This Document includes administrative and procedural requirements for quality assurance and quality control.
- 1.2.2. Testing and inspecting services by the District are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Documents' requirements.
 - 1.2.2.1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Specifications for those activities. Requirements in those Specifications may also cover production of standard products.
 - 1.2.2.2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Documents' requirements.
 - 1.2.2.3. Requirements for Contractor to provide quality-assurance and -control services required by District, District's consultants, or authorities having jurisdiction are not limited by provisions of this Document.

1.3. DEFINITIONS

- 1.3.1. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- 1.3.2. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by District or its consultants.

- 1.3.3. Mock-ups: Full-size, physical assemblies that are constructed on-site. Mock-ups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Approved mock-ups establish the standard by which the Work will be judged.
- 1.3.4. Laboratory Mock-ups: Full-size, physical assemblies that are constructed at testing facility to verify performance characteristics.
- 1.3.5. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- 1.3.6. Product Testing: Tests and inspections that are performed by an NRTL (National Recognized Testing Laboratory), an NVLAP (National Voluntary Laboratory Accreditation Program), or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- 1.3.7. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- 1.3.8. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

1.4. CONFLICTING REQUIREMENTS

- 1.4.1. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different but apparently equal, to District for a decision before proceeding.
- 1.4.2. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to District for a decision before proceeding.

1.5. SUBMITTALS

- 1.5.1. Qualification Data: For testing agencies specified in "Quality Assurance" below to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- 1.5.2. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1.5.2.1. Specification number and title.
 - 1.5.2.2. Description of test and inspection.
 - 1.5.2.3. Identification of applicable standards, codes or regulations.
 - 1.5.2.4. Identification of test and inspection methods.

- 1.5.2.5. Number of tests and inspections required.
- 1.5.2.6. Time schedule or time span for tests and inspections.
- 1.5.2.7. Entity responsible for performing tests and inspections.
- 1.5.2.8. Requirements for obtaining samples.
- 1.5.2.9. Unique characteristics of each quality-control service.
- 1.5.3. Reports: Prepare and submit certified written reports that include the following:
 - 1.5.3.1. Date of issue.
 - 1.5.3.2. Project title and number.
 - 1.5.3.3. Name, address, and telephone number of testing agency.
 - 1.5.3.4. Dates and locations of samples and tests or inspections.
 - 1.5.3.5. Names of individuals making tests and inspections.
 - 1.5.3.6. Description of the Work and test and inspection method.
 - 1.5.3.7. Identification of product and Specification.
 - 1.5.3.8. Complete test or inspection data.
 - 1.5.3.9. Test and inspection results and an interpretation of test results.
 - 1.5.3.10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 1.5.3.11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Documents' requirements.
 - 1.5.3.12. Name and signature of laboratory inspector.
 - 1.5.3.13. Recommendations on retesting and re-inspecting.
 - 1.5.3.14. Descriptions of deficiencies noted, and corrective action undertaken to resolve such deficiencies.
 - 1.5.3.14.1. Deficiencies observed shall immediately be brought to the attention of the Contractor's field superintendent, and trade foreman. In the event deficiencies are not corrected, or if an interpretation of the Contract Documents is required, the Testing Agency shall immediately notify the District and applicable consultant, Architect, or Engineer.
 - 1.5.3.14.2. The Testing Agency shall maintain a deficiency list of all items not corrected and shall reinspect the area after the deficiency has been corrected. The list shall include a description of the deficiency, the date and time the deficiency was observed,

who was notified, the date of reinspection and description of any corrective action taken. Distribute the deficiency list at least once per month.

1.5.3.15.15. At the end of the Project, the Testing Agency shall submit a final signed report stating whether the work tested and inspected conforms to the Contract Documents' requirements.

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

1.6. QUALITY ASSURANCE

1.6.1. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specifications specify additional requirements.

1.6.2. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance. Where required by the individual Specifications, Installer employing workers trained and approved by manufacturer, Installer being acceptable to manufacturer, and/or Installer being an authorized representative of manufacturer for both installation and maintenance.

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

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

1.6.5. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in the State of California, and who is experienced in providing engineering services of the kind indicated.

1.6.6. Engineering services are defined as those performed for installations of the system, assembly, or products that are similar to those indicated for this Project in material, design, and extent.

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

1.6.7.1. Requirement for specialists shall not supersede building codes or regulations governing the Work.

1.6.8. Testing Agency Qualifications: An NRTL, an NVLAP, Division of the State of Architect's Accepted Laboratory, or an independent agency with the experience and capability to conduct testing and inspecting indicated; and with additional qualifications stated in

individual Specifications; and where required by and acceptable to authorities having jurisdiction.

1.6.8.1. NRTL: A Nationally Recognized Testing Laboratory according to 29 CFR 1910.7.

1.6.8.2. NVLAP: A testing agency accredited according to NIST's (National Institute of Standards and Technology) National Voluntary Laboratory Accreditation Program.

1.6.8.3. Tests shall be made by an accredited testing agency with a minimum of 5 years of experience in the specific type of testing to be performed. Except as otherwise provided, sampling and testing of all materials and the laboratory methods and testing equipment shall be in accordance with the applicable standards and methods of the California Building Standards code.

1.6.8.4. For each type of inspection and testing service to be performed, the Testing Agency shall submit certification, signed and sealed by the Agency's professional engineer, of compliance with all applicable requirements of the following:

1.6.8.4.1. ASTM E329, "Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction."

1.6.8.4.2. "Recommended Requirements for Independent Laboratory Qualifications" published by the American Council of Independent Laboratories.

1.6.8.5. Furnish written certification to the District that all equipment to be used has been calibrated in accordance with applicable ASTM standards within the last year and is in proper working order.

1.6.8.6. Testing Agency Personnel Qualifications: Testing and inspection services shall be performed only by trained and experienced technicians currently qualified for the work they are to perform. Documentation of such training and experience shall be submitted to the District and/or its consultants upon request.

1.6.8.7. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the state where the Project is located.

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

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

1.6.9.1. Contractor responsibilities include the following:

1.6.9.1.1. Verify by its Quality Assurance/Quality Control procedures that an element is ready for testing prior to requesting a test.

- 1.6.9.1.2. Provide test specimens representative of proposed products and construction.
- 1.6.9.1.3. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
- 1.6.9.1.4. Provide sizes and configurations of test assemblies, mock-ups, and laboratory mock-ups to adequately demonstrate capability of products to comply with performance requirements.
- 1.6.9.1.5. Build site-assembled test assemblies and mock-ups using installers who will perform same tasks for Project.
- 1.6.9.1.6. Build laboratory mock-ups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
- 1.6.9.1.7. When testing is complete, remove test specimens, assemblies, mock-ups, and laboratory mock-ups; do not reuse products on Project.
- 1.6.9.2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to District with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected Work complies with or deviates from the Contract Documents' requirements.
- 1.6.10. Mock-ups: Before installing portions of the Work requiring mock-ups, build mock-ups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - 1.6.10.1. Build mock-ups in location and of size indicated or, if not indicated, as directed by District or its consultant.
 - 1.6.10.2. Notify District and its consultants seven (7) days in advance of dates and times when mock-ups will be constructed.
 - 1.6.10.3. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 1.6.10.4. Obtain District and its consultant's approval of mock-ups before starting work, fabrication, or construction.
 - 1.6.10.4.1. Allow seven (7) days for initial review and each re-review of each mock-up.
 - 1.6.10.5. Incorporate seismic design of nonstructural components into mock-ups.
 - 1.6.10.6. Maintain mock-ups during construction in an undisturbed condition as a standard for judging the completed Work.
 - 1.6.10.7. Demolish and remove mock-ups when directed, unless otherwise indicated.
- 1.6.11. Laboratory Mock-Ups: Comply with requirements of preconstruction testing and those specified in individual Specifications in Divisions 02 through 49.

1.7. QUALITY CONTROL

- 1.7.1. District Responsibilities: Where quality-control services are indicated as District's responsibility, District will engage a qualified testing agency to perform these services.
 - 1.7.1.1. District will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting the testing agencies are engaged to perform.
 - 1.7.1.2. Costs for retesting and re-inspecting construction that replaces or is necessitated by Work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Price will be adjusted by Change Order per the Contract Documents.
- 1.7.2. Tests and inspections not explicitly assigned to District are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 - 1.7.2.1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform the quality-control services.
 - 1.7.2.1.1. Contractor shall not employ same entity engaged by District, unless agreed to in writing by District.
 - 1.7.2.2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 - 1.7.2.3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 - 1.7.2.4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 - 1.7.2.5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- 1.7.3. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Document "Submittal Procedures."
- 1.7.4. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents' requirements.
- 1.7.5. Testing Agency Responsibilities: Cooperate with District, District's consultants, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - 1.7.5.1. Notify District, District's consultants, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.

- 1.7.5.2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
- 1.7.5.3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
- 1.7.5.4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
- 1.7.5.5. Do not release, revoke, alter, or increase the Contract Documents' requirements or approve or accept any portion of the Work.
- 1.7.5.6. Do not perform any duties of Contractor.
- 1.7.6. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify testing agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1.7.6.1. Access to the Work.
 - 1.7.6.2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 1.7.6.3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 1.7.6.4. Facilities for storage and field curing of test samples.
 - 1.7.6.5. Delivery of samples to testing agencies.
 - 1.7.6.6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - 1.7.6.7. Security and protection for samples and for testing and inspecting equipment at Project Site.
 - 1.7.6.8. Furnish tools, samples of materials, design mixes, equipment and assistance as requested.
 - 1.7.6.9. Provide and maintain, for the sole use of the Testing Agency, adequate facilities for the safe storage and proper curing of concrete test cylinders on the project site for the first 24 hours after casting as required by ASTM C31, Method of Making and Curing Concrete Test Specimens in the Field.
 - 1.7.6.10. Build and store masonry test prisms in a manner acceptable to the Testing Agency. Prisms to be tested shall remain at the job site until moved by Testing Agency personnel.
 - 1.7.6.11. Notify Testing Agency at least 10 working days in advance of any qualification testing for welding required herein.
 - 1.7.6.12. Notify Testing Agency at least 24 hours prior to expected time for operations requiring testing or inspection services.

- 1.7.6.13. Make arrangements with the Testing Agency and pay for additional samples and tests made for the Contractor's convenience or for retesting of failed samples.
- 1.7.6.14. For deficiencies requiring corrective action, submit in writing a description of the deficiency and a proposed correction to the District. After review and approval, the proposed corrective action shall be implemented and inspected by the Testing Agency. It is Contractor's responsibility to ascertain that the deficiency is corrected and inspected prior to the work being covered.
- 1.7.6.15. Retention of an independent Testing Agency by the District shall in no way relieve Contractor of responsibility for performing all work in accordance with the Contract Documents' requirements.
- 1.7.7. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1.7.7.1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.8. TESTS AND SPECIAL INSPECTIONS

- 1.8.1. Tests and Special Inspections: District will engage a qualified testing agency to conduct tests and special inspections required by authorities having jurisdiction as follows:
 - 1.8.1.1. Soils: 2022 CBC 1704.7
 - 1.8.1.2. Pile Foundations: 2022 CBC 1704.9
 - 1.8.1.3. Cast in Place Concrete: 2022 CBC 1704.4
- 1.8.2. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specifications, and as follows:
 - 1.8.2.1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 - 1.8.2.2. Notifying District, District's consultants, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 - 1.8.2.3. Submitting a certified written report of each test, inspection, and similar quality-control service to District, with copy to Contractor and to authorities having jurisdiction.
 - 1.8.2.4. Submitting a final report of special tests and inspections at Project Completion, which includes a list of unresolved deficiencies.
 - 1.8.2.5. Interpreting tests and inspections and stating in each report whether tested and inspected Work complies with or deviates from the Contract Documents.
 - 1.8.2.6. Retesting and reinspecting corrected work.

2. PRODUCTS

2.1. GENERAL

- 2.1.1. Do not use any materials or equipment represented by samples until tests, if required, have been made and the materials or equipment found to be acceptable. Any product which becomes unfit for use after acceptance shall not be incorporated into the Work.

3. EXECUTION

3.1. TEST AND INSPECTION LOG

- 3.1.1. Prepare a record of tests and inspections. Include the following:
 - 3.1.1.1. Date test or inspection was conducted.
 - 3.1.1.2. Description of the Work tested and inspected.
 - 3.1.1.3. Date test or inspection results were transmitted to District.
 - 3.1.1.4. Identification of testing agency or special inspector conducting test or inspection.
- 3.1.2. Maintain log at Project Site. Post changes and modifications as they occur. Provide access to test and inspection log for District's reference during normal working hours.

3.2. REPAIR AND PROTECTION

- 3.2.1. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 3.2.1.1. Provide materials and comply with installation requirements specified in other Specifications. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
 - 3.2.1.2. Comply with Document "Cutting and Patching" and all related Contract Documents' requirements.
- 3.2.2. Protect construction exposed by or for quality-control service activities.
- 3.2.3. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF DOCUMENT

ABBREVIATIONS AND ACRONYMS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions including without limitation, Contract Terms and Definitions; and
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any).

1.2. ABBREVIATIONS AND ACRONYMS FOR STANDARDS AND REGULATIONS

1.2.1. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations as indicated in Thomson Gale™ (www.gale.com), Gale Research's "Encyclopedia of Associations" or "Encyclopedia of Associations: National Organizations of the U.S.," or in Columbia Books' "National Trade & Professional Associations of the U.S."

1.2.2. Some of the applicable abbreviations and acronyms referenced in the Specifications or other Contract Documents have the following meanings, subject to updates or revisions based on the above-referenced publications:

- AA: Aluminum Association
- AAMA: Architectural Aluminum Manufacturers Association
- AASHTO: American Association of State Highway and Transportation Officials
- ABPA: Acoustical and Board Products Association
- ACI: American Concrete Institute
- AGA: American Gas Association
- AGC: Associated General Contractors
- AHC: Architectural Hardware Consultant
- AI: Asphalt Institute
- AIA: American Institute of Architects
- AIEE: American Institute of Electrical Engineers
- AISC: American Institute of Steel Construction
- AISI: American Iron and Steel Institute
- AMCA: Air Moving and Conditioning Association
- ANSI: American National Standards Institute
- APA: American Plywood Association
- ARI: Air Conditioning and Refrigeration Institute
- ASHRAE: American Society of Heating, Refrigeration and Air Conditioning Engineers
- ASME: American Society of Mechanical Engineers
- ASSE: American Society of Structural Engineers
- ASTM: American Society of Testing and Materials
- AWPB: American Wood Preservers Bureau

- AWPI: American Wood preservers Institute
- AWS: American Welding Society
- AWSC: American Welding Society Code
- AWI: Architectural Woodwork Institute
- AWWA: American Water Works Association
- BIA: Brick Institute of America
- CCR: California Code of Regulations
- CLFMI: Chain Link Fence Manufacturers Institute
- CMG: California Masonry Guild
- CRA: California Redwood Association
- CRSI: Concrete Reinforcing Steel Institute
- CS: Commercial Standards
- CSI: Construction Specifications Institute
- CTI: Cooling Tower Institute
- FGMA: Flat Glass Manufacturer's Association
- FIA: Factory Insurance Association
- FM: Factory Mutual
- FS: Federal Specification
- FTI: Facing Title Institute
- GA: Gypsum Association
- ICC: International Code Council
- IEEE: Institute of Electrical and Electronic Engineers
- IES: Illumination Engineering Society
- LIA: Lead Industries Association
- MIA: Marble Institute of America
- MLMA: Metal Lath Manufacturers Association
- MS: Military Specifications
- NAAMM: National Association of Architectural Metal Manufacturers
- NBHA: National Builders Hardware Association
- NBFU: National Board of Fire Underwriters
- NBS: National Bureau of Standards
- NCMA: National Concrete Masonry Association
- NEC: National Electrical Code
- NEMA: National Electrical Manufacturers Association
- NFPA: National Fire Protection Association/National Forest Products Association
- NMWIA: National Mineral Wool Insulation Association
- NTMA: National Terrazzo and Mosaic Association
- NWMA: National Woodwork Manufacturer's Association
- ORS: Office of Regulatory Services (California)
- OSHA: Occupational Safety and Health Act
- PCI: Precast Concrete Institute
- PCA: Portland Cement Association
- PDCA: Painting and Decorating Contractors of America
- PDI: Plumbing Drainage Institute
- PEI: Porcelain Enamel Institute
- PG&E: Pacific Gas & Electric Company
- PS: Product Standards
- SDI: Steel Door Institute; Steel Deck Institute
- SJI: Steel Joist Institute
- SSPC: Steel Structures Painting Council
- TCA: Tile Council of America

- TPI: Truss Plate Institute
- UBC: Uniform Building Code
- UL: Underwriters Laboratories Code
- UMC: Uniform Mechanical Code
- USDA: United States Department of Agriculture
- VI: Vermiculite Institute
- WCLA: West Coast Lumberman's Association
- WCLB: West Coast Lumber Bureau
- WEUSER: Western Electric Utilities Service Engineering Requirements
- WIC: Woodwork Institute of California
- WPOA: Western Plumbing Officials Association

- 1.2.3. Additional Abbreviations and Symbols: Refer to the above-referenced publications or to Drawings for additional abbreviations and for symbols.

END OF DOCUMENT

GENERAL DEFINITIONS AND REFERENCES

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISION

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions including without limitation, Contract Terms and Definitions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any); and
- 1.1.4. Special Conditions.

1.2. DEFINITIONS

General: Basic Contract definitions are included in the General Conditions of the Contract for Construction. The following are in addition to those definitions.

- 1.2.1. "Alternate": A cost or credit for certain Work that may be added to or deducted from the Project.
- 1.2.2. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- 1.2.3. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- 1.2.4. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- 1.2.5. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- 1.2.6. "Provide": Furnish and install, complete and ready for the intended use.

1.3. QUALITY ASSURANCE

- 1.3.1. For products or workmanship specified by association, trade, or Federal Standards, Contractor shall comply with requirements of the standard, except when more stringent requirements are specified in the Contract Documents, or are required by applicable codes.
- 1.3.2. Contractor shall conform to current reference standard publication in effect on the date of bid opening.

- 1.3.3. Unless directed otherwise by the Contract Documents, Contractor shall obtain copies of referenced standards.
- 1.3.4. Unless directed otherwise by the Contract Documents, Contractor shall maintain a copy of referenced standards at jobsite until Completion.
- 1.3.5. If specified standards conflict with Contract Documents, Contractor shall request clarification from the District or the Architect before proceeding.
- 1.3.6. Governing Codes shall be as shown in the Contract Documents including, without limitation, the Specifications.

1.4. STANDARDS

- 1.4.1. Standard Specifications: References to codes, specifications and standards referred to in the Contract Documents shall mean, and are intended to be, the latest edition, amendment or revision of such reference standard in effect as of the date of these Contract Documents. If those standard specifications are revised prior to Completion of any part of the Work to which such revision would pertain, Contractor may, if acceptable to and approved by the District, perform such Work in accordance with the revised standard specifications.
- 1.4.2. Conflicting Requirements: Where compliance with two or more standards is specified, and the standards may establish different or conflicting requirements for minimum quantities or quality levels, refer requirements that are different, but apparently equal, and uncertainties to the District for a decision before proceeding.
- 1.4.3. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to District for a decision before proceeding.
- 1.4.4. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.
- 1.4.5. Copies from the Publication Source: Where copies of standards are needed for performance of a required construction activity, Contractor shall obtain copies directly from the publication source.

1.5. SCHEDULE OF REFERENCES

The following information is intended only for the general assistance of Contractor. District does not represent the accuracy of the information. Contractor shall independently verify the information for each entity listed below:

AA	Aluminum Association 900 19th Street NW, Suite 300 Washington, DC 20006 www.aluminum.org	202/862-5100
AABC	Associated Air Balance Council 1518 K Street, NW, Suite 503	202/737-0202

	Washington, DC 20005 www.aabchg.com	
AAMA	American Architectural Manufacturers Association 1827 Walden Office Sq., Suite 104 Schaumburg, IL 60173-4268 www.aamanet.org	847/303-5664
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, Suite 249 Washington, DC 20001 www.aashto.org	202/624-5800
AATCC	American Association of Textile Chemists and Colorists P.O. Box 12215 One Davis Drive Research Triangle Park, NC 27709-2215 www.aatcc.org	919/549-8141
ACI	American Concrete Institute P.O. Box 9094 Farmington Hills, MI 48333-9094 www.aci-int.org	248/848-3700
ACPA	American Concrete Pipe Association 222 West Las Colinas Blvd., Suite 641 Irving, TX 75039-5423 www.concrete-pipe.org	972/506-7216
ADC	Air Diffusion Council 11 South LaSalle St., Suite 1400 Chicago, IL 60603 http://www.flexibleduct.org/index.asp	312/201-0101
AFPA	American Forest and Paper Association 1111 19th St., NW, Suite 800 Washington, DC 20036 http://www.afandpa.org/	202/463-2700
AGA	American Gas Association 1515 Wilson Blvd. Arlington VA 22209 www.aga.com	703/841-8400
AHA	American Hardboard Association 1210 W. Northwest Hwy Palatine, IL 60067-1897 http://domensino.com/AHA/default.htm	847/934-8800
AI	Asphalt Institute Research Park Drive P.O. Box 14052 Lexington, KY 40512-4052	606/288-4960

www.asphaltinstitute.org

AIA	The American Institute of Architects 1735 New York Avenue, NW Washington, DC 20006-5292 www.aia.org	202/626-7300
AISC	American Institute of Steel Construction One East Wacker Drive, Suite 3100 Chicago, IL 60601-2001 http://www.aisc.org/	800/644-2400
AITC	American Institute of Timber Construction 7012 S. Revere Pkwy., Suite 140 Englewood, CO 80112 www.aitc-glulam.org	303/792-9559
ALCA	Associated Landscape Contractors of America 12200 Sunrise Valley Drive, Suite 150 Reston, VA 20191 www.alca.org	703/620-6363
ALI	Associated Laboratories, Inc. P.O. Box 152837 1323 Wall St. Dallas, TX 75315 http://www.assoc-labs.com/	214/565-0593
ALSC	American Lumber Standards Committee P.O. Box 210 Germantown, MD 20875	301/972-1700
AMCA	Air Movement and Control Association International, Inc. 30 W. University Drive Arlington Heights, IL 60004-1893 www.amca.org	847/394-0150
ANLA	American Nursery and Landscape Association 1250 Eye Street, NW, Suite 500 Washington, DC 20005	202/789-2900
ANSI	American National Standards Institute 11 West 42nd Street, 13th Floor New York, NY 10036-8002 www.ansi.org	212/642-4900
APA	APA-The Engineered Wood Association P.O. Box 11700 Tacoma, WA 98411-0700 www.apawood.org	206/565-6600
APA	Architectural Precast Association P.O. Box 08669 Fort Myers, FL 33908-0669	941/454-6989

ARI	Air Conditioning and Refrigeration Institute 4301 Fairfax Drive, Suite 425 Arlington, VA 22203 www.ari.org	703/524-8800
ARMA	Asphalt Roofing Manufacturers Association Center Park 4041 Powder Mill Road, Suite 404 Calverton, MD 20705	301/231-9050
ASA	Acoustical Society of America 500 Sunnyside Blvd. Woodbury, NY 11797	516/576-2360
ASCE	American Society of Civil Engineers- World Headquarters 1801 Alexander Bell Drive Reston, VA 20190-4400 www.asce.org	800/548-2723 703/295-6000
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers 1791 Tullie Circle, NE Atlanta, GA 30329-2305 www.ashrae.org	800/527-4723 404/636-8400
ASLA	American Society of Landscape Architects 4401 Connecticut Ave., NW, 5th Floor Washington, DC 20008-2369 www.asla.org	202/686-2752
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017-2392 www.asme.org	800/434-2763
ASPE	American Society of Plumbing Engineers 3617 Thousand Oaks Blvd., Suite 210 Westlake, CA 91362-3649	805/495-7120
ASQC	American Society for Quality Control 611 E. Wisconsin Avenue Milwaukee, WI 53201-3005 www.asqc.org	800/248-1946 414/272-8575
ASSE	American Society of Sanitary Engineering 28901 Clemens Road Westlake, OH 44145 www.asse-plumbing.org	216/835-3040
ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, PA 19428-2959 www.astm.org	610/832-9500

AWCI	Association of the Wall and Ceiling Industries--International 307 E. Annandale Road, Suite 200 Falls Church, VA 22042-2433 www.awci.org	703/534-8300
AWPA	American Wood-Preservers' Association 3246 Fall Creek Highway, Suite 1900 Granbury, TX 76049-7979	817/326-6300
AWS	American Welding Society 550 NW LeJeune Road Miami, FL 33126 www.amweld.org	800/443-9373 305/443-9353
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235 www.awwa.org	800/926-7337 303/794-7711
BHMA	Builders' Hardware Manufacturers Association 355 Lexington Avenue, 17th Floor New York, NY 10017-6603	212/661-4261
CBM	Certified Ballast Manufacturers Association 1422 Euclid Avenue, Suite 402 Cleveland, OH 44115-2094	216/241-0711
CGA	Compressed Gas Association 1725 Jefferson Davis Hwy, Suite 1004 Arlington, VA 22202-4102 www.cganet.com	703/412-0900
CISCA	Ceilings & Interior Systems Construction Association 1500 Lincoln Hwy, Suite 202 St. Charles, IL 60174 www.cisca.org	630/584-1919
CISPI	Cast Iron Soil Pipe Institute 5959 Shallowford Road, Suite 419 Chattanooga, TN 37421	423/892-0137
CPSC	Consumer Product Safety Commission East West Towers 4330 East-West Hwy. Bethesda, MD 20814	800/638-2772
CPPA	Corrugated Polyethylene Pipe Association 432 N. Superior Street Toledo, OH 43604	800/510-2772 419/241-2221
CRA	California Redwood Association 405 Enfrente Drive, Suite 200	415/382-0662

	Novato, CA 94949	
CRI	Carpet and Rug Institute 310 S. Holiday Avenue Dalton, GA 30722-2048 www.carpet-rug.com	800/882-8846 706/278-3176
CRSI	Concrete Reinforcing Steel Institute 933 N. Plum Grove Road Schaumburg, IL 60173-4758 www.crsi.org	847/517-1200
CTI	Ceramic Tile Institute of America 12061 W. Jefferson Blvd. Culver City, CA 90230-6219	310/574-7800
DHI	Door and Hardware Institute 14170 Newbrook Drive Chantilly, VA 20151-2223 www.dhi.org	703/222-2010
DIPRA	Ductile Iron Pipe Research Association 245 Riverchase Pkwy East, Suite O Birmingham, AL 35244	205/988-9870
DOC	Department of Commerce 14th Street and Constitution Avenue, NW Washington, DC 20230	202/482-2000
DOT	Department of Transportation 400 Seventh Street, SW Washington, DC 20590	202/366-4000
EJMA	Expansion Joint Manufacturers Association 25 N. Broadway Tarrytown, NY 10591-3201	914/332-0040
EPA	Environmental Protection Agency 401 M Street, SW Washington, DC 20460	202/260-2090
FCICA	Floor Covering Installation Contractors Association P.O. Box 948 Dalton, GA 30722-0948	706/226-5488
FM	Factory Mutual 1151 Boston-Providence Turnpike P.O. Box 9102 Norwood, MA 02062-9102 www.factorymutual.com	781/255-4300
FS	Federal Specifications Unit (Available from GSA) 470 East L'Enfant Plaza, SW, Suite 8100	202/619-8925

Washington, DC 20407

GA	Gypsum Association 810 First Street NE, Suite 510 Washington, DC 20002 www.usg.com	202/289-5440
GANA	Glass Association of North America 3310 SW Harrison Street Topeka, KS 66611-2279 www.glasswebsite.com/gana	913/266-7013
HMA	Hardwood Manufacturers Association 400 Penn Center Blvd., Suite 530 Pittsburgh, PA 15235-5605 www.hardwood.org	412/828-0770
HPVA	Hardwood Plywood and Veneer Association 1825 Michael Farraday Drive P.O. Box 2789 Reston, VA 22195-0789 www.hpva.org	703/435-2900
IEEE	Institute of Electrical and Electronic Engineers 345 E. 47th Street New York, NY 10017-2394 www.ieee.org	800/678-4333 212/705-7900
IESNA	Illuminating Engineering Society of North America 120 Wall Street, 17th Floor New York, NY 10005-4001 www.iesna.org	212/248-5000
ITS	Intertek Testing Services P.O. Box 2040 607/753-6711 3933 US Route 11 Cortland, NY 13045-7902 www.itsglobal.com	800/345-3851
LMA	Laminating Materials Association 116 Lawrence Street Hillsdale, NJ 07642-2730 www.lma.org	201/664-2700
MCAA	Mechanical Contractors Association of America 1385 Piccard Drive Rockville, MD 20850-4329	301/869-5800
ML/SFA	Metal Lath/Steel Framing Association (A Division of the NAAMM) 8 South Michigan Avenue, Suite 1000 Chicago, IL 60603	312/456-5590
MSS	Manufacturers Standardization Society for the Valve and Fittings Industry	703/281-6613

127 Park Street, NE
Vienna, VA 22180-4602

NAA	National Arborist Association P.O. Box 1094 603/673-3311 Amherst, NH 03031-1094 www.natlarb.com	800/733-2622
NAAMM	National Association of Architectural Metal Manufacturers 8 South Michigan Avenue, Suite 1000 Chicago, IL 60603 www.gss.net/naamm	312/782-5590
NAIMA	North American Insulation Manufacturers Association 44 Canal Center Plaza, Suite 310 Alexandria, VA 22314 www.naima.org	703/684-0084
NAPA	National Asphalt Pavement Association NAPA Building 5100 Forbes Blvd. Lanham, MD 20706-4413	301/731-4748
NCSPA	National Corrugated Steel Pipe Association 1255 23rd Street, NW, Suite 850 Washington, DC 20037 www.ncspa.org	202/452-1700
NEBB	National Environmental Balancing Bureau 8575 Grovemont Circle Gaithersburg, MD 20877-4121	301/977-3698
NECA	National Electrical Contractors Association 3 Bethesda Metro Center, Suite 1100 Bethesda, MD 20814-5372	301/657-3110
NEI	National Elevator Industry 185 Bridge Plaza North, Suite 310 Fort Lee, NJ 07024	201/944-3211
NEMA	National Electrical Manufacturers' Association 1300 N. 17th Street, Suite 1847 Rosslyn, VA 22209 www.nema.org	703/841-3200
NFPA	National Fire Protection Association One Batterymarch Park P.O. Box 9101 Quincy, MA 02269-9101 www.nfpa.org	800/344-3555 617/770-3000
NHLA	National Hardwood Lumber Association P.O. Box 34518	901/377-1818

	Memphis, TN 38184-0518 www.natlhardwood.org	
NIA	National Insulation Association 99 Canal Center Plaza, Suite 222 Alexandria, VA 22314 www.insulation.org	703/683-6422
NPA	National Particleboard Association 18928 Premiere Court Gaithersburg, MD 20879-1569 www.pbmdf.com	301/670-0604
NPCA	National Paint and Coatings Association 1500 Rhode Island Avenue, NW Washington, DC 20005-5597 www.paint.org	202/462-6272
NRCA	National Roofing Contractors Association O'Hare International Center 10255 W. Higgins Road, Suite 600 Rosemont, IL 60018-5607 www.roofonline.org	800/323-9545
NRMCA	National Ready Mixed Concrete Association 900 Spring Street Silver Spring, MD 20910 www.nrmca.org	301/587-1400
NSF	NSF International P.O. Box 130140 Ann Arbor, MI 48113-0140 www.nsf.org	313/769-8010
NUSIG	National Uniform Seismic Installation Guidelines 12 Lahoma Court Alamo, CA 94526	510/946-0135
NWWDA	National Wood Window and Door Association 1400 E. Touhy Avenue, G-54 Des Plaines, IL 60018 www.nwwda.org	800/223-2301 847/299-5200
SHA	Occupational Safety and Health Administration (U.S. Department of Labor) 200 Constitution Ave., NW Washington, DC 20210	202/219-8148
PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077-1083 www.portcement.org	847/966-6200
PDCA	Painting and Decorating Contractors of America	800/332-7322 703/359-0826

3913 Old Lee Hwy, Suite 33-B
 Fairfax, VA 22030
www.pdca.com

PDI	Plumbing and Drainage Institute 45 Bristol Drive, Suite 101 South Easton, MA 02375	800/589-8956 508/230-3516
RFCI	Resilient Floor Covering Institute 966 Hungerford Drive, Suite 12-B Rockville, MD 20805-1714	301/340-8580
RIS	Redwood Inspection Service c/o California Redwood Association 405 Enfrente Drive, Suite 200 Novato, CA 94949-7206	415/382-0662
SDI	Steel Deck Institute P.O. Box 25 Fox River Grove, IL 60012 www.sdi.org	847/462-1930
SDI	Steel Door Institute 30200 Detroit Road Cleveland, OH 44145-1967	216/889-0010
SMA	Stucco Manufacturers Association 14006 Ventura Blvd. Sherman Oaks, CA 91403	213/789-8733
SMACNA	Sheet Metal and Airconditioning Contractors National Association, Inc. P.O. Box 221230 Chantilly, VA 20151-1209 www.smacna.org	703/803-2980
SPI	Society of the Plastics Industry, Inc. Spray Polyurethane Division 1801 K Street, NW, Suite 600K Washington, DC 20006 www.socplas.org	800/951-2001 202/974-5200
SSPC	Steel Structures Painting Council 40 24th Street, 6th Floor Pittsburgh, PA 15222-4643	412/281-2331
TCA	Tile Council of America 100 Clemson Research Blvd. Anderson, SC 29625	864/646-8453
TPI	Turfgrass Producers International 1855-A Hicks Road Rolling Meadows, IL 60008	800/405-8873 847/705-9898
UL	Underwriters Laboratories, Inc.	800/704-4050

	333 Pfingston Road Northbrook, IL 60062 www.ul.com	847/272-8800
UNI	Uni-Bell PVC Pipe Association 2655 Villa Creek Drive, Suite 155 Dallas, TX 75234 www.members.aol.com/unibell1	972/243-3902
USDA	U.S. Department of Agriculture 14th St. and Independence Ave., SW Washington, DC 20250	202/720-8732
WA	Wallcoverings Association 401 N. Michigan Avenue Chicago, IL 60611-4267	312/644-6610
WCLIB	West Coast Lumber Inspection Bureau P.O. Box 23145 Portland, OR 97281-3145	503/639-0651
WCMA	Window Covering Manufacturers Association 355 Lexington Ave., 17th Floor New York, NY 10017-6603	212/661-4261
WIC	Woodwork Institute of California P.O. Box 980247 West Sacramento, CA 95798-0247	916/372-9943
WLPDIA	Western Lath/Plaster/Drywall Industries Association 8635 Navajo Road San Diego, CA 92119	619/466-9070
WMMPA	Wood Moulding & Millwork Producers Association 507 First Street Woodland, CA 95695 www.wmmpa.com	800/550-7889 916/661-9591
WRI	Wire Reinforcement Institute 203 Loudoun Street, SW Leesburg, VA 20175-2718	703/779-2339
WWPA	Western Wood Products Association Yeon Building 522 S.W. 5th Avenue Portland, OR 97204-2122	503/224-3930

END OF DOCUMENT

TESTING LABORATORY SERVICES

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISION

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions, including “Tests and Inspections”; and
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any).

1.2. DOCUMENT INCLUDES

- 1.2.1. Observation and Supervision.
- 1.2.2. Testing Laboratories and Agencies
- 1.2.3. Tests and Inspections
- 1.2.4. Selection and Payment
- 1.2.5. District's Testing Laboratory Responsibilities
- 1.2.6. Laboratory reports.
- 1.2.7. Limits on testing laboratory authority.
- 1.2.8. Contractor responsibilities.
- 1.2.9. Schedule of inspections and tests.
- 1.2.10. Project Inspector’s Access to Site

1.3. REFERENCES

- 1.3.1. ASTM D3740 - Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- 1.3.2. ASTM E329 - Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction.
- 1.3.3. CBC - California Building Code.
- 1.3.4. IBC - International Building Code.
- 1.3.5. Title 24, Parts 1 and 2, of the California Code of Regulations. Contractor shall keep a copy of these available at the job Site for ready reference during construction

- 1.3.6. DSA - Division of the State Architect, Office of Regulation Services, Structural Safety Section. DSA shall be notified at or before the start of construction.

1.4. OBSERVATION AND SUPERVISION

- 1.4.1. The District and Architect or their appointed representatives will review the Work and the Contractor shall provide facilities and access to the Work at all times as required to facilitate this review. Administration by the Architect and any consulting Structural Engineer will be in accordance with applicable regulations, including, without limitation, 24 C.C.R. § 4-341.
- 1.4.2. One or more Project Inspector(s) approved by DSA and employed by or in contract with the District("Project Inspector"), will observe the Work in accordance with 24 C.C.R. §§ 4-333(b) and 4-342:
- 1.4.3. Project Inspector shall have access to the Work wherever it is in preparation or progress for ascertaining that the Work is in accordance with the Contract Documents and all applicable code sections. Contractor shall provide facilities and access as required and shall provide assistance for sampling or measuring materials.
- 1.4.3.1. Project Inspector will notify District and Architect and inform Contractor of any observed failure of Work or material to conform to Contract Documents.
- 1.4.3.2. The Project Inspector shall observe and monitor all testing and inspection activities required.
- 1.4.4. Contractor shall conform with all applicable laws as indicated in the Contract Documents, including, without limitation, to 24 C.C.R. § 4-343. Contractor shall supervise and direct the Work and maintain a competent superintendent on the Project who is authorized to act in all matters pertaining to the Work. The Contractor shall inspect all materials, as they arrive, for compliance with the Contract Documents. Contractor shall reject defective Work or materials immediately upon delivery or failure of the Work or material to comply with the Contract Documents. The Contractor shall submit verified reports as indicated in the Contract Documents, including, without limitation, the Specifications and as required by 24 C.C.R. § 4-336.

1.5. TESTING LABORATORIES AND AGENCIES

- 1.5.1. Testing agencies and tests shall be in conformance with the Contract Documents and the requirements of 24 C.C.R. § 4-335.
- 1.5.2. Testing and inspection in connection with earthwork shall be under the direction of the District's consulting soils engineer ("Soils Engineer").
- 1.5.3. Testing and inspection of construction materials and workmanship shall be performed by a qualified laboratory ("Testing Laboratory" or "Laboratory"). The Testing Laboratory shall be under direction of an engineer registered in the State of California, shall conform to requirements of ASTM E329, and shall be employed by or in contract with the District.

1.6. TESTS AND INSPECTIONS

- 1.6.1. Contractor shall be responsible for notifying District and Project Inspector of all required tests and inspections. Contractor shall notify District and Project Inspector forty-eight (48) hours in advance of performing any Work requiring testing or inspection.
- 1.6.2. Contractor shall provide access to Work to be tested and furnish incidental labor, equipment, and facilities to facilitate all inspections and tests.
- 1.6.3. District will pay for first inspections and tests required by the Title 24 and other inspections or tests that District and/or Architect may direct to have made, including, but not limited to, the following principal items:
 - 1.6.3.1. Tests and observations for earthwork and pavings.
 - 1.6.3.2. Tests for concrete mix designs, including tests of trial batches.
 - 1.6.3.3. Tests and inspections for structural steel work.
 - 1.6.3.4. Field tests for framing lumber moisture content.
 - 1.6.3.5. Additional tests directed by District that establish that materials and installation comply with the Contract Documents.
 - 1.6.3.6. Test and observation of welding and expansion anchors.
 - 1.6.3.7. Factory observation of components and assembly of modular prefabrication structures and buildings.
- 1.6.4. District may at its discretion, pay and back charge Contractor for:
 - 1.6.4.1. Retests or reinspections, if required, and tests or inspection required due to Contractor error or lack of required identifications of material.
 - 1.6.4.2. Uncovering of work in accordance with Contract Documents.
 - 1.6.4.3. Testing done on weekends, holidays, and overtime will be chargeable to Contractor for the overtime portion.
 - 1.6.4.4. Testing done off site.
- 1.6.5. Testing and inspection reports and certifications:
 - 1.6.5.1. If initially received by Contractor, Contractor shall provide to each of the following a copy of the agency or laboratory report of each test or inspection or certification: District; Construction Manager, if any; Architect; Consulting Engineer, if any; Other Engineers on the Project, as appropriate; and; Project Inspector.
 - 1.6.5.2. When the test or inspection is one required by the Title 24, a copy of the report shall also be provided to the DSA.

1.7. SELECTION AND PAYMENT

- 1.7.1. District will hire and pay for services of an independent Testing Laboratory to perform specified inspection and testing as specified by District's Testing Laboratory.

- 1.7.2. District's hiring of Testing Laboratory shall in no way relieve Contractor of its obligation to perform work in accordance with requirements of Contract Documents.

1.8. DISTRICT'S TESTING LABORATORY RESPONSIBILITIES

- 1.8.1. Test samples of mixes submitted by Inspector.
- 1.8.2. Perform specified inspection, sampling, and testing of Products in accordance with specified standards.
- 1.8.3. Notify Architect and Contractor of observed irregularities or non-conformance of Work or Products.
- 1.8.4. Attend preconstruction conferences and progress meetings when requested by Architect.

1.9. LABORATORY REPORTS

- 1.9.1. After each inspection and test, District shall then submit one copy of laboratory report to Contractor. Reports of test results of materials and inspections found not to be in compliance with the requirements of the Contract Documents shall be forwarded immediately.
- 1.9.2. Each Testing Laboratory shall submit a verified report covering all of the tests which were required to be made by that agency during the progress of the Project. Such report shall be furnished each time that Work is suspended, covering the tests up to that time and at the Completion of the Project, covering all tests.

1.10. LIMITS ON TESTING LABORATORY AUTHORITY

- 1.10.1. Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
- 1.10.2. Laboratory may not approve or accept any portion of the Work.
- 1.10.3. Laboratory may not assume any duties of Contractor.
- 1.10.4. Laboratory has no authority to stop the Work.

1.11. CONTRACTOR RESPONSIBILITIES

- 1.11.1. Submit proposed items for testing as required herein and/or as further required in the Contract Documents to Architect for review in accordance with applicable specifications.
- 1.11.2. Cooperate with Laboratory personnel, and provide access to the Work and to manufacturer's facilities.
- 1.11.3. Notify Architect, District, and Testing Laboratory 48 hours prior to expected time for operations requiring inspection and testing services.
- 1.11.4. When tests or inspections cannot be performed after such notice, reimburse District for Laboratory personnel and travel expenses incurred due to the Contractor's negligence.

1.11.5. Contractor shall notify District a sufficient time in advance of the manufacture of material to be supplied by Contractor pursuant to the Contract Documents, which must by terms of the Contract be tested, in order that the District may arrange for the testing of same at the source of supply.

1.11.5.1. 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 that such testing and inspection will not be required shall not be incorporated in the Work.

1.11.6. Contractor shall contract and pay for services of District's Testing Laboratory to perform additional inspections, sampling and testing required when initial tests indicate Contractor's work and/or materials does not comply with Contract Documents.

1.12. SCHEDULE OF INSPECTIONS AND TESTS

The Testing Laboratory shall perform tests and inspections for the following in conformance with the (CBC) California Building Code (International Building Code with State of California Amendments), California Code of Regulations, Title 24, Part 2:

- Structural Tests and Special Inspections (Chapter 17A)
 - Special Inspections (§ 1704A)
- Soils and Foundations (Chapter 18A)
 - Geotechnical Investigations (§ 1803A)
- Concrete (Chapter 19A)
 - Specifications for Tests and Materials
 - Concrete Quality, Mixing and Placing
 - Concrete Reinforcement and Anchor Testing Inspection (§ 1916A)

1.12.1. Plumbing

Testing as specified in Division 15 including, but not limited to: Sterilization, soil waste and vent, water piping, source of water, gas piping, downspouts and storm drains.

1.12.2. Automatic Fire Sprinklers (where applicable)

Testing as specified in Division 15 shall include, but not be limited to: hydrostatic pressure.

1.12.3. Heating, Ventilating and Air Conditioning

Testing as specified in Division 15 shall include, but not be limited to: Ductwork tests, cooling tower tests, boiler tests, controls testing, piping tests, water and air systems, and test and balance of heating and air conditioning systems.

1.12.4. Electrical

Testing as specified in Division 16, including, but not limited to: Equipment testing, all electrical system operations, grounding system and checking insulation after cable is pulled.

1.13. PROJECT INSPECTOR'S ACCESS TO SITE

1.13.1. A Project Inspector employed by the District in accordance with the requirement of State of California Code of Regulations, Title 24, Part 1 will be assigned to the Work.

Project Inspector's duties are specifically defined in 24. C.C.R. §4-342, and as indicated in the General Conditions.

- 1.13.2. District and Construction Manager shall at all times have access for the purpose of inspection to all parts of the Work and to the shops wherein the Work is in preparation, and Contractor shall at all times maintain proper facilities and provide safe access for such inspection.
- 1.13.3. The Work in all stages of progress shall be subject to the personal continuous observation of the Inspector. Inspector shall have free access to any or all parts of the Work at any time. Contractor shall furnish the Inspector reasonable facilities for obtaining such information as may be necessary to keep Inspector fully informed respecting the progress and manner of the Work and the character of the materials. Inspection of the Work shall not relieve the Contractor from any obligation set forth in the Contract Documents.
- 1.13.4. The Inspector is not authorized to change, revoke, alter, enlarge or decrease in any way any requirement of the Contract Documents, drawings, specifications or subsequent change orders.
- 1.13.5. Whenever there is insufficient evidence of compliance with any of the provisions of Title 24 or evidence that any material or construction does not conform to the requirements of Title 24, the Division of the State Architect may require tests as proof of compliance. Test methods shall be as specified herein or by other recognized and accepted test methods determined by the Division of the State Architect. All tests shall be performed by a testing laboratory accepted by the Division of the State Architect.

END OF DOCUMENT

TEMPORARY FACILITIES AND CONTROLS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Site Standards; and
- 1.1.5. Temporary Tree and Plant Protection.

1.2. TEMPORARY UTILITIES

1.2.1. Electric Power and Lighting:

- 1.2.1.1. Contractor will furnish and pay for power during the course of the work to the extent power is not in the building(s) or on the Site. Contractor shall be responsible for providing temporary facilities required on the Site to point of intended use.
- 1.2.1.2. Contractor shall furnish, wire for, install, and maintain temporary electrical lights wherever it is necessary to provide illumination for the proper performance and/or observation of the Work: a minimum of 20 foot-candles for rough work and 50 foot-candles for finish work.
- 1.2.1.3. Contractor shall be responsible for maintaining existing lighting levels in the Project vicinity should temporary outages or service interruptions occur.

1.2.2. Heat and Ventilation:

- 1.2.2.1. Contractor shall provide temporary heat to maintain environmental conditions to facilitate progress of the Work, to meet specified minimum conditions for the installation and curing of materials, and to protect materials and finishes from damage due to improper temperature and humidity conditions. Portable heaters shall be standard units complete with controls.
- 1.2.2.2. Contractor shall provide forced ventilation and dehumidification, as required, of enclosed areas for proper installation and curing of materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors, and gases.
- 1.2.2.3. Contractor shall pay the costs of installation, maintenance, operation, and removal of temporary heat and ventilation, including costs for fuel consumed, required for the performance of the Work.

1.2.3. **Water:**

1.2.3.1. Contractor will furnish and pay for water during the course of the work. Contractor shall be responsible for providing temporary facilities required.

1.2.3.2. Contractor shall make potable water available for human consumption.

1.2.4. **Sanitary Facilities:**

1.2.4.1. Contractor shall provide sanitary temporary facilities in no fewer numbers than required by law and such additional facilities as may be directed by the Inspector for the use of all workers. The facilities shall be maintained in a sanitary condition at all times and shall be left at the Site until removal is directed by the District or Contractor completes all Work.

1.2.4.2. Use of toilet facilities in the Site shall not be permitted except by consent of the Project Inspector and District.

1.2.5. **Telephone Service:**

1.2.5.1. Contractor shall arrange with local telephone service company for telephone service for the performance of the Work. Contractor shall, at a minimum, provide in its field office one line for telephone and one line for fax machine.

1.2.5.2. Contractor shall pay the costs for telephone and fax lines installation, maintenance, service, and removal; for Construction Site Office, Construction Manager's Office and Inspector's Office.

1.2.6. **Fire Protection:**

1.2.6.1. Contractor shall provide and maintain fire extinguishers and other equipment for fire protection. Such equipment shall be designated for use for fire protection only and shall comply with all requirements of the California Fire, State Fire Marshall and/or its designee.

1.2.6.2. Where on-site welding and burning of steel is unavoidable, Contractor shall provide protection for adjacent surfaces.

1.2.7. **Trash Removal:**

1.2.7.1. Contractor shall provide trash removal on a timely basis from all Site Offices and throughout the Site.

1.2.8. **Temporary Facilities:**

1.2.8.1. Contractor shall provide sufficient space and facilities for its own force's needs.

1.3. CONSTRUCTION AIDS

1.3.1. **Plant and Equipment:**

1.3.1.1. Contractor shall furnish, operate, and maintain a complete plant for fabricating, handling, conveying, installing, and erecting materials and equipment; and for

conveyances for transporting workmen. Include elevators, hoists, debris chutes, and other equipment, tools, and appliances necessary for performance of the Work.

1.3.1.2. Contractor shall maintain plant and equipment in safe and efficient operating condition. Damages due to defective plant and equipment, and uses made thereof, shall be repaired by Contractor at no expense to the District.

1.3.2. No District tools or equipment shall be used by Contractor or its subcontractors for the performance of the Work.

1.4. BARRIERS AND ENCLOSURES

1.4.1. Contractor shall obtain District's written permission for locations and types of temporary barriers and enclosures, including fire-rated materials proposed for use, prior to their installation.

1.4.2. Contractor shall provide a six (6) foot high, chain link perimeter fence with posts driven into the ground and fabric screen as a temporary barrier around construction area. Contractor shall provide and maintain temporary enclosures to prevent public entry and to protect persons using other buildings and portions of the Site and/or Premises. Contractor shall remove temporary fence, barriers and enclosure upon Completion of the Work.

1.4.3. Contractor shall provide site access to existing facilities for persons using other buildings and portions of the Site, for the public, and for deliveries and other services and activities.

1.5. SECURITY

Contractor shall secure all construction equipment, machinery and vehicles, park and store only within fenced area, and render inoperable during non-work hours. Contractor is responsible for ensuring that no construction materials, tools, equipment, machinery or vehicles can be used for unauthorized entry or other damage or interference to activities and security of existing facilities adjacent to and in the vicinity of the Project Site.

1.6. TEMPORARY CONTROLS

1.6.1. Noise Control:

1.6.1.1. Contractor acknowledges that adjacent facilities may remain in operation during all or a portion of the Work, and Contractor shall take all reasonable precautions to minimize noise as required by applicable laws and the Contract Documents.

1.6.1.2. Notice of proposed noisy operations, including without limitation, operation of pneumatic demolition tools, concrete saws, and other equipment, shall be submitted to District a minimum of forty-eight (48) hours in advance of their performance.

1.6.2. Noise and Vibration:

1.6.2.1. Equipment and impact tools shall have intake and exhaust mufflers.

- 1.6.2.2. Contractor shall cooperate with District to minimize and/or cease the use of noisy and vibratory equipment if that equipment becomes objectionable by its longevity.

1.6.3. Dust and Dirt:

- 1.6.3.1. Contractor shall conduct demolition and construction operations to minimize the generation of dust and dirt, and prevent dust and dirt from interfering with the progress of the Work and from accumulating in the Work and adjacent areas including, without limitation, occupied facilities.
- 1.6.3.2. Contractor shall periodically water exterior demolition and construction areas to minimize the generation of dust and dirt.
- 1.6.3.3. Contractor shall ensure that all hauling equipment and trucks carrying loads of soil and debris shall have their loads sprayed with water or covered with tarpaulins, and as otherwise required by local and state ordinance.
- 1.6.3.4. Contractor shall prevent dust and dirt from accumulating on walks, roadways, parking areas, and planting, and from washing into sewer and storm drain lines.

1.6.4. Surface and Subsurface Water:

Contractor shall not permit surface and subsurface water, and other liquids, to accumulate in or about the vicinity of the Premises. Should accumulation develop, Contractor shall control the water or other liquid, and suitably dispose of it by means of temporary pumps, piping, drainage lines, troughs, ditches, dams, or other methods.

1.6.5. Pollution:

- 1.6.5.1. No burning of refuse, debris, or other materials shall be permitted on or in the vicinity of the Premises.
- 1.6.5.2. Contractor shall comply with applicable regulatory requirements and anti-pollution ordinances during the conduct of the Work including, without limitation, demolition, construction, and disposal operations.

1.6.6. Lighting

If portable lights are used after dark, all light must be located so as not to direct light into neighboring property.

1.7. JOB SIGN(S)

1.7.1. General:

- 1.7.1.1. Contractor shall provide and maintain and locate a Project identification sign with the design, text, and colors designated by District and/or the Architect.
- 1.7.1.2. Signs other than the specified Project sign and or signs required by law, for safety, or for egress, shall not be permitted, unless otherwise approved in advance by the District.

1.7.2. Materials:

1.7.2.1. Structure and Framing: Structurally sound, new or used wood or metal; wood shall be nominal 3/4-inch exterior grade plywood.

1.7.2.2. Sign Surface: Minimum 3/4-inch exterior grade plywood.

1.7.2.3. Rough Hardware: Galvanized.

1.7.2.4. Paint: Exterior quality, of type and colors selected by the District and/or the Architect.

1.7.3. Fabrication:

1.7.3.1. Contractor shall fabricate to provide smooth, even surface for painting.

1.7.3.2. Size: 4'-0" x 8'-0", unless otherwise indicated.

1.7.3.3. Contractor shall paint exposed surfaces of supports, framing, and surface material with exterior grade paint: one coat of primer and one coat of finish paint.

1.7.3.4. Text and Graphics: As indicated.

1.8. PUBLICITY RELEASES

Contractor shall not release any information, story, photograph, plan, or drawing relating to information about the Project to anyone, including press and other public communications medium, including, without limitation, on website(s).

END OF DOCUMENT

DOCUMENT 01 52 10

SITE STANDARDS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS:

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions, including without limitation, Site Access, Conditions, and Regulations;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Drug-Free Workplace Certification;
- 1.1.5. Tobacco-Free Environment Certification;
- 1.1.6. Criminal Background Investigation/Fingerprinting Certification; and
- 1.1.7. Temporary Facilities and Controls.

1.2. REQUIREMENTS OF THE DISTRICT

1.2.1. Drug-Free Schools and Safety Requirements:

- 1.2.1.1. All school sites and other District Facilities have been declared "Drug-Free Zones." No drugs, alcohol, smoking or the use of tobacco products are allowed at any time in any buildings, Contractor-owned vehicles or vehicles owned by others while on District property. No students, staff, visitors, or contractors are to use drugs on these sites.
- 1.2.1.2. Contractor shall post: "Non-Smoking Area" in a highly visible location on Site. Contractor may designate a smoking area outside of District property within the public right-of-way, provided that this area remains quiet and unobtrusive to adjacent neighbors. This smoking area must be kept clean at all times.
- 1.2.1.3. Contractor shall ensure that no alcohol, firearms, weapons, or controlled substances enter or are used at the Site. Contractor shall immediately remove from the Site and terminate the employment of any employee(s) found in violation of this provision.

- 1.2.2. **Language:** Unacceptable and/or loud language will not be tolerated, "Cat calls" or other derogatory language toward students or public will not be allowed.

1.2.3. Disturbing the Peace (Noise and Lighting):

- 1.2.3.1. Contractor shall observe the noise ordinance of the Site at all times including, without limitation, all applicable local, city, and/or state laws, ordinances, and/or regulations regarding noise and allowable noise levels.

1.2.3.2. The use of radios, etc., shall be controlled to keep all sound at a level that cannot be heard beyond the immediate area of use. District reserves the right to prohibit the use of radios at the Site, except for handheld communication radios.

1.2.3.3. If portable lights are used after dark, the lights must be located so as not to direct light into neighboring properties.

1.2.4. **Traffic:**

1.2.4.1. Driving on the Premises shall be limited to periods when students and public are not present. If driving or deliveries must be made during the school hours, two (2) or more ground guides shall lead the vehicle across the area of travel. In no case shall driving take place across playgrounds or other pedestrian paths during recess, lunch, and/or class period changes. The speed limit on-the Premises shall be five (5) miles per hour (maximum) or less if conditions require.

1.2.4.2. All paths of travel for deliveries, including without limitation, material, equipment, and supply deliveries, shall be reviewed and approved by District in advance. Any damage will be repaired to the pre-damaged condition by the Contractor.

1.2.4.3. District shall designate a construction entry to the Site. If Contractor requests, District determines it is required, and to the extent possible, District shall designate a staging area so as not to interfere with the normal functioning of school facilities. Location of gates and fencing shall be approved in advance with District and at Contractor's expense.

1.2.4.4. Parking areas shall be reviewed and approved by District in advance. No parking is to occur under the drip line of trees or in areas that could otherwise be damaged.

1.2.4.5. All of the above shall be observed and complied with by the Contractor and all workers on the Site. Failure to follow these directives could result in individual(s) being suspended or removed from the work force at the discretion of the District. The same rules and regulations shall apply equally to delivery personnel, inspectors, consultants, and other visitors to the Site.

END OF DOCUMENT

DOCUMENT 01 56 39

TEMPORARY TREE AND PLANT PROTECTION

Also refer to Division 02 56 39- Tree Preservation and Protection (L)

1. GENERAL

1.1. RELATED DOCUMENTS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any); and
- 1.1.4. Temporary Facilities and Controls.

1.2. SUMMARY

This Document includes the protection and trimming of existing trees that interfere with, or are affected by, execution of the Work, whether temporary or permanent construction.

1.3. DEFINITIONS

Tree Protection Zone: Area surrounding individual trees or groups of trees to remain during construction, and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.

1.4. SUBMITTALS

- 1.4.1. Product Data: For each type of product indicated.
- 1.4.2. Tree Pruning Schedule: Written schedule from arborist detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.
- 1.4.3. Qualification Data: For tree service firm and arborist.
- 1.4.4. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.
- 1.4.5. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.

1.5. QUALITY ASSURANCE

- 1.5.1. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed tree protection and trimming work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of tree protection and trimming.

- 1.5.2. Arborist Qualifications: An arborist certified by ISA (International Society of Arboriculture) or licensed in the jurisdiction where Project is located.
- 1.5.3. Tree Pruning Standard: Comply with ANSI A300 (Part 1), "Tree, Shrub, and Other Woody Plant Maintenance--Standard Practices (Pruning)."
- 1.5.3.1. Before tree protection and trimming operations begin, meet with District to review tree protection and trimming procedures and responsibilities.

2. PRODUCTS

2.1. MATERIALS

- 2.1.1. Unless otherwise specified, Contractor shall select materials as recommended by arborist or landscape architect.
- 2.1.2. Drainage Fill: Selected crushed stone, or crushed or uncrushed gravel, washed, ASTM D 448, Size 24, with 90 to 100 percent passing a 2-1/2-inch (63-mm) sieve and not more than 10 percent passing a 3/4-inch (19-mm) sieve.
- 2.1.3. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 1 inch (25 mm) in diameter; and free of weeds, roots, and toxic and other nonsoil materials.
 - 2.1.3.1. Obtain topsoil only from well-drained sites where topsoil is 4 inches (100 mm) deep or more; do not obtain from bogs or marshes.
- 2.1.4. Filter Fabric: Manufacturer's standard, nonwoven, pervious, geotextile fabric of polypropylene, nylon, or polyester fibers.
- 2.1.5. Chain-Link Fence: Metallic-coated steel chain-link fence fabric of 0.120-inch- (3-mm-) diameter wire; a minimum of 48 inches (1200 mm) high; with 1.9-inch- (48-mm-) diameter line posts; 2-3/8-inch- (60-mm-) diameter terminal and corner posts; 1-5/8-inch- (41-mm-) diameter top rail; and 0.177-inch- (4.5-mm-) diameter bottom tension wire; with tie wires, hog ring ties, and other accessories for a complete fence system.
- 2.1.6. Select mulch as recommended by arborist or landscape architect.
- 2.1.7. Organic Mulch: Use shredded hardwood, ground or shredded bark, or wood and bark chips, all free of deleterious materials.

3. EXECUTION

3.1. PREPARATION

- 3.1.1. Temporary Fencing: Install temporary fencing around tree protection zones to protect remaining trees and vegetation from construction damage. Maintain temporary fence and remove when construction is complete.
- 3.1.2. Install chain-link fence according to ASTM F 567 and manufacturer's written instructions.

- 3.1.3. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.
- 3.1.4. Mulch areas inside tree protection zones and other areas indicated.
 - 3.1.4.1. Select mulch as recommended by arborist or landscape architect.
 - 3.1.4.2. Apply 2-inch (50-mm) to 3-inch (75-mm) average thickness of organic mulch. Do not place mulch within 6 inches (150 mm)] of tree trunks.
- 3.1.5. Do not store construction materials, debris, or excavated material inside tree protection zones. Do not permit vehicles or foot traffic within tree protection zones; prevent soil compaction over root systems.
- 3.1.6. Maintain tree protection zones free of weeds and trash.
- 3.1.7. Do not allow fires within tree protection zones.

3.2. EXCAVATION

- 3.2.1. Install shoring or other protective support systems to minimize sloping or benching of excavations where construction or utility excavation is near trees to be protected.
- 3.2.2. Do not excavate within tree protection zones, unless otherwise indicated.
- 3.2.3. Where excavation for new construction is required within tree protection zones, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks and comb soil to expose roots.
 - 3.2.3.1. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.
- 3.2.4. Where utility trenches are required within tree protection zones, tunnel under or around roots by drilling, auger boring, pipe jacking, or digging by hand.
 - 3.2.4.1. Root Pruning: Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots with sharp pruning instruments; do not break or chop.

3.3. REGRADING

- 3.3.1. Grade Lowering: Where new finish grade is indicated below existing grade around trees, slope grade beyond tree protection zones. Maintain existing grades within tree protection zones.
- 3.3.2. Grade Lowering: Where new finish grade is indicated below existing grade around trees, slope grade away from trees as recommended by arborist, unless otherwise indicated.
 - 3.3.2.1. Root Pruning: Prune tree roots exposed during grade lowering. Do not cut main lateral roots or taproots; cut only smaller roots. Cut roots with sharp pruning instruments; do not break or chop.

- 3.3.3. Minor Fill: Where existing grade is 6 inches (150 mm) or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.
- 3.3.4. Moderate Fill: Where existing grade is more than 6 inches (150 mm) but less than 12 inches (300 mm) below elevation of finish grade, place drainage fill, filter fabric, and topsoil on existing grade as follows:
 - 3.3.4.1. Carefully place drainage fill against tree trunk approximately 2 inches (50 mm) above elevation of finish grade and extend not less than 18 inches (450 mm) from tree trunk on all sides. For balance of area within drip-line perimeter, place drainage fill up to 6 inches (150 mm) below elevation of grade.
 - 3.3.4.2. Place filter fabric with edges overlapping 6 inches (150 mm) minimum.
 - 3.3.4.3. Place fill layer of topsoil to finish grade. Do not compact drainage fill or topsoil. Hand grade to required finish elevations.

3.4. TREE PRUNING

- 3.4.1. Prune trees to remain that are affected by temporary and permanent construction.
- 3.4.2. Prune trees to remain to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during Contract period as recommended by arborist.
- 3.4.3. Pruning Standards: Prune trees according to ANSI A300 (Part 1), as recommended by arborist report.
- 3.4.4. Adjust pruning requirements per arborist's recommendations.
- 3.4.5. Cut branches with sharp pruning instruments; do not break or chop.
- 3.4.6. Modify below to specific project requirements.
- 3.4.7. Chip removed tree branches and dispose of or spread over areas identified by District.

3.5. TREE REPAIR AND REPLACEMENT

- 3.5.1. Promptly repair trees damaged by construction operations within 24 hours. Treat damaged trunks, limbs, and roots according to arborist's written instructions.
- 3.5.2. Remove and replace trees indicated to remain that die or are damaged during construction operations or that are incapable of restoring to normal growth pattern.
 - 3.5.2.1. Provide new trees of 6-inch (150-mm) caliper size and of a when damaged trees more than 6 inches (150 mm) in caliper size, measured 12 inches (300 mm) above grade, are required to be replaced. Plant and maintain new trees as specified in Contract Documents.
- 3.5.3. Where recommended by arborist report, aerate surface soil, compacted during construction, 10 feet (3 m) beyond drip line and no closer than 36 inches (900 mm) to tree trunk. Drill 2-inch (50-mm) diameter holes a minimum of 12 inches (300 mm) deep at 24 inches (600 mm) o.c. Backfill holes with an equal mix of augered soil and sand.

3.6. DISPOSAL OF WASTE MATERIALS

3.6.1. Burning is not permitted.

3.6.2. Disposal: Remove excess excavated material and displaced trees from Site.

END OF DOCUMENT

DOCUMENT 01 57 10

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) – CONSTRUCTION

1. GENERAL

1.15. RELATED DOCUMENTS AND PROVISION

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.15.1. General Conditions;
- 1.15.2. Special Conditions (if any);
- 1.15.3. Supplemental Conditions (if any);
- 1.15.4. Site Standards;
- 1.15.5. Collaborative for High Performance Schools (CHPS) -- Special Environmental.

1.16. The Clean Water Act and Porter Cologne Water Quality Act prohibit the discharge of any water containing pollutants from certain construction sites unless a National Pollutant Discharge Elimination System permit is first obtained and followed. The National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction Storm Water Permit) Order No. 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ (NPDES No. CAS000002) issued by the California State Water Resources Control Board (State Water Board) authorizes the discharge of storm water and certain non-storm water from construction sites if certain conditions and measures are taken. The District has determined that the construction of this Project requires enrollment in the Construction Storm Water Permit.

2. SUBMITTALS

2.1. GENERAL

All submittals shall be made in a form conducive for the District to electronically upload the approved submittals to the Storm water Multi-Application Reporting and Tracking System (SMARTS).

2.2. RISK ASSESSMENT

- 2.2.1. Concurrent with the Submittal Schedule as indicated in the General Conditions, Contractor shall prepare and submit a proposed "Risk Assessment" as set forth in the Construction Storm Water Permit.
- 2.2.2. The District's Qualified SWPPP Developer ("QSD") will review the Contractor's proposed Risk Assessment for compliance with the Construction Storm Water Permit. If changes to the proposed Risk Assessment are required to comply with the Construction Storm Water Permit, the District QSD will identify such changes to the Contractor.
- 2.2.3. Contractor shall make the changes specified by the District's QSD and shall submit the revised Risk Assessment to the District within seven (7) days of receipt of the changes

identified by the District's QSD. If the changes had been acceptably made, the District's QSD will approve the Risk Assessment and provide the Contractor with a copy within seven (7) days of receipt of the revised Risk Assessment.

2.3. SITE MAPS

- 2.3.1. Concurrent with the Submittal Schedule as indicated in the General Conditions, Contractor shall prepare and submit proposed "Site Maps" as described in Attachment B of the Construction Storm Water Permit.
- 2.3.2. The District's QSD will review the Contractor's proposed Site Maps for compliance with the Construction Storm Water Permit. If changes to the proposed Site Maps are required to comply with the Construction Storm Water Permit, the District QSD will identify such changes to the Contractor.
- 2.3.3. Contractor shall make the changes specified by the District's QSD and shall submit the revised Site Maps to the District within seven (7) days of receipt of the changes identified by the District's QSD. If the changes had been acceptably made, the District's QSD will approve the Site Maps and provide the Contractor with a copy within seven (7) days of receipt of the revised SWPPP.

2.4. SWPPP

- 2.4.1. Concurrent with the Submittal Schedule as indicated in the General Conditions, Contractor shall prepare and submit to the District a proposed SWPPP for the Work.
- 2.4.2. The District's QSD will review the Contractor's proposed SWPPP for compliance with the Construction Storm Water Permit. If changes to the proposed SWPPP are required to comply with the Construction Storm Water Permit, the District QSD will identify such changes to the Contractor.
- 2.4.3. Contractor shall make the changes specified by the District's QSD and shall submit the revised SWPPP to the District within seven (7) days of receipt of the changes identified by the District's QSD. If the changes had been acceptably made, the District's QSD will approve the SWPPP and provide the Contractor with a copy within seven (7) days of receipt of the revised SWPPP.

2.5. RAIN EVENT ACTION PLAN (REAP) – CONTRACTOR'S OBLIGATIONS TO PREPARE

- 2.5.1. A Rain Event Action Plan (REAP) is a written document, specific for each rain event. A REAP should be designed so that when implemented it protects all exposed portions of the site within 48 hours of any likely rain.
- 2.5.2. The General Permit requires Risk Level 2 and 3 dischargers to develop and implement a REAP designed to protect all exposed portions of their sites within 48 hours prior to any likely precipitation event. The REAP requirement is designed to ensure that the discharger has adequate materials, staff, and time to implement erosion and sediment control measures that are intended to reduce the amount of sediment and other pollutants generated from the active site. A REAP must be developed when there is likely a forecast of 50% or greater probability of precipitation in the Project area. (The National Oceanic and Atmospheric Administration (NOAA) defines a chance of

precipitation as a probability of precipitation of 30% to 50% chance of producing precipitation in the project area. The NOAA defines the probability of precipitation as the likelihood of occurrence (expressed as a percent) of a measurable amount (0.01 inch or more) of liquid precipitation (or the water equivalent of frozen precipitation) during a specified period of time at any given point in the forecast area). Forecasts are normally issued for 12-hour time periods.

- 2.5.3. Contractor shall prepare and submit to the District a proposed REAP for the Work.
- 2.5.4. The District's QSD will review the Contractor's proposed REAP for compliance with the Construction Storm Water Permit. If changes to the proposed REAP are required to comply with the Construction Storm Water Permit, the District QSD will identify such changes to the Contractor.
- 2.5.5. Contractor shall make the changes specified by the District's QSD and shall submit the revised REAP to the District within seven (7) days of receipt of the changes identified by the District's QSD. If the changes had been acceptably made, the District's QSD will approve the REAP and provide the Contractor with a copy within seven (7) days of receipt of the revised REAP.

2.6. ACTIVE TREATMENT SYSTEM (ATS)

- 2.6.1. If Contractor determines that Site requires an ATS under the Construction Storm Water Permit, concurrent with the Submittal Schedule as indicated in the General Conditions, Contractor shall prepare and submit to the District a proposed ATS for the Work.
- 2.6.2. The District's QSD will review the Contractor's proposed ATS for compliance with the Construction Storm Water Permit. If changes to the proposed ATS are required to comply with the Construction Storm Water Permit, the District QSD will identify such changes to the Contractor.
- 2.6.3. Contractor shall make the changes specified by the District's QSD and shall submit the revised ATS to the District within seven (7) days of receipt of the changes identified by the District's QSD. If the changes had been acceptably made, the District's QSD will approve the ATS and provide the Contractor with a copy within seven (7) days of receipt of the revised ATS.

2.7. RECORDS

All electronic and hardcopy records required by the Construction Storm Water Permit shall be submitted to the District within seven (7) days of Completion of the Project.

3. PERMIT REGISTRATION DOCUMENTS

Prior to any activities on Site that disturb the Site's surface, the Permit Registration Documents (PRDs) required by the Construction Storm Water Permit must be filed with the Regional Water Quality Control Board. The District shall file the PRDs with the Regional Water Quality Control Board to activate coverage under the Construction Storm Water Permit.

4. IMPLEMENTATION REQUIREMENTS

- 4.1. Contractor shall not conduct any activities that may affect the Site's construction runoff water quality until the District provides Contractor with the Waste Discharger Identification Number (WDID) assigned to the Project by the State Water Board.
- 4.2. Contractor shall keep a copy of the approved SWPPP at the job site. The SWPPP shall be made available when requested by a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency, or the local storm water management agency. Requests from the public shall be directed to the District for response.
- 4.3. Contractor shall designate in writing to the District a Qualified SWPPP Practitioner (QSP) who shall be responsible for implementing the SWPPP, REAP (if applicable), ATS (if applicable), conducting non-storm water and storm water visual observations, and for ensuring that all best management practices (BMPs) required by the SWPPP and General Permit are properly implemented and maintained.
- 4.4. All measures required by the SWPPP shall be implemented concurrent with the commencement of construction. Pollution practices and devices shall be followed or installed as early in the construction schedule as possible with frequent upgrading of devices as construction progresses.
- 4.5. Contractor shall ensure that all measures are properly maintained and repaired to protect the water quality of discharges.

5. INSPECTION, SAMPLING, ANALYSIS, AND RECORD KEEPING REQUIREMENTS

The Contractor's QSP shall conduct all required visual observations, sampling, analysis, reporting, and record keeping required by the SWPPP and the Construction Storm Water Permit.

6. REPORTING REQUIREMENTS

Contractor shall prepare and provide all the reports, which include, but are not limited to the Annual Report and any NEL Violation Reports or NAL Exceedance Reports, all of which are required by the SWPPP and the Construction Storm Water Permit.

7. ANNUAL REPORT

By August 1 of each year (defined as July 1 to June 30) that had at least one continuous three (3) month period coverage under the General Permit, Contractor shall complete and submit to the District an Annual Report, as required by the General Permit. If the Project is complete prior to August 1, Contractor shall submit the report prior to acceptance of the Project.

8. COMPLETION OF WORK

- 8.1. Clean-up shall be performed as each portion of the Work progresses. All refuse, excess material, and possible pollutants shall be disposed of in a legal manner off-site and all temporary and permanent SWPPP devices shall be in place and maintained in good condition.
- 8.2. At Completion of Work, Contractor shall inspect installed SWPPP devices, and present the currently implemented SWPPP with all backup records to the District.

9. NOTICE OF TERMINATION (NOT)

A Notice of Termination (NOT) must be submitted by the Contractor to the District for electronic submittal by the Legally Responsible Person via SMARTS to terminate coverage under the General Permit. The NOT must include a final Site Map and representative photographs of the Project Site that demonstrate final stabilization has been achieved. The NOT shall be submitted to the District on or before the Contractor submits its final application for payment. If the Regional Water Board rejects the NOT for any reason, the Contractor shall revise the NOT as many times as necessary to obtain the Regional Water Board's approval. The Regional Water Board will consider a construction site complete when the conditions of Section II.D of the General Permit have been met.

10. QUALITY ASSURANCE

- 10.1.** Before performing any of the obligations indicated herein, the Contractor's QSP shall meet the training and certification requirements in the Construction Storm Water Permit.
- 10.2.** Contractor shall perform the Work in strict compliance with the approved SWPPP, REAP, ATS, and the Construction Storm Water Permit.
- 10.3.** Contractor shall conduct at least a one-hour training session on the requirements of the SWPPP for each employee before an employee conducts any Work on the Site. Contractor shall maintain documentation of this employee training at the Site for review by the District or any regulatory agency.

11. PERFORMANCE REQUIREMENTS

- 11.1.** The SWPPP is a minimum requirement. Revisions and modifications to the SWPPP are acceptable only if they maintain levels of protection equal to or greater than originally specified.
- 11.2.** Read and be thoroughly familiar with all of the requirements of the SWPPP.
- 11.3.** Inspect and monitor all work and storage areas for compliance with the SWPPP prior to any anticipated rain.
- 11.4.** Complete any and all corrective measures as may be directed by the regulatory agency.
- 11.5.** **Penalties:** Contractor shall pay any fees and any penalties that may be imposed by a regulatory agency for non-compliance with the SWPPP during the course of Work.
- 11.6.** **Costs:** Contractor shall pay all costs associated with the implementation of the requirements of the SWPPP in order to maintain compliance with the Permit. This includes installation of all Housekeeping BMPs, General Site and Material Management BMPs, Inspection requirements, maintenance requirements, and all other requirements specified in the SWPPP.

12. MATERIALS

All temporary and permanent storm water pollution prevention facilities, equipment, and materials as required by or as necessary to comply with the SWPPP as described in the BMP Handbook.

END OF DOCUMENT

DOCUMENT 01 60 00

MATERIALS AND EQUIPMENT

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions.
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any); and
- 1.1.4. Imported Materials Certification.

1.2. MATERIALS AND EQUIPMENT

- 1.2.1. Only items approved by the District and/or Architect shall be used.
- 1.2.2. Contractor shall submit lists of Products and other Product information in accordance with the Contract Documents, including, without limitation, the provisions regarding the submittals.

1.3. MATERIALS AND EQUIPMENT COLORS

- 1.3.1. The Contractor shall comply with all schedule(s) of colors provided by the District and/or Architect.
- 1.3.2. No individual color selections will be made until after approval of all pertinent materials and equipment and after receipt of appropriate samples in accordance with the Contract Documents, including, without limitation, the provisions regarding the submittals.
- 1.3.3. Contractor shall request priority in writing for any item requiring advance ordering to maintain the approved Construction Schedule.

1.4. DELIVERY, STORAGE, AND HANDLING

- 1.4.1. Contractor shall deliver manufactured materials in original packages, containers, or bundles (with seals unbroken), bearing name or identification mark of manufacturer. District may inspect materials prior to Contractor unloading the delivered materials. District may reject any materials that do not conform to the Contract Documents.
- 1.4.2. Contractor shall deliver fabrications in as large assemblies as practicable; where specified as shop-primed or shop-finished, package or crate as required to preserve such priming or finish intact and free from abrasion.

- 1.4.3. Contractor shall store materials in such a manner as necessary to properly protect them from damage. Materials or equipment damaged by handling, weather, dirt, or from any other cause will not be accepted.
- 1.4.4. Materials that have been warehoused for long periods of time, stored or transported in improper environment, improperly packaged, inadequately labeled, poorly protected, excessively shipped, deviated from normal distribution pattern, or reassembled are not acceptable.
- 1.4.5. Contractor shall store materials so as to cause no obstructions of sidewalks, roadways, or underground services. Contractor shall protect materials and equipment furnished pursuant to the Contract Documents.
- 1.4.6. Contractor may store materials on Site with prior written approval by District; all materials shall remain under Contractor's control and Contractor shall remain liable for any damage to the materials. Should the Project Site not have storage area available, the Contractor shall provide for off-site storage at no cost to District.
- 1.4.7. When any room in Project is used as a shop or storeroom, Contractor shall be responsible for any repairs, patching, or cleaning necessary due to that use. Location of storage space shall be subject to prior written approval by District.

2. PRODUCTS

2.1. MANUFACTURERS

- 2.1.1. Manufacturers listed in various sections of the Contract Documents are names of those manufacturers that are believed to be capable of supplying one or more of the items specified therein.
- 2.1.2. The listing of a manufacturer does not imply that every product of that manufacturer is acceptable or as meeting the requirements of the Contract Documents.

2.2. FACILITIES AND EQUIPMENT

Contractor shall provide, install, maintain, and operate a complete and adequate facility for handling, execution, disposal, and distribution of materials and equipment as required for proper and timely performance of Work.

2.3. MATERIALS REFERENCE STANDARDS

Where materials are specified solely by reference to "standard specifications" or other general reference, and if requested by District, Contractor shall submit for review data on actual materials proposed to be incorporated into Work, listing name and address of vendor, manufacturer, or producer, and trade or brand names of those materials, and data substantiating compliance with standard specifications.

3. EXECUTION

3.1. WORKMANSHIP

- 3.1.1. Where not more specifically described in any other Contract Documents, workmanship shall conform to methods and operations of best standards and accepted practices of trade or trades involved and shall include items of fabrication, construction, or installation regularly furnished or required for completion (including finish and for successful operation, as intended).
- 3.1.2. Work shall be executed by tradespersons skilled in their respective field of work. When completed, parts shall have been durably and substantially built and present a neat appearance.

3.2. COORDINATION

- 3.2.1. Contractor shall coordinate installation of materials and equipment so as to not interfere with installation of other Work. Adjustment or rework because of Contractor's failure to coordinate will be at no additional cost to District.
- 3.2.2. Contractor shall examine in-place materials and equipment for readiness, completeness, fitness to be concealed or to receive Work, and compliance with Contract Documents. Concealing or covering work constitutes acceptance of additional cost which will result should in-place materials and equipment be found unsuitable for receiving other work or otherwise deviating from the requirements of the Contract Documents.

3.3. COMPLETENESS

Contractor shall provide all portions of the Work, unless clearly stated otherwise, installed complete and operational with all elements, accessories, anchorages, utility connections, etc., in a manner to ensure well-balanced performance, in accordance with manufacturer's recommendations and in accordance with Contract Documents. For example, electric water coolers require water, electricity, and drain services; roof drains require drain systems; sinks fit within countertop, etc. Terms such as "installed complete," "operable condition," "for use intended," "connected to all utilities," "terminate with proper cap," "adequately anchored," "patch and refinish," and "to match similar" should be assumed to apply in all cases, except where completeness of functional or operable condition is specifically stated as not required.

3.4. APPROVED INSTALLER OR APPLICATOR

Contractor shall ensure that all installations are only performed by a manufacturer's approved installer or applicator.

3.5. MANUFACTURER'S RECOMMENDATIONS

All installations shall be in accordance with manufacturer's published recommendations and specific written directions of manufacturer's representative. Should the Contract Documents differ from recommendations of manufacturer or directions of manufacturer's representative, Contractor shall analyze differences, make recommendations to the District and the Architect in writing, and shall not proceed until interpretation or clarification has been issued by the District and/or the Architect.

END OF DOCUMENT

DOCUMENT 01 66 10

DELIVERY, STORAGE AND HANDLING

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions, including, without limitation, Site Access, Conditions and Requirements; and
- 1.1.2. Special Conditions.

1.2. PRODUCTS

- 1.2.1. Products are as defined in the General Conditions.
- 1.2.2. Contractor shall not use and/or reuse materials and/or equipment removed from existing Premises, except as specifically permitted by the Contract Documents.
- 1.2.3. Contractor shall provide interchangeable components of the same manufacturer, for similar components.

1.3. TRANSPORTATION AND HANDLING

- 1.3.1. Contractor shall transport and handle Products in accordance with manufacturer's instructions.
- 1.3.2. Contractor shall promptly inspect shipments to confirm that Products comply with Contract requirements, are of correct quantity, and are undamaged.
- 1.3.3. Contractor shall provide equipment and personnel to properly handle Products to prevent soiling, disfigurement, or damage.

1.4. STORAGE AND PROTECTION

- 1.4.1. Contractor shall store and protect Products in accordance with manufacturer's instructions, with seals and labels intact and legible. Contractor shall store sensitive Products in weather-tight, climate controlled enclosures.
- 1.4.2. Contractor shall place fabricated Products that are stored outside, on above-ground sloped supports.
- 1.4.3. Contractor shall provide off-site storage and protection for Products when Site does not permit on-site storage or protection.

- 1.4.4. Contractor shall cover Products subject to deterioration with impervious sheet covering and provide ventilation to avoid condensation.
- 1.4.5. Contractor shall store loose granular materials on solid flat surfaces in a well-drained area and prevent mixing with foreign matter.
- 1.4.6. Contractor shall provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.
- 1.4.7. Contractor shall arrange storage of Products to permit access for inspection and periodically inspect to assure Products are undamaged and are maintained under specified conditions.

END OF DOCUMENT

DOCUMENT 01 73 00

EXECUTION

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Coordination and Project Meetings;
- 1.1.5. Submittals;
- 1.1.6. Materials and Equipment;
- 1.1.7. Cutting and Patching;
- 1.1.8. Contract Closeout and Final Cleaning; and
- 1.1.9. General Commissioning Requirements.

1.2. SUMMARY

- 1.2.1. This Document includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1.2.1.1. Construction layout;
 - 1.2.1.2. Field engineering and surveying;
 - 1.2.1.3. General installation of products;
 - 1.2.1.4. Owner furnished, Contractor installed items;
 - 1.2.1.5. Coordination of District-installed products;
 - 1.2.1.6. Progress cleaning;
 - 1.2.1.7. Staring and adjusting;
 - 1.2.1.8. Protection of installed construction; and
 - 1.2.1.9. Correction of the Work.

1.3. SUBMITTALS

- 1.3.1. Qualification Data: For land surveyor or professional engineer.
- 1.3.2. Certificates: Submit certificate signed by land surveyor or professional engineer certifying that location and elevation of improvements comply with requirements.
- 1.3.3. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept the materials as classified, for hazardous waste disposal.
- 1.3.4. Certified Surveys: Submit electronic files and three (3) paper copies signed by land surveyor or professional engineer.
- 1.3.5. Final Property Survey: Submit electronic files and three (3) paper copies showing the Work performed and record survey data.

2. EXECUTION

2.1. EXAMINATION

- 2.1.1. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning Site Work, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 2.1.1.1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 - 2.1.1.2. Furnish location data for Work related to Project that must be performed by public utilities serving the Project Site.

2.2. PREPARATION

- 2.2.1. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- 2.2.2. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- 2.2.3. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- 2.2.4. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to

District per requirements of Document "Requests for Information." Include a detailed description of problem encountered, together with recommendations for any necessary changes to the Contract Documents.

2.3. CONSTRUCTION LAYOUT

- 2.3.1. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify District and its consultant promptly.
- 2.3.2. General: Engage a land surveyor or professional engineer to lay out the Work using accepted surveying practices.
 - 2.3.2.1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2.3.2.2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 2.3.2.3. Inform installers of lines and levels to which they must comply.
 - 2.3.2.4. Check the location, level and plumb, of every major element as the Work progresses.
 - 2.3.2.5. Notify District and its consultant when deviations from required lines and levels exceed allowable tolerances.
 - 2.3.2.6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- 2.3.3. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- 2.3.4. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- 2.3.5. Record Log: Maintain a log of layout control Work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by District and its consultant.

2.4. FIELD ENGINEERING

- 2.4.1. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 2.4.1.1. Do not change or relocate existing benchmarks or control points without prior written approval of District and its consultant. Report lost or destroyed

permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to District and its consultant before proceeding.

2.4.1.2. Require surveyor to replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

2.4.2. Benchmarks: Establish and maintain a minimum of two (2) permanent benchmarks on Project Site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

2.4.2.1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.

2.4.2.2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.

2.4.2.3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

2.4.3. Records: Contractor shall maintain a complete, accurate log of all control and survey Work as it progresses. On request of District or Architect, Contractor shall submit documentation to verify accuracy of field engineering Work at no additional cost to the District.

2.4.4. Certified Survey: On completion of foundation walls, major site improvements, and other Work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.

2.4.5. Final Property Survey: Prepare and submit a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by land surveyor or professional engineer, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey and are in conformance with Contract Documents.

2.4.5.1. Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a Site corner to a legal point.

2.4.6. Compliance with Laws: Contractor is responsible for meeting all applicable codes, OSHA, safety, and shoring requirements.

2.4.7. Nonconforming Work: Contractor is responsible for any re-surveying required by correction of nonconforming Work.

2.5. INSTALLATION

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

- 2.5.1.1. Make vertical Work plumb and make horizontal Work level.
- 2.5.1.2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
- 2.5.1.3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
- 2.5.1.4. Maintain minimum headroom clearance of 7 feet in spaces without a suspended ceiling.
- 2.5.2. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- 2.5.3. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Completion.
- 2.5.4. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- 2.5.5. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels where possible.
- 2.5.6. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- 2.5.7. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 2.5.7.1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by District.
 - 2.5.7.2. Allow for building movement, including thermal expansion and contraction.
 - 2.5.7.3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project Site in time for installation.
- 2.5.8. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- 2.5.9. Hazardous Materials: Use products, cleaners, and installation materials that are not classed as hazardous per the MSDS sheets for the products where possible. If hazardous materials are necessary, inform District where and when they will be used no less than 48 hours before use. Take all recommended precautions of the materials' manufacturers to ensure safe use and clean-up.

2.6. DISTRICT-INSTALLED PRODUCTS

- 2.6.1. Site Access: Provide access to Project Site for District's construction forces.
- 2.6.2. Coordination: Coordinate construction and operations of the Work with work performed by District's construction forces.
 - 2.6.2.1. Construction Schedule: Inform District of Contractor's preferred schedule for District's portion of the Work. Adjust Construction Schedule based on a mutually agreeable timetable. Notify District if changes to schedule are required due to differences in actual construction progress.
 - 2.6.2.2. Preinstallation Conferences: Include District's construction forces at preinstallation conferences covering portions of the Work that are to receive District's work. Attend preinstallation conferences conducted by District's construction forces if portions of the Work depend on District's construction.

2.7. PROGRESS CLEANING

- 2.7.1. General: Clean Project Site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 2.7.1.1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2.7.1.2. Do not hold materials more than seven (7) days during normal weather or three (3) days if the temperature is expected to rise above 80 degrees F.
 - 2.7.1.3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations. Remove hazardous and unsanitary waste materials daily.
- 2.7.2. Site: Maintain Project Site free of waste materials and debris.
- 2.7.3. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 2.7.3.1. Remove liquid spills promptly.
 - 2.7.3.2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- 2.7.4. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- 2.7.5. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

- 2.7.6. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Completion.
- 2.7.7. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- 2.7.8. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Completion.
- 2.7.9. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- 2.7.10. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

2.8. STARTING AND ADJUSTING

- 2.8.1. Start equipment and operating components to confirm proper operation. Replace or repair malfunctioning units and retest.
- 2.8.2. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- 2.8.3. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- 2.8.4. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Document "Quality Requirements."

2.9. PROTECTION OF INSTALLED CONSTRUCTION

- 2.9.1. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Completion.
- 2.9.2. Comply with manufacturer's written instruction for temperature and relative humidity unless otherwise addressed in the construction planning, sequences, and instructions.

2.10. CORRECTION OF THE WORK

- 2.10.1. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Document "Cutting and Patching."
 - 2.10.1.1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

- 2.10.2. Restore permanent facilities used during construction to their specified condition.
- 2.10.3. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- 2.10.4. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- 2.10.5. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF DOCUMENT

DOCUMENT 01 73 10

CUTTING AND PATCHING

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions, including, without limitation, Inspector, Inspections, and Tests, Integration of Work, Nonconforming Work, and Correction of Work, and Uncovering Work;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Hazardous Materials Procedures and Requirements;
- 1.1.5. Hazardous Materials Certification;
- 1.1.6. Lead-Based Materials Certification; and
- 1.1.7. Imported Materials Certification.

1.2. CUTTING AND PATCHING

- 1.2.1. Contractor shall be responsible for all cutting, fitting, and patching, including associated excavation and backfill, required to complete the Work or to:
 - 1.2.1.1. Make several parts fit together properly.
 - 1.2.1.2. Uncover portions of Work to provide for installation of ill-timed Work.
 - 1.2.1.3. Remove and replace defective Work.
 - 1.2.1.4. Remove and replace Work not conforming to requirements of Contract Documents.
 - 1.2.1.5. Remove Samples of installed Work as specified for testing.
 - 1.2.1.6. Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.
 - 1.2.1.7. Attaching new materials to existing remodeling areas – including painting (or other finishes) to match existing conditions.
- 1.2.2. In addition to Contract requirements, upon written instructions from District, Contractor shall uncover Work to provide for observations of covered Work in accordance with the

Contract Documents, remove samples of installed materials for testing as directed by District, and remove Work to provide for alteration of existing Work.

- 1.2.3. Contractor shall not cut or alter Work, or any part of it, in such a way that endangers or compromises the integrity of the Work, the Project, or Work of others.
- 1.2.4. Contractor shall not cut and patch operating elements or safety related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:
 - 1.2.4.1. Primary operational systems and equipment.
 - 1.2.4.2. Air or smoke barriers.
 - 1.2.4.3. Fire-suppression systems.
 - 1.2.4.4. Mechanical systems piping and ducts.
 - 1.2.4.5. Control systems.
 - 1.2.4.6. Communication systems.
 - 1.2.4.7. Conveying systems.
 - 1.2.4.8. Electrical wiring systems.
- 1.2.5. Contractor shall not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing capacity to perform as intended, or that results in increased maintenance or decreased operational life of safety. Miscellaneous elements include the following:
 - 1.2.5.1. Water, moisture or vapor barriers.
 - 1.2.5.2. Membranes and flashings.
 - 1.2.5.3. Exterior curtain-wall construction.
 - 1.2.5.4. Equipment supports.
 - 1.2.5.5. Piping, ductwork, vessels and equipment.
 - 1.2.5.6. Noise and vibration control elements and systems.
 - 1.2.5.7. Shoring, bracing and sheeting.

1.3. REQUEST TO CUT, ALTER, PATCH OR EXCAVATE

- 1.3.1. Contractor shall submit written notice to District pursuant to the applicable notice provisions of the Contract Documents, requesting consent to proceed with the cutting or alteration ("Request") at least ten (10) days prior to any cutting or alterations that

may affect the structural safety of the Project, or Work of others, including the following:

1.3.1.1. The Work of the District or other trades.

1.3.1.2. Structural value or integrity of any element of the Project.

1.3.1.3. Integrity or effectiveness of weather-exposed or weather-resistant elements or systems.

1.3.1.4. Efficiency, operational life, maintenance or safety of operational elements.

1.3.1.5. Visual qualities of sight-exposed elements.

1.3.2. Contractor's Request shall also include:

1.3.2.1. Identification of the Project.

1.3.2.2. Description of affected Work.

1.3.2.3. Necessity for cutting, alterations, or excavations.

1.3.2.4. Impacts of that Work on the District, other trades, or structural or weatherproof integrity of the Project.

1.3.2.5. Description of proposed Work:

1.3.2.5.1. Scope of cutting, patching, alterations, or excavations.

1.3.2.5.2. Trades that will execute Work.

1.3.2.5.3. Products proposed to be used.

1.3.2.5.4. Extent of refinishing to be done.

1.3.2.6. Alternates to cutting and patching.

1.3.2.7. Cost proposal, when applicable.

1.3.2.8. The scheduled date the Work is to be performed and the duration of time to complete the Work.

1.3.2.9. Written permission of other trades whose Work will be affected.

1.4. QUALITY ASSURANCE

1.4.1. Contractor shall ensure that cutting, fitting, and patching shall achieve security, strength, weather protection, appearance for aesthetic match, efficiency, operational life, maintenance, safety of operational elements, and the continuity of existing fire ratings.

- 1.4.2. Contractor shall ensure that cutting, fitting, and patching shall successfully duplicate undisturbed adjacent profiles, materials, textures, finishes, and colors, and that materials shall match existing construction. Where there is dispute as to whether duplication is successful or has been achieved to a reasonable degree, the District's decision shall be final.

1.5. PAYMENT FOR COSTS

- 1.5.1. Costs caused by ill-timed or defective Work or Work not conforming to Contract Documents, including costs for additional services of the District or its consultants including but not limited to the Architect, inspector(s), engineers, and agents, will be paid by Contractor and/or deducted from the Contract Price by the District.
- 1.5.2. Contractor shall provide written cost proposals prior to proceeding with cutting and patching. District shall only pay for cost of Work if it is part of the Contract Price or if a change has been made to the Contract in compliance with the provisions of the General Conditions. Cost of Work performed upon instructions from the District, other than defective or nonconforming Work, will be paid by District on approval of written Change Order in accordance with the Contract Documents.

2. PRODUCTS

2.1. MATERIALS

- 2.1.1. Contractor shall provide for replacement and restoration of Work removed. Contractor shall comply with the Contract Documents and with the industry standard(s), for the type of Work, and the Specification requirements for each specific product involved. If not specified, Contractor shall recommend a product of a manufacturer or appropriate trade association for approval by the District.
- 2.1.2. Materials to be cut and patched include those damaged by the performance of the Work.

3. EXECUTION

3.1. INSPECTION

- 3.1.1. Contractor shall inspect existing conditions of the Site and the Work, including elements subject to movement or damage during cutting and patching, excavating and backfilling. After uncovering Work, Contractor shall inspect conditions affecting installation of new products.
- 3.1.2. Contractor shall report unsatisfactory or questionable conditions in writing to District as indicated in the General Conditions and shall proceed with Work as indicated in the General Conditions by District.

3.2. PREPARATION

- 3.2.1. Contractor shall provide shoring, bracing and supports as required to maintain structural integrity for all portions of the Project, including all requirements of the Project.

- 3.2.2. Contractor shall provide devices and methods to protect other portions of Project from damage.
- 3.2.3. Contractor shall, provide all necessary protection from weather and extremes of temperature and humidity for the Project, including without limitation any work that may be exposed by cutting and patching Work. Contractor shall keep excavations free from water.

3.3. ERECTION, INSTALLATION AND APPLICATION

- 3.3.1. With respect to performance, Contractor shall ensure its Subcontractors:
 - 3.3.1.1. Execute fitting and adjustment of products to provide finished installation to comply with and match specified tolerances and finishes.
 - 3.3.1.2. Execute cutting and demolition by methods that will prevent damage to other Work, and provide proper surfaces to receive installation of repairs and new Work.
 - 3.3.1.3. Execute cutting, demolition excavating, and backfilling by methods that will prevent damage to other Work and damage from settlement.
 - 3.3.1.4. Contractor shall use original installer or fabricator to perform cutting and patching for:
 - 3.3.1.5. Weather-exposed surfaces and moisture-resistant elements such as roofing, sheet metal, sealants, waterproofing, and other trades.
 - 3.3.1.6. Sight-exposed finished surfaces.
- 3.3.2. Contractor shall ensure its Subcontractors execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes as shown or specified in the Contract Documents including, without limitation, the Drawings and Specifications.
- 3.3.3. Subcontractors shall fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces. Contractor shall conform to all Code requirements for penetrations or the Drawings and Specifications, whichever calls for a higher quality or more thorough requirement. Contractor shall maintain integrity of both rated and non-rated fire walls, ceilings, floors, etc.
- 3.3.4. Contractor's Subcontractors shall restore Work which has been cut or removed and install new products to provide completed Work in accordance with requirements of the Contract Documents and as required to match surrounding areas and surfaces.
- 3.3.5. Contractor's Subcontractors shall refinish all continuous surfaces to nearest intersection as necessary to match the existing finish to any new finish.

END OF DOCUMENT

DOCUMENT 01 77 00

CONTRACT CLOSEOUT AND FINAL CLEANING

1. GENERAL

1.1. RELATED DOCUMENTS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions including, without limitation, Documents on Work and Completion of Work;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Submittals;
- 1.1.5. Operation and Maintenance Data;
- 1.1.6. Warranties;
- 1.1.7. Record Documents;
- 1.1.8. Demonstration and Training; and
- 1.1.9. General Commissioning Requirements.

1.2. PRELIMINARY PROCEDURES

- 1.2.1. Before requesting inspection for determining date of Completion, complete the following. List items below that are incomplete in request.
 - 1.2.1.1. Prepare a list of items to be completed and corrected ("Punch List"), the value of items on the list, and reasons why the Work is not complete.
 - 1.2.1.2. Advise District of pending insurance changeover requirements.
 - 1.2.1.3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 1.2.1.4. Obtain and submit releases permitting District unrestricted use of the Work and access to services and utilities. Include certificate of occupancy, operating certificates, and similar releases, if required.
 - 1.2.1.5. Prepare and submit Project Record Documents, operation and maintenance manuals, Completion construction photograph prints and electronic files, damage or settlement surveys, property surveys, and similar final record information.

- 1.2.1.6. Deliver tools, spare parts, extra materials, and similar items to location designated by District. Label with manufacturer's name and model number where applicable.
- 1.2.1.7. Make final changeover of permanent locks and deliver keys to District. Advise District's personnel of changeover in security provisions.
- 1.2.1.8. Complete startup testing of systems.
- 1.2.1.9. Submit test/adjust/balance records.
- 1.2.1.10. Terminate and remove temporary facilities from Project Site, along with mockups, construction tools, and similar elements.
- 1.2.1.11. Advise District of changeover in heat and other utilities.
- 1.2.1.12. Submit changeover information related to District's occupancy, use, operation, and maintenance.
- 1.2.1.13. Complete final cleaning requirements, including touch-up painting.
- 1.2.1.14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

1.3. RECORD DOCUMENTS AND SHOP DRAWINGS

- 1.3.1. Contractor shall legibly mark each item to record actual construction, including:
 - 1.3.1.1. Measured depths of foundation in relation to finish floor datum.
 - 1.3.1.2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permit surface improvements.
 - 1.3.1.3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 1.3.1.4. Field changes of dimension and detail.
 - 1.3.1.5. Details not on original Contract Drawings
 - 1.3.1.6. Changes made by modification(s).
 - 1.3.1.7. References to related Shop Drawings and modifications.
 - 1.3.1.8. Contractor will provide one set of Record Drawings to District.
 - 1.3.1.9. Contractor shall submit all required documents to District and/or Architect prior to or with its final Application for Payment.

1.4. COMPLETION

- 1.4.1. Preliminary Procedures: Before requesting inspection for determining date of Completion, complete the following:

1.4.1.1. Submit a final Application for Payment according to the Contract Documents.

1.4.1.2. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

1.4.1.3. Submit pest-control final inspection report and warranty.

1.4.1.4. Instruction of District Personnel:

1.4.1.4.1. Before final inspection, at agreed upon times, Contractor shall instruct District's designated personnel in operation, adjustment, and maintenance of products, equipment, and systems.

1.4.1.4.2. For equipment requiring seasonal operation, Contractor shall perform instructions for other seasons within six (6) months.

1.4.1.4.3. Contractor shall use operation and maintenance manuals as basis for instruction. Contractor shall review contents of manual with personnel in detail to explain all aspects of operation and maintenance.

1.4.1.4.4. Contractor shall prepare and insert additional data in Operation and Maintenance Manual when need for such data becomes apparent during instruction.

1.4.1.4.5. Contractor shall use operation and maintenance manuals as basis for instruction. Contractor shall review contents of manual with personnel in detail to explain all aspects of operation and maintenance.

1.4.2. Inspection: Submit a written request for inspection.

1.4.3. **LIST OF INCOMPLETE ITEMS (PUNCH LIST)** Contractor shall notify District and Architect when Contractor considers the Work complete. Upon notification, District and Architect will prepare a list of minor items to be completed or corrected ("Punch List").

1.4.4. Contractor and/or its Subcontractors shall proceed promptly to complete and correct items on the Punch List. Failure to include an item on Punch List does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

1.4.5. Contractor shall comply with Punch List procedures as provided herein and in the Contract Documents, and maintain the presence of a Project Superintendent and 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 receipt of Contractor's written notice that all of the Punch List items have been fully completed and the Work is ready for final inspection and acceptance, District and Architect will inspect the Work and shall submit to Contractor a final inspection report noting the Work, if any, required in order to reach Completion in accordance with the Contract Documents. Absent unusual

circumstances, this report shall consist of the Punch List items not yet satisfactorily completed and any additional Punch List items not originally included.

- 1.4.6. Upon Contractor's completion of all items on the Punch List and any other uncompleted portions of the Work, the Contractor shall notify the District and Architect, who shall again inspect such Work. If the District and Architect find the Work complete and acceptable under the Contract Documents, the District will notify Contractor, who shall then jointly submit to the Architect and District its final Application for Payment.
- 1.4.7. **Costs of Multiple Inspections.** More than two (2) requests of District to make a final inspection shall be considered an additional service of District, the Architect and/or the Inspector, and all subsequent costs will be invoiced to Contractor and withheld from remaining payments, if funds are available.
- 1.4.8. Punch List shall be deemed complete only upon the District's determination that all items on the Punch List, and all updates to the Punch List, are complete.

1.5. WARRANTIES

- 1.5.1. Submittal Time: Submit written warranties on request of District for designated portions of the Work where commencement of warranties other than date of Completion is indicated.
- 1.5.2. Organize warranty documents into an orderly sequence as required by the Division 01 Document "Warranties."

2. PRODUCTS

2.1. MATERIALS

- 2.1.1. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

3. EXECUTION

3.1. FINAL CLEANING

- 3.1.1. Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations. Contractor shall use cleaning methods and procedures that reduce the overall impact on human health and the natural environment by reducing the amount of disposed waste, pollution and environmental degradation. If Project is subject to LEED certification, Contractor shall ensure compliance with the applicable LEED requirements for final cleaning of the Site.
- 3.1.2. Contractor shall employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program.
 - 3.1.2.1. Complete the following cleaning operations before requesting final inspection:

- 3.1.2.1.1. Clean Project Site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
- 3.1.2.1.2. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
- 3.1.2.1.3. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
- 3.1.2.1.4. Remove tools, construction equipment, machinery, and surplus material from Project Site.
- 3.1.2.1.5. Remove snow and ice to provide safe access to building.
- 3.1.2.1.6. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
- 3.1.2.1.7. Clean all surfaces and other work in accordance with recommendations of the manufacturer.
- 3.1.2.1.8. Remove spots, mortar, plaster, soil, and paint from ceramic tile, stone, and other finish materials.
- 3.1.2.1.9. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- 3.1.2.1.10. Sweep concrete floors broom clean in unoccupied spaces.
- 3.1.2.1.11. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
- 3.1.2.1.12. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
- 3.1.2.1.13. Remove labels that are not permanent.
- 3.1.2.1.14. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 3.1.2.1.14.1. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.

- 3.1.2.1.15. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - 3.1.2.1.16. Replace parts subject to unusual operating conditions.
 - 3.1.2.1.17. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - 3.1.2.1.18. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - 3.1.2.1.19. Clean ducts, blowers, and coils if units were operated without filters during construction.
 - 3.1.2.1.20. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
 - 3.1.2.1.21. Leave Project Site clean and ready for occupancy.
- 3.1.3. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests.
 - 3.1.4. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on District's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project Site and dispose of lawfully.

END OF DOCUMENT

DOCUMENT 01 78 23

OPERATION AND MAINTENANCE DATA

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions, including, without limitation, Completion of the Work;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Submittals;
- 1.1.5. Contract Closeout and Final Cleaning;
- 1.1.6. Warranties;
- 1.1.7. Record Documents;
- 1.1.8. General Commissioning Requirements.

1.2. QUALITY ASSURANCE

- 1.2.1. Contractor shall prepare instructions and data by personnel experienced in maintenance and operation of described products.

1.3. FORMAT

- 1.3.1. Contractor shall prepare data in the form of an instructional manual entitled "OPERATIONS AND MAINTENANCE MANUAL & INSTRUCTIONS" ("Manual").
- 1.3.2. Binders: Contractor shall use commercial quality, 8-1/2 by 11 inch, three-side rings, with durable plastic covers; two inch maximum ring size. When multiple binders are used, Contractor shall correlate data into related consistent groupings.
- 1.3.3. Cover: Contractor shall identify each binder with typed or printed title "OPERATION AND MAINTENANCE MANUAL & INSTRUCTIONS"; and shall list title of Project and identify subject matter of contents.
- 1.3.4. Contractor shall arrange content by systems process flow under section numbers and sequence of the Table of Contents of the Contract Documents.
- 1.3.5. Contractor shall provide tabbed fly leaf for each separate Product and system, with typed description of Product and major component parts of equipment.

- 1.3.6. Text: The content shall include Manufacturer's printed data, or typewritten data on 24 pound paper.
- 1.3.7. Drawings: Contractor shall provide with reinforced punched binder tab and shall bind in with text; folding larger drawings to size of text pages.

1.4. CONTENTS, EACH VOLUME

- 1.4.1. Table of Contents: Contractor shall provide title of Project; names, addresses, and telephone numbers of the Architect, any engineers, subconsultants, Subcontractor(s), and Contractor with name of responsible parties; and schedule of Products and systems, indexed to content of the volume.
- 1.4.2. For Each Product or System: Contractor shall list names, addresses, and telephone numbers of Subcontractor(s) and suppliers, including local source of supplies and replacement parts.
- 1.4.3. Product Data: Contractor shall mark each sheet to clearly identify specific Products and component parts, and data applicable to installation. Delete inapplicable information.
- 1.4.4. Drawings: Contractor shall supplement Product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Contractor shall not use Project Record Documents as maintenance drawings.
- 1.4.5. Text: The Contractor shall include any and all information as required to supplement Product data. Contractor shall provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

1.5. MANUAL FOR MATERIALS AND FINISHES

- 1.5.1. Building Products, Applied Materials, and Finishes: Contractor shall include Product data, with catalog number, size, composition, and color and texture designations. Contractor shall provide information for re-ordering custom manufactured Products.
- 1.5.2. Instructions for Care and Maintenance: Contractor shall include Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- 1.5.3. Moisture Protection and Weather Exposed Products: Contractor shall include Product data listing applicable reference standards, chemical composition, and details of installation. Contractor shall provide recommendations for inspections, maintenance, and repair.
- 1.5.4. Additional Requirements: Contractor shall include all additional requirements as specified in the Specifications.
- 1.5.5. Contractor shall provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.6. MANUAL FOR EQUIPMENT AND SYSTEMS

- 1.6.1. Each Item of Equipment and Each System: Contractor shall include description of unit or system, and component parts and identify function, normal operating characteristics, and limiting conditions. Contractor shall include performance curves, with engineering data and tests, and complete nomenclature, and commercial number of replaceable parts.
- 1.6.2. Panelboard Circuit Directories: Contractor shall provide electrical service characteristics, controls, and communications.
- 1.6.3. Contractor shall include color coded wiring diagrams as installed.
- 1.6.4. Operating Procedures: Contractor shall include start-up, break-in, and routine normal operating instructions and sequences. Contractor shall include regulation, control, stopping, shut-down, and emergency instructions. Contractor shall include summer, winter, and any special operating instructions.
- 1.6.5. Maintenance Requirements: Contractor shall include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- 1.6.6. Contractor shall provide servicing and lubrication schedule, and list of lubricants required.
- 1.6.7. Contractor shall include manufacturer's printed operation and maintenance instructions.
- 1.6.8. Contractor shall include sequence of operation by controls manufacturer.
- 1.6.9. Contractor shall provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- 1.6.10. Contractor shall provide control diagrams by controls manufacturer as installed.
- 1.6.11. Contractor shall provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- 1.6.12. Contractor shall provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- 1.6.13. Contractor shall provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- 1.6.14. Additional Requirements: Contractor shall include all additional requirements as specified in Specification(s).
- 1.6.15. Contractor shall provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.7. SUBMITTAL

- 1.7.1. Concurrent with the Schedule of Submittals as indicated in the General Conditions, Contractor shall submit to the District for review two (2) copies of a preliminary draft of proposed formats and outlines of the contents of the Manual.
- 1.7.2. For equipment, or component parts of equipment put into service during construction and to be operated by District, Contractor shall submit draft content for that portion of the Manual within ten (10) days after acceptance of that equipment or component.
- 1.7.3. On or before the Contractor submits its final application for payment, Contractor shall submit two (2) copies of a complete Manual in final form. The District will provide comments to Contractor and Contractor must revise the content of the Manual as required by District prior to District's approval of Contractor's final Application for Payment.
- 1.7.4. Contractor must submit two (2) copies of revised Manual in final form within ten (10) days after receiving District's comments. Failure to do so will be a basis for the District withholding funds sufficient to protect itself for Contractor's failure to provide a final Manual to the District.

END OF DOCUMENT

DOCUMENT 01 78 36

WARRANTIES

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions, including, without limitation, Warranty/Guarantee/Indemnity;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Submittals;
- 1.1.5. Contract Closeout and Final Cleaning;
- 1.1.6. Operation and Maintenance Data;
- 1.1.7. Record Documents;
- 1.1.8. General Commissioning Requirements.

1.2. FORMAT

- 1.2.1. Binders: Contractor shall use commercial quality, 8-1/2 by 11 inch, three-side rings, with durable plastic covers; two inch maximum ring size.
- 1.2.2. Cover: Contractor shall identify each binder with typed or printed title "WARRANTIES" and shall list the title of Project.
- 1.2.3. Table of Contents: Contractor shall provide the title of Project; name, address, and telephone number of Contractor and equipment supplier, and name of responsible principal. Contractor shall identify each item with the number and title of the specific Specification, document, provision, or section in which the name of the Product or Work item is specified.
- 1.2.4. Contractor shall separate each Warranty with index tab sheets keyed to the Table of Contents listing, providing full information and using separate typed sheets as necessary. Contractor shall list each applicable and/or responsible Subcontractor(s), supplier(s), and/or manufacturer(s), with name, address, and telephone number of each responsible principal(s).
- 1.2.5. In addition to all Warranty documentation and information required herein, Contractor shall provide its Guarantee as required by the Contract Documents.

1.3. PREPARATION

- 1.3.1. Contractor shall obtain Warranties, executed in duplicate by each applicable and/or responsible Subcontractor(s), supplier(s), and manufacturer(s), within ten (10) days after completion of the applicable item or Work. Except for items put into use with District's permission, Contractor shall leave date of beginning of time of Warranty until the date of Completion is determined.
- 1.3.2. Contractor shall verify that Warranties.
- 1.3.3. are in proper form, contain full information, and are notarized, when required.
- 1.3.4. Contractor shall co-execute submittals when required.
- 1.3.5. Contractor shall retain warranties until time specified for submittal.

1.4. TIME OF SUBMITTALS

- 1.4.1. Schedule of Warranties. Contractor shall provide District with a Schedule of Warranties at least fourteen (14) days prior to submitting its other required submittals indicated herein. This will provide District the opportunity to review the anticipated Warranties and make any comments, suggestions or revisions the District may require.
- 1.4.2. For equipment or component parts of equipment put into service during construction with District's permission, Contractor shall submit a draft Warranty for that equipment or component within ten (10) days after acceptance of that equipment or component.
- 1.4.3. On or before the Contractor submits its final application for payment, Contractor shall submit all Warranties and related documents in final form. The District shall indicate any Warranty-related Work that is being performed and incomplete at the time Contractor submits its final application for payment. District will provide comments to Contractor and Contractor must revise the content of the Warranties as required by District prior to District's approval of Contractor's final Application for Payment.
- 1.4.4. For items of Work that are not completed until after the date of Completion, Contractor shall provide an updated Warranty for those item(s) of Work within ten (10) days after acceptance, listing the date of acceptance as start of the Warranty period.

END OF DOCUMENT

DOCUMENT 01 78 39

RECORD DOCUMENTS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions, including, without limitation, Documents on Work and Completion of Work;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Submittals;
- 1.1.5. Contract Closeout and Final Cleaning;
- 1.1.6. Operation and Maintenance Data;
- 1.1.7. Warranties;
- 1.1.8. General Commissioning Requirements.

2. RECORD DOCUMENTS OR DRAWINGS

2.1. GENERAL

- 2.1.1. "Record Documents" and "Record Drawings" may also be referred to in the Contract Documents as "As-Built Drawings."
- 2.1.2. As indicated in the Contract Documents, District will provide Contractor with one set of reproducible plans of the original Drawings.
- 2.1.3. Contractor shall maintain at each Project Site one (1) set of marked-up Drawings and shall transfer all changes and information to those marked-up Drawings, as often as required in the Contract Documents, but in no case less than once each month. Contractor shall submit to the Project Inspector one set of reproducible vellums of the Project Record Documents ("As-Built") showing all changes incorporated into the Work since the preceding monthly submittal. The As-Built shall be available at the Project Site. The Contractor shall submit reproducible vellums at the conclusion of the Project following review of the blue-line prints.
- 2.1.4. Label and date each Record Document "RECORD DOCUMENT" in legibly printed letters.
- 2.1.5. All deviations in construction, including but not limited to pipe and conduit locations and deviations caused, without limitation, by Change Orders, Construction Directives, RFI's, and Addenda shall be accurately and legibly recorded by Contractor.

- 2.1.6. Locations and changes shall be done by Contractor in a neat and legible manner and, where applicable, indicated by drawing a "cloud" around the changed or additional information.

2.2. RECORD DOCUMENT INFORMATION

- 2.2.1. Contractor shall record the following information:
 - 2.2.1.1. Locations of Work buried under or outside each building, including, without limitation, all utilities, plumbing and electrical lines, and conduits.
 - 2.2.1.2. Actual numbering of each electrical circuit.
 - 2.2.1.3. Locations of significant Work concealed inside each building whose general locations are changed from those shown on the Drawings.
 - 2.2.1.4. Locations of all items, not necessarily concealed, which vary from the Contract Documents.
 - 2.2.1.5. Installed location of all cathodic protection anodes.
 - 2.2.1.6. Deviations from the sizes, locations, and other features of installations shown in the Contract Documents.
 - 2.2.1.7. Locations of underground work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stubouts, invert elevations, etc.
 - 2.2.1.8. Sufficient information to locate Work concealed in each building with reasonable ease and accuracy.
- 2.2.2. In some instances, this information may be recorded by dimension. In other instances, it may be recorded in relation to the spaces in the building near which it was installed.
- 2.2.3. Contractor shall provide additional Drawings as necessary for clarification.
- 2.2.4. Contractor shall provide in an electronic format as indicated in the Contract Documents, a copy of the Drawings, made from final Shop Drawings marked "No Exceptions Taken" or "Approved as Noted."
 - 2.2.4.1. With the District's prior approval, Contractor may provide these reproducible Drawings in hard copy.

3. RECORD MATERIALS LOG

- 3.1.1. Materials Log shall be submitted prior to Completion.
- 3.1.2. Preparation: Mark Material Log to indicate the actual product installation where installation varies from that indicated in original Material Log.

- 3.1.3. Give particular attention to information on concealed materials and installations that cannot be readily identified and recorded later.
- 3.1.4. Mark copy with the proprietary name and characteristics of products, materials, and equipment furnished, including substitutions and product options selected.
- 3.1.5. Record the name of the manufacturer, supplier, installer, and other information necessary to provide a record of selections made.
- 3.1.6. The working copy of Materials Log shall be consistently maintained throughout construction, and shall be accessible at Project Site.

4. MAINTENANCE OF RECORD DOCUMENTS

- 4.1. Contractor shall store Record Documents apart from documents used for construction as follows:
 - 4.1.1. Provide files and racks for storage of Record Documents.
 - 4.1.2. Maintain Record Documents in a clean, dry, legible condition and in good order.
- 4.2. Contractor shall not use Record Documents for construction purposes.

END OF DOCUMENT

DOCUMENT 01 91 00

COMMISSIONING

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions, including, without limitation, Documents on Work and Completion of Work;
- 1.1.2. Special Conditions (if any);
- 1.1.3. Supplemental Conditions (if any);
- 1.1.4. Submittals;
- 1.1.5. Contract Closeout and Final Cleaning;
- 1.1.6. Operation and Maintenance Data;
- 1.1.7. Warranties;
- 1.1.8. Record Documents; and

1.2. SUMMARY

- 1.2.1. Commissioning is a process for validating and documenting that the facility and its systems are constructed and perform in conformity with the Contract Documents.
- 1.2.2. The objective of the commissioning process is to verify that the performance of the facility and its systems meet or exceed the design intent.
- 1.2.3. Commissioning includes special facility start-up processes used to bring the facility to a fully operational state, free of deficiencies in an efficient and timely manner.
- 1.2.4. Training on related systems and equipment operation and maintenance shall be scheduled to commence only after start-up is complete and systems are verified to be 100% complete and functional.

1.3. DESCRIPTION

The following applies to all Contract Documents:

- 1.3.1. **Contractor Startup:** Sub-phase of Contractor's work ending with Acceptance of Work, during which Contractor performs a pre-planned program of activities including starting, testing, inspecting, adjusting balancing, correcting deficiencies and other similar activities.

1.3.1.1. The District, Construction Manager and Architect and the Inspector shall be present to observe, inspect and identify deficiencies in building systems operations.

1.3.2. The completion of startup means the entire Construction Project including startup and fine tuning has been performed to the requirements of the Contract Documents and is verified in writing by the District, Construction Manager and Architect.

1.3.3. **Fine Tuning:** Fine tuning is the responsibility of Contractors after District occupancy and ending one (1) year after District occupancy. During this time the Contractor is responsible for optimizing systems and correcting deficiencies arising under normal operating conditions.

1.3.3.1. Includes a period after occupancy where systems are optimized under "live" operating conditions and any outstanding construction deficiencies are corrected.

1.3.3.2. Fine Tuning shall extend from date of District occupancy to one year after occupancy.

1.4. DEFINITION OF TERMS

1.4.1. **Contractor's Pre-Commissioning Checklists:** Includes installation and start-up items as specified to be completed by the appropriate contractors prior to operational verification through the functional testing process.

1.4.2. **Installation Verification Process:** Includes the on-site inspection and review of related system components for conformance to Contract Documents. The Contractor shall verify systems readiness for functional testing procedures prior to the start of functional testing. Deficiencies will be documented by the Inspector for future resolution.

1.4.3. **Functional Performance Testing Process:** Includes the documented testing of system parameters, under actual or simulated operating conditions. Final performance commissioning of systems will begin only after the appropriate Contractor certifies that systems are 100% complete and ready for functional testing. The Contractor will be required to schedule, coordinate and perform device tests, calibration and functional performance test procedures.

1.4.4. **Deficiencies and Resolutions List:** Includes a list of noted deficiencies discovered as a result of the commissioning process. This list also includes the current disposition of issues, and the date of final resolution as confirmed by the Construction Manager and Inspector. Deficiencies are defined as those issues where products execution or performance does not satisfy the Project Contract Documents and/or the design intent.

1.5. COMMISSIONING SCHEDULE

1.5.1. Provide schedules for Contractor Start-Up work.

1.5.2. Incorporate in overall construction schedule.

- 1.5.3. Contractor's activities, which will be performed as specified under Fine Tuning, shall be completed within one (1) year from date of occupancy by the District.

1.6. CONTRACTOR RESPONSIBILITIES

- 1.6.1. Provide utility services required for the commissioning process.
- 1.6.2. Contractor is responsible for construction means, methods, job safety, and/or management function related to commissioning on the Project Site.
- 1.6.3. Contractor shall assign representatives with expertise and authority to act on behalf of Contractor and schedule the representatives to participate in and perform commissioning team activities including, but not limited to, the following:
 - 1.6.3.1. Participate in design and construction-phase coordination meetings.
 - 1.6.3.2. Participate in maintenance orientation and inspection.
 - 1.6.3.3. Participate in operation and maintenance training sessions.
 - 1.6.3.4. Participate in final review.
 - 1.6.3.5. Certify that Work is complete and systems are operational according to the Contract Documents, including calibration of instrumentation and controls.
 - 1.6.3.6. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.
 - 1.6.3.7. Review and comment on final commissioning documentation.
- 1.6.4. Contractor shall integrate all commissioning activities into Contractor's Construction Schedule.
- 1.6.5. Contractor's Subcontractors shall assign representatives with expertise and authority to act on behalf of subcontractors and schedule the representatives to participate in and perform commissioning team activities including, but not limited to, the following:
 - 1.6.5.1. Participate in design and construction-phase coordination meetings.
 - 1.6.5.2. Participate in maintenance orientation and inspection.
 - 1.6.5.3. Participate in procedures meeting for testing.
 - 1.6.5.4. Participate in final review.
 - 1.6.5.5. Provide schedule for operation and maintenance data submittals, equipment startup, and testing to Commissioning Authority for incorporation into the commissioning plan. Update schedule on a weekly basis throughout the construction period.

- 1.6.5.6. Provide information to the Commissioning Authority for developing construction phase commissioning plan.
- 1.6.5.7. Participate in training sessions for District's operation and maintenance personnel.
- 1.6.5.8. Provide updated Project Record Documents to Commissioning Authority on a daily basis.
- 1.6.5.9. Gather and submit operation and maintenance data for systems, subsystems, and equipment to the Commissioning Authority, as specified in Division 01 Document "Operation and Maintenance Data."
- 1.6.5.10. Provide technicians who are familiar with the construction and operation of installed systems, who shall execute the test procedures developed by the Commissioning Authority, and who shall participate in testing of installed systems, subsystems, and equipment.

1.7. SUBMITTALS

- 1.7.1. Submit Draft and Final Contractor Start-up Forms as described in this Document. Submit Draft Report for Construction Manager and Architect's review and comment prior to Final Submission. Submit Final Report not later than twenty weeks before scheduled date of Acceptance of Work.
- 1.7.2. Prepare and submit one copy of report form to be used in preparation of system reports for:
 - 1.7.2.1. Food Service Equipment.
 - 1.7.2.2. Gymnasium Equipment and Scoreboards
 - 1.7.2.3. Laboratory Fume Hoods
 - 1.7.2.4. Elevators
 - 1.7.2.5. Each mechanical system specified in Division 15.
 - 1.7.2.6. Each Electrical system specified in Division 16.
- 1.7.3. Each System Report shall be submitted including the following:
 - 1.7.3.1. Project Name
 - 1.7.3.2. Name of System
 - 1.7.3.3. Index of report's content
 - 1.7.3.4. Adjacent to list of equipment, columns to indicate status of equipment operation, to date and to sign off equipment start-up.

1.7.3.5. Space to record equipment and operational problems which cannot be corrected with scheduled Contractor Start-Up program and which may delay Acceptance of Work.

1.7.3.6. Manufacturer's equipment start-up reports.

1.7.3.7. Systems' testing, balancing, and adjusting reports.

1.7.3.8. Equipment Report Forms shall include the following: Project name, name of equipment, starting and testing procedures to be performed and observations and test results to be recorded.

1.8. QUALITY ASSURANCE

1.8.1. Training Instructor Qualifications: Contractor shall provide factory-authorized service representatives, experienced in training, operation, and maintenance procedures for installed systems, subsystems, and equipment.

1.8.2. Test Equipment Calibration: Comply with test equipment manufacturer's calibration procedures and intervals. Recalibrate test instruments (per NIST requirements if applicable) immediately whenever instruments have been repaired following damage or dropping. Affix calibration tags to test instruments. Instruments shall have been calibrated within six months prior to use.

1.9. EQUIPMENT & SYSTEM SCHEDULE

1.9.1. The following equipment shall be commissioned in this Project:

System	Equipment	Note	Req'd by LEED
HVAC System	Chillers		X
	Boilers		X
	Pumps		X
	Cooling towers		X
	Variable frequency drives		X
	Air handlers		X
	Packaged AC units		X
	Terminal units for Office areas	2	X
	Unit heaters		X
	Heat exchangers		X
	Exhaust fans		X
	Supply fans		X
	Return fans		X
Building Management System	Sequences of Operation, Monitored Points, and Alarms		X
	Metering/Monitoring Devices and Equipment		X
	Software Commissioning, GUI presentation commissioning, system access performance criteria, software tools/source code commissioning, instrument data sheets,		

	middleware commissioning, Internet Protocol commissioning		
Electrical System	Sweep or scheduled lighting controls	2	X
	Daylight dimming controls		X
	Lighting occupancy sensors		X
	Electrical grounding		
Plumbing System	Domestic water heaters		X
Security Alarm Systems	Security cameras and monitoring system personal duress alarm system; Intercom system; Paging System.		
System	Equipment	Note	Req'd by LEED
Security Electronics	Security plumbing fixture water management system.		
	Door Controls.		
	Fire alarm system.		
	Distributed radio antenna system.		
	Access control system.		
Fire/Life Safety Systems	All devices		
	Alarm drivers		
	HVAC/Fire System Integration		
	Event Notifying and Reporting Systems		
Communication System			

1.10. SYSTEM FAILURES

After a second failure of a system to successfully meet the criteria as set for in the functional performance testing process, the Contractor shall reimburse the District for cost associated with any additional retesting required due to uncorrected deficiencies. Costs shall include salary, benefits, overhead, travel costs and per diem lodging costs if applicable.

END OF DOCUMENT

SECTION 02 56 39
LANDSCAPE PRESERVATION AND TREE PRUNING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Drawings and general provisions of the Contract, including Section 00700, General Conditions and Division 01, General Requirements, apply to this Section.
- B. Protecting and maintaining trees to be preserved, not specifically designated for removal, affected by this work, whether or not tree trunk is located within project site. Include pruning and remedial work, protection and irrigation during removal work, site work and construction.
- C. Preservation of all existing plantings (trees, shrubs, groundcover, vines, and lawn), care, and pruning of trees to remain in place.
- D. Replacement of work damaged during construction, including existing plantings and irrigation systems.
- E. Trimming of trees (limbs and tree roots) as may be required to construct the improvements.
- F. The work shall include the provision of all labor, materials, equipment, temporary irrigation system, and apparatus not specifically mentioned herein or noted on the plans, but which are incidental and necessary to complete the work specified.
- G. The Contractor shall exercise all necessary precautions so as not to destroy or damage any trees, or other vegetation, including that landscaping materials lying within the project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removing by the Owner's Representative. All existing trees and other vegetation to be preserved, which become damaged during demolition, shall be trimmed or replaced by the Contractor in consultation with Project Arborist to the satisfaction of the Owner's Representative. Tree trimming and replacement shall be accomplished as approved and directed by the Owner's Representative.

1.2 RELATED SECTIONS

- A. Section 02019 Earthwork
- B. Section 328000 Irrigation System
- C. Section 329000 Landscape Planting
- D. Section 00700 General Requirements
- E. Arborist Report prepared by the District

1.3 JOB CONDITIONS

- A. The Contractor will be held responsible for any damage to trees or other plants, which are to remain during construction, including limb or branch breakage, tearing of bark along trunk or excessive root damage. Roots two inches and greater in diameter shall not be cut without approval by the Owner's Representative.

1.4 REFERENCE

- A. Trees and Building Sites: Official Publication of the International Society of Arboriculture.
- B. Arboriculture: The care of trees and shrubs by Dr. Richard Harris

1.5 QUALITY ASSURANCE AND QUALIFICATION

- A. Qualification of Workmen: All tree pruning, and removal performed shall be executed by a company having, in full-time employment, an Arborist certified by the International Society of Arboriculture. Certification must be verified, and the Arborist must be directly responsible for decisions made and should visit the work sites daily when trimming of trees and roots is to be performed. Contractor shall hold a California state license for tree service (D-49 classification), carry General Liability and Worker's Compensation insurance, and abide by ANSI Z133.1-2006 (Safety Operations) per Document 00450.
- B. Contractor shall have the Project Arborist on site continuously while existing trees or roots are being pruned or remedial work is being performed.
- C. Pruning shall be performed per the scope established by the Owner's Representative, and in accordance with ANSI A300 Pruning standards.
- D. If applicable, tree pruning shall not occur without approval by the Owner's Representative.
- E. Tree removal shall not occur without first securing a tree Removal Permit. For regulations on size description, application procedure and fees, the Contractor shall contact the Owner's Representative.

PART 2 - PRODUCTS

As required per the Contract Drawings, Section 328000 Irrigation System and Section 329000 Landscape Planting.

PART 3 - EXECUTION

3.1 LANDSCAPE PRESERVATION

- A. Contractor shall notify the Owner's Representative of any and all work which impacts existing landscape and irrigation services to areas within the property. Contractor shall coordinate irrigation controller schedules and services with the City's maintenance personnel.

LANDSCAPE PRESERVATION AND TREE PRUNING 02 56 39 - 2

- B. Contractor shall provide irrigation water to all adjacent landscape areas impacted by the construction of work. Temporary irrigation systems, hand watering, truck watering or other means may be required to provide water to plant material and lawn zones during the duration of work. All costs related to such work shall be borne by the Contractor at no additional cost to the Contract.
- C. Any landscape irrigation, planting or lawn area which are impacted, damaged or destroyed during construction shall be fully replaced with equipment, plant material and sodded lawn matching in size and type by the Contractor at no additional cost to the Contract.

3.2 TREE PROTECTION

- A. At sites where the excavation has taken place near trees to remain, and many living roots remain exposed to the air, the Contractor shall cover the exposed roots within 2 hours with sand, soil, moist burlap or other means acceptable to the Owner's Representative.
- B. Construction materials, debris, and supplies shall not be stored within the drip line or protective fencing area under any tree.
- C. Vehicles shall not be parked within the drip line or protective fencing area.
- D. Woodchips or another cushioning surface material approved by the Owner's Representative shall be placed over areas where roots are present and construction traffic occurs.
- E. Where called for on the plans or the Arborist Report, place fences or other approved protective barriers around trees to be saved.
- F. Tree protection adjacent to the new site work per the Arborist Report prior to placing tree protective fencing:
 - 1) Review the extent of the site work and minimize the depth of excavation adjacent to the existing trees.
 - 2) Perform the demolition and excavation with the smallest equipment possible and from as far from the trees as possible.
 - 3) Where the new site work will be placed within 5' of the base of trees, all excavation shall be performed by hand and with only hand-held equipment to achieve the goal to exposed roots 2" and larger in diameter within the limits of the excavation for the roots to be pruned square and clean beyond the limits of the excavation (see below for root pruning specifications), while preserving roots below/beyond the limits of the excavation.
 - 4) Avoid the use of a root barrier on the tree side of the decomposed granite path.
 - 5) Provide Redwoods with supplemental irrigation during the dry summer months. Two options: a) use a water truck and soil berms around the trees to flood irrigate, or b) a temporary PVC system run on the ground surface.

3.3 TREE PRUNING

- A. Tree pruning shall be performed to balance the crown and eliminate hazards. The main work performed shall be to reduce the sail effect through thinning. Reducing end weights, shortening long heavy limbs, removing deadwood, weak limbs and sucker growth. Limbs shall be pruned back to an appropriate lateral branch.
- B. All final cuts shall be made at the outer edge of the branch collar. The pruning work shall be performed in a safe and proper manner, adhering to CAL-OSHA and ANSI Standards.
- C. The Contractor shall be responsible for the preservation of all public and private property. Pruning includes the cutting of limbs, cleanup, removal and disposal of cuttings and debris. Elm logs must be properly disposed of per State Quarantine. Work shall be performed by a (minimum) two-person crew with one climber, one ground person, a dumping chipper truck and chipper, and any other necessary saws, lines, tools and safety equipment. The work area shall have appropriate cones and signs for safe pedestrian and vehicle traffic.

3.4 ROOT PRUNING

- A. Any excavation that that is expected to encounter tree roots two inches (2") and larger in diameter shall be approved and monitored by the Project Arborist. Roots shall be cut by manually exposing roots and pruning all roots of two inches (2") and larger in diameter with a sharp saw.
- B. Roots shall be cut cleanly, as far from the trunk of the tree as possible.
- C. Root pruning shall be performed using a Vermeer Root Cutting Machine. Alternate equipment or techniques must be approved by the Owner's Representative.
- D. Root pruning shall be completed prior to base or subgrade preparation, or to any excavation adjacent to the tree.

END OF SECTION

SECTION 12 93 00

SITE FURNISHINGS AND ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. The General Conditions and all other Contract Documents for this project are complementary and applicable to this Section of the Specifications.
- B. Work Included: Furnish all labor, materials, equipment and services necessary to provide and construct, repair, or install the site elements, complete in place, as shown and specified, including, but not limited to:
 - 1. Asphalt Painting and Striping
 - 2. Landscape Boulders
 - 3. Pebble Seat-A
 - 4. Pebble Seat-B
 - 5. Picnic Table-A
 - 6. Picnic Table-B
 - 7. Play Sand
 - 8. Twig Bench
- C. Related Work:
 - 1. Section 32 13 16 – Decorative Concrete
 - 2. Section 32 90 00 - Landscape Planting
 - 3. Section 09 96 23 - Graffiti Resistant Coatings

1.2 SUBMITTALS

- A. Prepare submittals in accordance with Section 01 33 00 -Submittals.
- B. Submit shop drawings where noted to the Owner for approval before installing any manufactured items. Plan shall include dimensions, color, finish, and connection details.
 - 1. Furnish manufacturers' literature and shop drawings for the following items:
 - a. Asphalt Painting and Striping
 - b. Landscape Boulders
 - c. Pebble Seat-A
 - d. Pebble Seat-B
 - e. Picnic Table-A
 - f. Picnic Table-B
 - g. Play Sand
 - h. Twig Bench
- C. Submit catalog cuts, samples and manufacturers literature (specifications and installation details) of all manufactured items in this section to the Architect for approval before installation.
 - 1. Provide color samples, brushouts, or charts for all items. Final colors to be selected by Architect and a sample submitted for approval.

- D. Submit all manufacture standard specifications and details. Manufacture specifications and details shall become part of the requirements of the Contract Specifications for the project.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle furnishings to prevent damage and deterioration.
- B. Stack assembled items off the ground.

1.4 PROJECT CONDITIONS

- A. Provide all footings, sleeves, anchors, inserts, bolts, clips, incidentals and other items furnished under this Section and built in with work of other trades.
- B. No work shall be installed until finish, color samples and shop drawings for the work have been reviewed and approved in writing by the Architect and final grading and surfacing is completed.

PART 2 - PRODUCTS

2.1 MANUFACTURED ITEMS

- A. Asphalt Play Striping: per plans.
- B. Pebble Seat-A: per plans.
- C. Pebble Seat-B: per plans.
- D. Picnic Table-A: per plans.
- E. Picnic Table-B: per plans.
- F. Play Sand: per plans.
- G. Twig Bench: per plans.

2.2 NON-MANUFACTURED ITEMS

- A. Landscape Boulders: per plans.

2.3 MISCELLANEOUS MATERIALS

- A. All other materials for site elements shall be as specified on the Drawing and these Specifications.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Examination: Verify that conditions are satisfactory for installation of each item of site elements. If unsatisfactory conditions exist, do not begin installation until such conditions have been corrected.
- B. Assemble and install site furnishings in accordance with approved shop drawings and manufacturer's printed instructions.
- C. Perform fitting required for installation. Set the work accurately in location, alignment, and elevation free of rack, measured from established lines and levels. Assembled furnishings shall be firm, rigid, free of rattle, and provide maximum protection against tampering and vandalism.
- D. Install per manufacturer's specifications and details.

3.2 DEFECTIVE WORK

- A. Materials which are damaged or not installed per the manufacturer, Specifications, or Drawings shall be considered defective work. All defective work shall be fully repaired or replaced at the discretion of the Owner at no additional cost to the contract.

3.3 GUARANTEE

- A. At completion of project, Contractor shall provide District with written guarantee from each manufacturer identifying the nature of warranty for each product component.
 - 1. Provide warranty manuals in electronic format in accordance with Section 01 7000- Contract Closeout.
- B. Contractor shall provide District with two (2) bound maintenance manuals in electronic format identifying each piece of equipment and manufacturer's cut sheets, installation details, and manufacturers' specifications.
 - 1. Provide maintenance manuals in accordance with Section 01 7000 - Contract Closeout.
- C. Contractor shall provide District with minimum of two (2) gallons each type and color of paint used on apparatus with recommended surface preparation and application guidelines.

END OF SECTION

SECTION 12 93 20

PLAY STRUCTURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Drawings and general provisions of the Contract, including Section 00700, General Conditions and Division 01, General Requirements, apply to this Section.
- B. Work shall include but not limited to: Furnish all labor, materials, equipment, rentals, facilities, transportation, incidentals, excavations, footings, and services to install complete and all Playground Structures, and related work as shown on the Plans and/or specified herein and as necessary for a complete installation.
- C. Related Work:
 - 1. Division 31 – Earthwork
 - 2. Section 12 93 00 – Site Furnishings and Accessories
 - 3. Section 32 16 00 – Site Concrete

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.
- B. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
 - 1. ASTM A 135 (1989a; R 1993) Electric-Resistance-Welded Steel Pipe
 - 2. ASTM A 153 (1982; R 1987) Zinc Coatings (Hot-Dip) on Iron and Steel Hardware
 - 3. ASTM A 385 (1980; R 1991) High-Quality Zinc Coatings (Hot-Dip)
 - 4. ASTM A 500 (1990a; R 1993) Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
 - 5. ASTM A 513 (1991a; R 1992) Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing
 - 6. ASTM B 117 (1990) Salt Spray Resistance Test
 - 7. ASTM B 221 (1992a; R 1993) Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
 - 8. ASTM D 822 (1989) Conducting Tests on Paint and Related Coatings and Materials Using Filtered Open-Flame Carbon Arc Light and Water Exposure Apparatus
 - 9. ASTM D 1248 (1984; R 1989) Polyethylene Plastics Molding and Extrusion Materials

10. ASTM D 1734 (1993) Flexibility Mandrel Test
11. ASTM D 2454 (1991) Overbake Hardness Test
12. ASTM D 2794 (1992; R 1993) Resistance of Organic Coatings to the Efforts of Rapid Deformation (Impact)
13. ASTM D 3359 (1992a; R 1993) Measuring Adhesion by Tape Test
14. ASTM D 3363 (1992a) Pencil Hardness Test
15. ASTM F 1292 (1993) Impact Attenuation of Surface Systems Under and Around Playground Equipment
16. ASTM 1487-07, Standard Consumer Safety Performance Specification for Playground Equipment for Public Use.
17. ASTM 2372, Play Equipments for Children Under the age of Two

C. FEDERAL STANDARDS

1. FED-STD-795 (4/1/88) Uniform Federal Accessibility Standards (UFAS)

D. FEDERAL SPECIFICATIONS

1. FS L-P-390 (1987) Plastic Molding Material FEP Fluorocarbon, Molding and Extrusion (Low, Medium and High) Density
2. FS QQA-200/8F (11/8/83) Aluminum Alloy 6061, Bar, Rod, Shapes, Tubes, and Wire Extruded

E. CODE OF FEDERAL REGULATIONS

1. 28 CFR Part 36 (7/26/91) Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities, Final Rule.

F. MANUFACTURER'S STANDARD SPECIFICATIONS AND DETAILS

1.3 PERFORMANCE REQUIREMENTS

A. Installer Qualifications

1. Engage an experienced installer or applicator that has specialized for a minimum of 5 years in installing the specific playground equipment required for this Project and who is acceptable to Manufacturer of primary materials. Installer must provide a minimum of 3 documented and inspectable playground installations within the past 5 years with project names, dates, and City contracts provided with the submittal. The Contractor shall furnish a list of projects using either specified material or equivalent that they have installed during the last five years. Information shall include project name, square footage, contact name with address and phone number. Also, the Contractor shall furnish resumes detailing the experience of key personnel, including supervisors and mechanics. The

Contractor shall be approved in writing by the material primary manufacturer for the system being installed.

- B. Assign a full-time employee to the job as supervisor for the duration of the Contract with a minimum of four (4) years experience in playground equipment installation.
- C. Labor Force
 - 1. Provide installation and maintenance force thoroughly familiar with, and trained in, the work to be accomplished to perform the task in a competent, efficient manner, and acceptable to the District.
- D. Safety
 - 1. Play equipment shall meet the safety requirements of CPSC and ASTM F 1487.
- E. Accessibility
 - 1. Play equipment intended for access by children with disabilities shall meet the requirements of CPSC and ASTM F 1487. The intent of the playground equipment should be that it is usable by children with disabilities, not merely accessible.

1.4 REGULATORY REQUIREMENTS

- A. Conform to all Federal, State, and City codes and requirements for installation and disabled accessibility as referenced herein and as applicable.

1.5 SUBMITTALS

- A. Submit a listing of at least three installations where the brand of playground equipment with similar units to those proposed has been installed and has been in successful service within the 5 past years. This list shall include purchaser, address of installation, service or maintenance organization, date of installation, and contact person and phone number.
- B. The installer of the playground equipment must submit proof of liability insurance per Document 00820.
- C. The installer of the playground equipment must submit proof that they are a certified installer of the playground equipment primary manufacturer per Document 00450.
- D. The Contractor shall submit cut sheets and shop drawings of all proposed play equipment for review and approval by the District.

1.6 QUALITY ASSURANCE

- A. The Installer of play equipment specializing in applying the work of the Section with minimum three years documented experience, approved and certified by manufacturer per Document 00450.

1.7 PLAYGROUND INSPECTION

- A. The play area will be audited by a third party Certified Playground Safety Inspector for compliance with ASTM F1487 and CPSC Guidelines. There will be no final acceptance or

final payment for the play area and the equipment until it has been certified by the Certified Playground Safety inspector. Before acceptance of the play area all deficiencies identified by the Certified Playground Safety Inspector shall be corrected for compliance with ASTM F1487 and CPSC Guidelines. If a return inspection is required to verify compliance the contractor will be required to pay for the return inspections.

- B. All cost associated with corrective work shall be paid by the Contractor.

1.8 WARRANTY

- A. Manufactured playground equipment shall be guaranteed against defects in workmanship or materials for a period of one year after acceptance by the District. All equipment shall be guaranteed by the primary manufacturer as specified.

- 1. Posts: 100 years

- 2. All plastic, steel, decks and tender tuff coating: 15 years.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Equipment shall be delivered and stored in accordance with the manufacturer's recommendations.

1.10 PERFORMANCE REQUIREMENTS

- A. SAFETY

- 1. Play equipment shall meet the safety requirements of CPSC and ASTM F 1487.

- B. ACCESSIBILITY

- 1. Play equipment intended for access by children with disabilities shall meet the requirements of CPSC and ASTM F 1487. The intent of the sporting equipment should be that it is usable by children with disabilities, not merely accessible.

PART 2 - PRODUCTS

2.1 GENERAL ACCEPTABLE MANUFACTURERS

- A. Playground Equipment

- 1. All playground equipment and playground signage shall be per plan. Contractor shall install all equipment per manufacturer's standard details and specifications. No substitutions shall be permitted as the equipment has been reviewed and approved by the District.

PART 3 - EXECUTION

3.1 GENERAL

- A. Prior to start of excavation, Contractor shall lay out the entire outdoor play area and stake location of all elements, including playground equipment, use zones, pathways, planters, and

hard surfaces, based on actual playground equipment supplied to be installed. Use zones shall not overlap hard surfaces, and shall meet criteria of ASTM F 1292 and ASTM 1487. The District's representative reserves the right to adjust the equipment locations and other elements to meet field conditions and use zone safety requirements.

- B. Contractor shall review all manufacturer specifications and details prior to start of work. Contractor shall adjust all post and deck elevations based on site grading to comply with manufacturer specifications and details, and with ASTM 1987 and CPEC.

3.2 INSPECTION

- A. Contractor shall verify that all units are as specified and are free from damage. Notify the District immediately of any damage to equipment.
- B. Verify that all accessories required for installation are provided.

3.3 COORDINATION

- A. Coordinate with work of other sections to insure appropriate sequencing of events.

3.4 INSTALLATION

A. General

Play equipment shall be installed according to the manufacturer's installation specifications and as shown on the drawings to meet the requirements of CPSC and ASTM F 1487.

All playground equipment shall be certified by a National Playground Safety Inspector (NPSI) prior to occupancy at the Contractor's expense. Any deficiencies noted by the NPSI shall be corrected by the Contractor at the Contractor's expense.

- B. Concrete footings shall be installed in accordance with specifications 02870 – Site Furnishings.

C. Play Equipment Manufacturer's Services

A manufacturer's representative who is experienced in the installation, adjustment, and operation of the playground equipment shall be on-site during installation. Manufacturer's certified installer shall be acceptable to meet this requirement. The representative shall supervise the installation and adjustment of the playground equipment to ensure that the equipment meets the requirements of CPSC and ASTM F 1487.

3.5 CLEANING

- A. Clean all installed items, fasteners and supports in accordance with Manufacturers' instructions.
- B. Cover or wrap all installed items to protect from weather and dirt from other trades.
- C. Remove protective cover at date of substantial completion.

3.6 PROTECTION OF INSTALLED EQUIPMENT

- A. Protect equipment from damage at all times, until final acceptance of the Work. If damage occurs to any equipment prior to final acceptance, Contractor shall, at his own expense, make replacement to satisfaction of the District.

3.7 SECURITY

- A. The Contractor shall provide means to keep the public from using any playground or playground equipment until safety surfaces have been properly installed, the area cleaned and cleared, and all installation reviewed by the District's representative. The area shall be secured until authorized to be opened by the District's representative.

3.8 LEVEL OF SAFETY SURFACING

- A. All play structures located in playground safety surfacing areas shall be clearly marked to indicate the finished level of safety surfacing material to meet impact attenuating requirements. All metal posts, springs or supports shall be as marked by the manufacturer. Those items not marked by the manufacturer shall be marked with a 3/4" circle painted with black epoxy paint.

3.9 FIELD QUALITY CONTROL

- A. All play structures shall be inspected and accepted upon delivery by the Contractor. Final acceptance of play structures and locations of play structures shall be per the discretion of the District.
- B. Upon substantial completion, the play areas will be audited by a Certified Playground Safety Inspector for compliance with ASTM F1487, F2223, F1951, and Consumer Product Safety Commission (CPSC) Guidelines. There will be no final acceptance or final payment for the installation of the play areas until the play areas have been certified by the Certified Playground Safety inspector. Before acceptance of the play areas, all deficiencies identified by the Certified Playground Safety Inspector shall be corrected for compliance with ASTM F1487, F2223, F1951 and CPSC Guidelines, at no cost to the District. The initial CPSI inspection shall be provided by the District. If a return inspection is required to verify compliance the contractor will be required to pay City's Consultants for the return inspections.
- C. Prior to Final Acceptance, the contractor shall fully instruct City's designated operating and maintenance personnel in the operation, adjustment and maintenance of all products, equipment, and systems installed. Provide services of factory trained instructors from the manufacturers of the play equipment or system, on site for a duration of 1-hour.

END OF SECTION

SECTION 31 01 30

GROUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment, and labor necessary to furnish and place grout and shall form, mix, place, cure, repair, finish, and do all other work as necessary to produce finished grout as shown on the Drawings and as specified herein.
- B. The following types of grout shall be covered in this Section:
 - 1. Non-Shrink Grout: Non-Shrink grout is to be used unless another type is specifically referenced or as shown on the Drawings.
 - 2. Epoxy Grout

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 32 16 00 Site Concrete
- B. Section 33 05 16 Precast Concrete Utility Boxes, Inlets and Wheel Stops
- C. Division 1 General Requirements.

1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Commercial Standards:

ASTM C 109	Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-In. or 50-mm Cube Specimens).
ASTM C 531	Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing.
ASTM C 579	Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing.
ASTM C 827	Test Method for Change in Height of Early Ages of Cylindrical Specimens from Cementitious Mixtures.
ASTM D 696	Test Method for Coefficient of Linear Thermal Expansion of Plastics.

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1.5 CONTRACTOR SUBMITTALS

- A. Certificates of Compliance: Certificates of Compliance shall be provided for all products and materials proposed to be used under this Section.

PART 2 - PRODUCTS

2.1 PREPACKAGED GROUTS

A. Non-Shrink Grout:

1. Non-shrink grout shall be a prepackaged, inorganic, non-gas-liberating, non-metallic, cement-based grout requiring only the addition of water. Manufacturer's instructions shall be printed on each bag or other container in which the materials are packaged. The specific formulation for each class of non-shrink grout specified herein shall be that recommended by the manufacturer for the particular application.
2. Class A non-shrink grouts shall have a minimum 28-day compressive strength of 5000 psi; shall have no shrinkage (zero percent) and a maximum 4.0 percent expansion in the plastic state when tested in accordance with ASTM C 827; and shall have no shrinkage (zero percent) and a maximum of 0.2-percent expansion in the hardened state when tested in accordance with CRD C 621.
3. Class B non-shrink grouts shall have a minimum 28-day compressive strength of 5000 psi and shall meet the requirements of CRD C 621.
4. Application:
 - a. Class A non-shrink grout shall be used for the repair of all holes and defects in concrete members which are water bearing or in contact with soil or other fill material, grouting under all equipment base plates, and at all locations where grout is specified; except, for those applications for Class B non-shrink grout and epoxy grout specified herein. Class A non-shrink grout may be used in place of Class B non-shrink grout for all applications.
 - b. Class B non-shrink grout shall be used for the repair of all holes and defects in concrete members which are not water-bearing and not in contact with soil or other fill material.

B. Epoxy Grout:

1. Epoxy grout shall be a pourable, non-shrink, 100-percent solids system. The epoxy grout system shall have 3 components: resin, hardener, and specially blended aggregate, all premeasured and prepackaged. The resin component shall not contain any non-reactive diluents. Resins containing butyl glycidyl ether (BGE) or other highly volatile and hazardous reactive diluents are not acceptable. Variation of component ratios is not permitted unless specifically recommended by the manufacturer. Manufacturer's instructions shall be printed on each container in which the materials are packaged.
2. The chemical formulation of the epoxy grout shall be that recommended by the manufacturer for the particular application.
3. The mixed epoxy grout system shall have a minimum working life of 45 minutes at 75° F.

4. The epoxy grout shall develop a compressive strength of 5000 psi in 24 hours and 10,000 psi in 7 days when tested in accordance with ASTM C 579, Method B. There shall be no shrinkage (zero percent) and a maximum 4.0 percent expansion when tested in accordance with ASTM C 827.
5. Application: Epoxy grout shall be used to embed all anchor bolts and reinforcing steel required to be set in grout, and for all other specified applications.

2.2 CEMENT GROUT

- A. Cement Grout: Cement grout shall be composed of one part cement, 3 parts sand, and the minimum amount of water necessary to obtain the desired consistency. Where needed to match the color of adjacent concrete, white Portland cement shall be blended with regular cement as needed. The minimum compressive strength at 28 days shall be 4000 psi.
- B. Cement shall be as specified in Section 321600, "Site Concrete."

2.3 CONSISTENCY

- A. The consistency of grouts shall be that necessary to completely fill the space to be grouted for the particular application. Dry pack consistency is such that the grout is plastic and moldable but will not flow. Where "dry pack" is specified, it shall mean a grout of that consistency; the type of grout to be used shall be as specified herein for the particular application.

2.4 MEASUREMENT OF INGREDIENTS

- A. Measurements for cement grout shall be made accurately by volume using appropriate containers. Shovel measurement will not be allowed.
- B. Prepackaged grouts shall have ingredients measured by means recommended by the manufacturer.

PART 3 - EXECUTION

3.1 GENERAL

- A. All surface preparation, curing, and protection of cement grout shall be as specified in Section 321600 "Site Concrete." The finish of the grout surface shall match that of the adjacent concrete.
- B. The manufacturer of Class A non-shrink grout and epoxy grout shall provide on-site technical assistance upon request.
- C. All mixing, surface preparation, handling, placing, consolidation and other means of execution for prepackaged grouts shall be done according to the printed instructions and recommendations of the manufacturer.

3.2 CONSOLIDATION

- A. Grout shall be placed in such a manner, for the consistency necessary for each application, so as to assure that the space to be grouted is completely filled.

END OF SECTION

GROUT 31 01 30- 3

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SECTION 31 10 00

DEMOLITION, CLEARING AND GRUBBING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specifications Sections, apply to this Section.

1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment and labor necessary to perform and complete all demolition work shown on the Drawings and as specified herein. This includes, but is not necessarily limited to, such items as demolition, removal, recycling and disposal of asphalt concrete, miscellaneous concrete, utilities, vegetation and all other features as shown on the Civil Drawings.
- B. Clearing and grubbing shall be in conformance with Section 17-2 "Clearing and Grubbing" of the State Standard Specifications.
- C. Manufactured articles, materials, equipment, and accessories shall be demolished in accordance with the manufacturer's printed specifications and recommendations, and industry standards, unless otherwise shown or specified.
- D. Hazardous materials shall be handled, removed and disposed of in accordance with all regulatory agency requirements.
- E. The CONTRACTOR shall coordinate with the DISTRICT for demolition permits required by the DISTRICT and with all other regulatory agencies and utility companies.

1.3 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. State of California (Caltrans) Standards:

- 1. Standard Specifications 2018:
 - Section 15 Existing Facilities.
 - Section 17-2 Clearing and Grubbing.
 - Section 19 Earthwork.

- B. Commercial Standards:

- 1. USA Underground Service Alert.

1.4 CONTRACTOR SUBMITTALS

- A. Demolition Schedule: The CONTRACTOR shall submit a complete coordination schedule for demolition work including shut-off and continuation of utility services prior to start of the work. The schedule shall indicate proposed methods and operations of facility demolition, and provide

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a detailed sequence of demolition and removal work to ensure uninterrupted operation of occupied areas.

- B. The CONTRACTOR shall provide copies of written agreements from private land owners, landfill operators, or other agencies accepting disposal of any demolished material prior to any work.

1.5 JOB CONDITIONS

- A. Condition of Facilities: The DISTRICT assumes no responsibility for actual condition of facilities to be demolished. The CONTRACTOR shall visit the site and inspect the existing facilities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 OCCUPANCY AND POLLUTION CONTROL

- A. Water sprinkling, temporary enclosures, chutes and other suitable methods shall be used to limit dust and dirt rising and scattering in the air. The CONTRACTOR shall comply with all government regulations pertaining to environmental protection. Water shall not be used in a manner that creates hazardous or objectionable conditions such as ice, flooding, or pollution.

3.2 PROTECTION

- A. Safe passage of persons around area of demolition shall be provided in accordance with all safety and regulatory requirements. Operations shall be conducted to prevent damage to adjacent buildings, structures, other facilities, people and property.
- B. Existing landscaping materials, structures, and appurtenances which are not to be demolished shall be protected and maintained as necessary.
- C. The CONTRACTOR shall protect and maintain conduits, drains, sewers, pipes and wires that are not to be demolished.

3.3 AT-GRADE DEMOLITION

- A. All asphalt concrete and all portland cement concrete curbs, walks, and access ramps shall be sawcut at the nearest score line or deep joint and removed entirely to the sawcut limits. Where adjacent pavement or concrete is broken or deteriorated sufficiently to prohibit a sound replacement the entire deteriorated section shall be removed to the limits determined by the DISTRICT.

3.4 SITE CLEARING, GRUBBING AND STRIPPING

- A. Clearing and grubbing shall conform to Section 17-2, "Clearing and Grubbing," of the Caltrans Standard Specifications and this Section.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. Demolition and removal of debris shall be conducted to ensure minimum interference with roads, streets, walks and other adjacent occupied or used facilities which shall not be closed or obstructed without permission from the DISTRICT. Alternate routes shall be provided around closed or obstructed traffic ways.
- B. Site debris, rubbish and other materials resulting from demolition operations shall become the property of the CONTRACTOR and shall be removed by the CONTRACTOR at the CONTRACTOR's expense to a suitable site. The proper and legal disposal of demolished materials shall be the responsibility of the CONTRACTOR.

3.6 PATCHING AND REPAIRING

- A. The CONTRACTOR shall provide patching, replacing, repairing and refinishing of damaged areas or damaged adjacent facilities involved in the demolition. New concrete shall match the existing adjacent surfaces, in kind or of better quality, to the satisfaction of the ENGINEER, at no cost to the DISTRICT or to the owners of the facilities.

3.7 CLEANUP

- A. During and upon completion of work the CONTRACTOR shall promptly remove unused tools and equipment, surplus materials, rubbish, debris and dust and shall leave areas affected by work in a clean, approved condition.
- B. The CONTRACTOR shall clean adjacent structures and facilities of dust, dirt and debris caused by demolition, as directed by the ENGINEER or governing authorities, and return adjacent areas to condition existing prior to start of work.
- C. The CONTRACTOR shall clean and sweep daily all street and roads affected by its operation.

END OF SECTION

SECTION 31 22 00

EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment and labor necessary to furnish and construct the roadway Subgrade and all appurtenant work, complete in place, as shown on the Drawings and as specified herein.
- B. Work Covered in this Section:
 - 1. Preparation for Fill Material.
 - 2. Grading and Compaction.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 10 00 Demolition, Clearing, and Grubbing
- B. Section 31 23 33 Trench Excavation and Backfill
- C. Section 32 12 00 Asphalt Pavement, Aggregate Base and AC Grind

1.4 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. State of California (Caltrans) Standards:

- 1. Standard Specifications 2025:
 - Section 15 Existing Facilities.
 - Section 17-2 Clearing and Grubbing.
 - Section 19 Earthwork.
 - Section 24 Stabilized Soils

- B. California Building Code (Current Edition).

- D. Commercial Standards:

ASTM C 117	Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing.
ASTM C 136	Method for Sieve Analysis of Fine and Course Aggregates.
ASTM D 1556	Test Method for Density of Soil in Place by the Sand-Cone Method.

ASTM D 1557	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54-kg) Rammer and 18-in. (457-mm) Drop.
ASTM D 2844	Test Method for Resistance <i>R</i> -Value and Expansion Pressure of Compacted Soils.
ASTM D 2922	Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
ASTM D 3017	Test Method for Water Content of Soil and Rock in Place By Nuclear Methods (Shallow Depth).
ASTM D 4318	Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.5 CONTRACTOR SUBMITTALS

- A. Certificates of Compliance: Certificates of Compliance shall be provided for all products and materials proposed to be used under this Section.

1.6 QUALITY ASSURANCE

- A. All soils testing will be done by a testing laboratory of the DISTRICT'S choice and at the CONTRACTOR'S expense, except as otherwise specified in this Section.
- B. Where soil material is required to be compacted to a percentage of relative compaction, the maximum density at optimum moisture content will be determined in conformance with ASTM D 1557. Field density in-place and moisture content tests will be performed in conformance with ASTM D 2922 and ASTM D 3017, respectively, or by such other means acceptable to the DISTRICT.
- C. If the tested materials show non-compliance with the required relative compaction, the CONTRACTOR shall accomplish such remedy as may be required to insure compliance.
- D. The CONTRACTOR shall pay the cost of the first test and any subsequent re-testing after the first test to show compliance shall also be at the CONTRACTOR'S expense.
- E. The CONTRACTOR shall notify the DISTRICT at least 48 hours prior to performing any site clearing, grubbing, or stripping.
- F. Finish Subgrade at any point shall not vary more than 0.05 foot above or below the subgrade elevation shown on the Drawings.

1.7 PROJECT CONDITIONS

- A. Material for embankments, where required, shall consist of suitable excavated material if available, or such imported fill material as may be required conforming to the requirements of this Section and the geotechnical engineering study.

- B. The CONTRACTOR shall be solely responsible for the maintenance of the graded surface at all times including implementing all erosion control measures as shown on the drawings during the winter months.
- C. The CONTRACTOR shall be solely responsible for provision of adequate site drainage at all times as shown on the grading and erosion control plans during the course of the WORK.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Structural fill, native or import fill shall meet the requirements specified on the geotechnical engineering study.
- B. All fill material, import or native, shall be “non-expansive” and free of organic materials, trash and debris, or any other deleterious materials. Imported select fill shall meet the requirements in the geotechnical investigation for the project and shall be subject to the approval of the DISTRICT.
- C. The CONTRACTOR shall submit to the DISTRICT at least 10 working days prior to use on the site its proposed source of import fill material along with a soils report and Certification from the designated source that the proposed source materials conform to this Section.
- D. All suitable native fill material containing clods or hard lumps of earth over 6 inches in the greatest dimension shall be broken up before compaction.

PART 3 - EXECUTION

3.1 PREPARATION FOR FILL MATERIAL

- A. Site preparation should consist of the removal of the existing buildings and pavement sections, removal of any existing underlying unsuitable undocumented fill where encountered and any other deleterious materials.
- B. Prior to placing import fill material, all areas to receive fill shall be scarified, moisture conditioned and compacted as specified in the geotechnical engineering study. Subgrades to receive engineered fill and subgrades for slabs on grade, flatwork or pavements, should be scarified to a minimum depth of 8-inches, moisture conditioned, and compacted.

3.2 SITE GRADING AND COMPACTION

- A. Site grading, placing and compacting shall conform to geotechnical engineering study, Section 19-2, "Roadway Excavation", Section 19-5, "Compaction" and Section 19-6, "Embankment Construction," of the Caltrans Standard Specifications and as modified by this Section. Compaction shall be per Table 5 “Project Compaction Requirements” in Section 6.3.3 “Project Compaction Recommendations”.
- B. Damage to underlying native soils caused by the CONTRACTOR'S operations shall be repaired and re-compacted under the supervision of and to the satisfaction of the DISTRICT at no additional cost to the DISTRICT.

- C. The CONTRACTOR shall remove and dispose of all excess excavated material to a suitable site. The proper and legal disposal shall be the responsibility of the CONTRACTOR.
- D. Non-expansive material for fill shall be placed in lifts or horizontal layers not exceeding 8 inches in uncompacted thickness as shown on the plans and as specified in the geotechnical engineering study.
- E. Areas to be lime treated should be as specified in the geotechnical engineering study. Scarified areas should extend 5 feet beyond the limits of the structure and 3 feet beyond the edge of the PCC flatwork or AC paving.

3.3 UNDERGROUND STRUCTURES

- A. Where abandoned underground structures and pipelines are encountered in the project areas, remove to sufficient depth to allow underground lines to cross, backfill and compact during rough grading. The DISTRICT may require further work to be done if visual inspection indicates during construction.

END OF SECTION

SECTION 31 23 33

TRENCH EXCAVATION AND BACKFILL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specifications, apply to this Section.

1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment, and labor necessary to perform and complete all utility trenching and backfill as shown on the Drawings and as specified herein.
- B. The work of this Section includes all utility earthwork trenching and backfilling required for construction of the project. Such earthwork shall include, but may not necessarily be limited to, the loosening, removing, loading, transporting, depositing, and compacting of all materials wet and dry, as required for the purposes of completing the work, which shall include, but not necessarily be limited to, the furnishing, placing, and removing of sheeting, shoring and bracing necessary to safely support the sides of all excavations; all pumping, ditching, draining and other required measures for the removal or exclusion of water from the excavation; the supporting of structures above and below the ground; all backfilling around structures and all backfilling of trenches and pits; the disposal of excess excavated materials; borrow of materials to make up deficiencies for fills; and all other incidental earthwork.
- C. Hazardous materials shall be handled in accordance with all regulatory agency requirements.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 10 00 Demolition, Clearing, and Grubbing.

1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. State Codes:
 - California Labor Code.
 - Construction Safety Orders of the State of California.
- B. State of California (Caltrans) Standards:
 - 1. Standard Specifications 2025:
 - Section 19 Earthwork.
 - Section 25 Aggregate Subbases.
 - Section 26 Aggregate Bases.
- C. Commercial Standards:

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ASTM D 422	Test Method for Particle-Size Analysis of Soils.
ASTM D 1556	Test Method for Density of Soil in Place by the Sand-Cone Method.
ASTM D 1557	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54-kg) Rammer and 18-in. (457-mm) Drop.
ASTM D 1633	Test Method for Compressive Strength of Molded Soil-Cement Cylinders.
ASTM D 2419	Method for Sand Equivalent Value of Soils and Fine Aggregate.
ASTM D 2487	Test Method for Classification of Soils for Engineering Purposes.
ASTM D 2922	Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
ASTM D 3017	Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
ASTM D 3776	Test Methods for Mass Per Unit Area (Weight) of Woven Fabric.
ASTM D 3786	Method of Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics: Diaphragm Bursting Strength Tester Method.
ASTM D 4253	Test Methods for Maximum Index Density of Soils Using a Vibratory Table.
ASTM D 4254	Test Methods for Minimum Index Density of Soils and Calculation of Relative Density.
ASTM D 4318	Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
ASTM D 4491	Test Methods for Water Permeability of Geotextiles by Permittivity.
ASTM D 4632	Test Method for Grab Breaking Load and Elongation of Geotextiles.
ASTM D 4751	Test Method for Determining the Apparent Opening Size of a Geotextile.
OSHA	Occupational Safety and Health Administration.

1.5 CONTRACTOR SUBMITTALS

TRENCH EXCAVATION AND BACKFILL 31 23 33- 2

- A. The CONTRACTOR'S attention is directed to the provisions for "Shoring and Bracing Drawings" in Section 6705 of the California Labor Code. The CONTRACTOR, prior to beginning any trench or structure excavation 5 feet deep or over, shall submit to the DISTRICT for review for compliance with Section 6705 the CONTRACTOR'S detailed plan showing design of all shoring, bracing, sloping of the sides of excavation, or other provisions for worker protection against the hazard of caving ground during the excavation of such trenches or structure excavation. If such plan varies from the shoring system standards established in the Construction Safety Orders of the State of California, such alternative system plans shall be prepared, stamped and signed by a civil or structural engineer licensed in the State of California at the CONTRACTOR'S expense.
- B. Certificates of Compliance: Certificates of Compliance shall be provided for all products and materials proposed to be used under this Section.
- C. For all materials that are not pre-approved by the DISTRICT the CONTRACTOR shall designate the source and/or submit samples of all materials in advance of their use for required testing and DISTRICT's approval. All testing costs shall be at the CONTRACTOR'S expense.

1.6 QUALITY ASSURANCE

- A. The CONTRACTOR shall notify the DISTRICT at least 48 hours prior to performing any utility excavation.

PART 2 - PRODUCTS

2.1 SUITABLE BACKFILL MATERIALS

- A. Suitable Backfill shall be in conformance with Section 19-3 "Structure Excavation and Backfill" of the Standard Specifications.

2.2 UNSUITABLE BACKFILL MATERIAL

- A. Unsuitable soils shall be disposed of daily in conformance with Section 19-2.03B "Surplus Material" of the Standard Specifications.

2.3 USE OF SUITABLE BACKFILL MATERIAL TYPES

- A. The CONTRACTOR shall use the types of materials as designated herein for all pipe bedding. Pipe zone bedding material shall be either:
 - 1. Class 2 aggregate base
 - 2. Washed natural river or bank sand, free of all silt, clay, loam, soluble or organic material, and of such gradation that a minimum of 90% will pass a No. 4 sieve and not more than 5% will pass a No. 200 sieve with a sand equivalent of thirty (30). The material shall have a resistivity of 2,000 ohm-cm, as determined by ASTM D2419 and shall have a pH between 6.5 and 8.5, as determined by ASTM G51.
- B. Class 2 permeable material shall conform to the provisions of Section 68-2.02F, "Permeable Material," of the Standard Specifications and these Special Provisions. The permeable material shall conform to the grading requirements for Class 2, permeable material and must consist of washed angular crushed stone.

- C. The CONTRACTOR shall use the types of materials as designated herein for all required trench backfill construction.
 - 1. Under structures and paving – Class 2 aggregate base
 - 2. Landscape areas – native material

PART 3 - EXECUTION

3.1 GENERAL

- A. Where abandoned underground structures are encountered in the pavement areas, remove the structure, backfill and compact during rough grading. The DISTRICT may require further work to be done if visual inspection indicates during construction.

3.2 MINOR STRUCTURE EXCAVATION

- A. General: Except when specifically provided to the contrary, excavation shall include the removal of all materials of whatever nature encountered, including all obstructions of any nature that would interfere with the proper execution and completion of the work. The removal of said materials shall conform to the lines and grades shown on the Drawings or ordered by the DISTRICT. Unless otherwise provided, the entire construction site shall be stripped of all vegetation and debris, and such material shall be removed from the site prior to performing any excavation. The CONTRACTOR shall furnish, place, and maintain all supports and shoring that may be required for the sides of the excavations, and all pumping, ditching, or other measures required for the removal or exclusion of water, including storm water, groundwater, and wastewater reaching the site of the work from any source so as to prevent damage to the work or adjoining property. Excavations shall be sloped or otherwise supported in a safe manner in accordance with applicable State safety requirements and the requirements of OSHA Safety and Health Standards for Construction (29CFR1926). The limits of structure excavation shall be a minimum of 12 inches beyond the outside edge of the structure, and at a minimum no larger than necessary to facilitate backfill, compaction and testing operations. For structures poured against undisturbed soil the width of the structure wall shall be no more than 2 inches greater than specified or shown on the Drawings.
- B. Excavation Beneath Minor Structures: Except where otherwise specified for a particular structure or as directed by the DISTRICT, excavation shall be carried to the grade of the bottom of the structure. When directed by the DISTRICT, areas beneath minor structures shall be over-excavated. When such over-excavation is directed, both over-excavation and subsequent backfill to the required grade shall be performed. After over-excavation is performed and before backfill is placed, the exposed surface shall be scarified to a depth of 8 inches, brought to optimum moisture content, and rolled with heavy compaction equipment to obtain 90 percent of maximum density.

3.3 PIPELINE AND UTILITY TRENCH EXCAVATION

- A. Trench installation and backfill shall be constructed per Details 120A, 120B, 122A, 122B, and 122C of the City of San Leandro Standard plans and these special provisions.

- B. Trench Width: Unless otherwise shown or directed, excavation for pipelines and utilities shall be open-cut trenches. Trench widths shall be kept as narrow as is practical for the method of densification selected by the CONTRACTOR, but shall have a minimum width at the bottom of the trench equal to the outside diameter of the pipe plus 24 inches. The maximum width at the top of the pipe shall be equal to the outside diameter of the pipe plus 36 inches for pipe diameters 18 inches and larger, and to the outside diameter of the pipe plus 24 inches for pipe diameters less than 18 inches. For deep trenches, the maximum width requirement may be waived for constructability reasons with the written approval of the DISTRICT. For telecommunications conduits (electrical, telephone, cable TV/communication conduits), street light and traffic signal conduits, the width of the trench shall be as shown on the drawings.
- C. Trench Bottom: The pipe bedding shall be given a final trim establishing grade such that each pipe section when first laid will be continually in contact with the bedding along the extreme bottom of the pipe. Pipe and conduit shall be bedded and surrounded, in the "pipe zone" (a minimum depth of three inches under the pipe and to 12 inches over the top of the pipe), with compacted bedding material. Rounding out the trench bottom or bedding to form a cradle for the pipe will not be allowed. The CONTRACTOR shall excavate for bell holes and fittings.
- D. Open Trench: The maximum amount of open trench permitted in any one location shall be the length necessary to accommodate the amount of pipe installed and backfilled in a single day. All trenches shall be fully backfilled at the end of each day or, in lieu thereof, shall be covered by heavy steel plates adequately braced and capable of supporting vehicular traffic in those locations where it is impractical to backfill at the end of each day. The above requirements for backfilling or use of steel plates may be waived in cases where the trench is located further than 100 feet from any travelled roadway or occupied structure. In such cases, however, barricades and warning lights meeting safety requirements shall be provided and maintained.
- E. Trench Over-Excavation: Where indicated trenches shall be excavated to the depth shown, and then backfilled to the grade of the bottom of the Pipe Zone.
- F. Over-Excavation: When ordered by the DISTRICT, whether or not indicated on the Drawings, trenches shall be over-excavated beyond the depth shown. Such over-excavation shall be to the depth ordered. The trench shall then be backfilled to the grade of the bottom of the Pipe Zone.
- G. Where pipelines are to be installed in embankment or structure fills, the fill shall be constructed to a level a minimum of 2 feet above the top of the pipe, as directed by the DISTRICT, or as recommended by the pipe manufacturer, whichever is greater, before the trench is excavated.

3.4 OVER-EXCAVATION NOT ORDERED, SPECIFIED, OR SHOWN

- A. Any over-excavation carried below the grade ordered, specified, or shown, shall be backfilled to the required grade and densified with the specified material and compaction. Such work shall be performed by the CONTRACTOR at its own expense.

3.5 EXCAVATION IN VICINITY OF TREES

- A. Except where trees are shown to be removed, trees shall be protected from injury during construction operations. No tree roots over 2 inches in diameter shall be cut without express permission of the DISTRICT. Trees shall be supported during excavation by any means previously reviewed by the DISTRICT.

- B. If existing roots over one inch in diameter are cut during the course of the work, the cut faces shall be thoroughly coated with emulsified asphalt made especially for use on cut or damaged plant tissues. Exposed roots shall be covered with wet burlap to prevent them from drying out.

3.6 DISPOSAL OF EXCESS EXCAVATED MATERIAL

- A. The CONTRACTOR shall remove and dispose of all excess excavated material to a suitable site. The proper and legal disposal shall be the responsibility of the CONTRACTOR.

3.7 BACKFILL - GENERAL

- A. Backfill shall not be dropped directly upon any structure or pipe. Backfill shall not be placed around or upon any structure for a minimum of 72 hours or until the concrete has attained sufficient design strength to withstand the loads imposed, whichever is greater.

3.8 PLACING AND SPREADING OF BACKFILL MATERIALS

- A. Backfill materials shall be placed and spread evenly in horizontal layers. The backfill layers shall be evenly spread so that when compacted, each layer shall not exceed 8 inches in thickness.
- B. During spreading each layer shall be thoroughly mixed as necessary to promote uniformity of material in each layer and uniformity of moisture throughout backfill materials. Pipe Zone backfill materials shall be manually spread around the pipe so that when compacted, the Pipe Zone backfill will provide uniform bearing and side support.
- C. Where the backfill material moisture content is below the optimum moisture content water shall be added before or during spreading until the proper moisture content is achieved.
- D. Where the backfill material moisture content is too high to permit the specified degree of compaction, the material shall be dried or replaced until the moisture content is satisfactory.
- E. Backfill shall be mechanically compacted by means of tamping rollers, sheepfoot rollers, pneumatic tire roller, vibrating rollers, or other mechanical tampers. All such equipment shall be of a size and type subject to review by the DISTRICT. Impact-type pavement breakers (stompers) will not be permitted. Permission to use specific compaction equipment shall not be construed as guaranteeing or implying that the use of such equipment will not result in damage to adjacent ground, existing improvements, or new improvements. The CONTRACTOR shall make its own determination in this regard.
- F. Material for mechanically compacted backfill may be placed in loose lifts which, prior to compaction, shall not exceed the thickness specified below for various types of equipment:
 - 1. Vibratory equipment, including vibratory plates, vibratory smooth-wheel rollers, and vibratory pneumatic-tired rollers - maximum lift thickness of 8-inches.
 - 2. Rolling equipment, including sheepfoot (both vibratory and non-vibratory), grid, smooth-wheel (non-vibratory), pneumatic-tired (non-vibratory), and segmented wheels - maximum lift thickness of 1 foot.
 - 3. Hand-directed mechanical tampers-maximum lift thickness of 4 inches.

3.9 COMPACTION OF BACKFILL MATERIALS

- A. Compaction of backfill material shall be in conformance with Section 19-5 of the Standard Specifications.

3.10 STEEL PLATE

- A. General: When backfilling operations of an excavation in the traveled way, whether transverse or longitudinal, cannot be properly completed within a work day, steel plate bridging with a non-skid surface and shoring may be required to preserve unobstructed traffic flow.
- B. When steel plate bridging is required, the following conditions shall apply:
 - 1. Steel plates used for bridging must extend a minimum of 12 inches beyond the edges of the trench.
 - 2. The trench shall be adequately shored to support the bridging and traffic loads and shall be installed to operate with minimum noise.
 - 3. Temporary paving with cold asphalt concrete shall be used to feather the edges of the plates.
 - 4. Bridging shall be secured against displacement by using adjustable cleats, shims or other devices.
- C. Steel plate bridging should not exceed 4 consecutive working days in any given week.

END OF SECTION

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SECTION 32 12 00

ASPHALT PAVEMENT, AGGREGATE BASE AND AC GRIND

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment, and labor necessary to furnish and construct the roadway structural section, asphalt overlay, and all appurtenant work, complete in place, as shown on the Drawings and as specified herein.

- B. Work Covered in this Section:

- 1. Preparation of Subgrade.
 - 2. Aggregate Base.
 - 4. Tack Coat.
 - 5. Asphalt Concrete, Utility Cut Pavement Replacement, and Pavement Structural Section.
 - 6. Asphalt Concrete Grinding
 - 7. Pavement Flood Testing.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 10 00 Demolition, Clearing, and Grubbing.
- B. Section 31 23 33 Trench Excavation and Backfill
- C. Division 1 General Requirements.

1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. State of California (Caltrans) Standards:

- 1. Standard Specifications 2025:

Section 15	Existing Highway Facilities.
Section 17-2	Clearing and Grubbing.
Section 19	Earthwork.
Section 26	Aggregate Bases
Section 37	Bituminous Seals
Section 39	Asphalt Concrete
Section 39-3.04	Cold Planing Asphalt Concrete Pavement
Section 92	Asphalt Binders
Section 94	Asphaltic Emulsions.

- B. Commercial Standards:

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ASTM D 36	Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus.)
ASTM D 1557	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54-kg) Rammer and 18-in. (457-mm) Drop.
ASTM D 3407	Methods of Testing Joint Sealants, Hot-Poured, for Concrete and Asphalt Pavements.

1.5 CONTRACTOR SUBMITTALS

- A. Certificates of Compliance: Certificates of Compliance shall be provided for all products and materials proposed to be used under this Section.
- B. Delivery Tickets: The CONTRACTOR shall provide delivery tickets to the DISTRICT at the time of delivery of each load of product, including aggregate subbase, aggregate base, asphalt concrete, and liquid asphalt. Each delivery ticket shall include or be accompanied by appropriate batch information produced by the batching plant or factory of origin and information stating the mix or model number, total yield in tons, gallons, or cubic yards, and time, date, and location of delivery.

1.6 QUALITY ASSURANCE

- A. The CONTRACTOR will employ a testing laboratory to perform all quality assurance testing and inspection testing as may be required by this Section.
- B. At the discretion of the DISTRICT the CONTRACTOR shall flood test all asphalt pavement for proper drainage by flooding with water in ample quantity to demonstrate the correct shaping of the pavement.

PART 2 - PRODUCTS

2.1 AGGREGATE BASE

- A. Aggregate base material shall be Class 2 aggregate base in conformance with Section 26, "Aggregate Bases," of the Caltrans Standard Specifications. All aggregate base used on the work shall conform to the 3/4 inch maximum size gradations.

2.2 TACK COAT OR PAINT BINDER

- A. A tack coat or paint binder shall be SS-1 asphalt emulsion in conformance with Section 92, "Asphalt Binders," of Caltrans Standard Specifications.

2.3 ASPHALT CONCRETE, UTILITY CUT PAVEMENT REPLACEMENT, AND PAVEMENT STRUCTURAL SECTION

- A. Asphalt concrete shall be Type A on all pavement sections.
- B. The asphalt binder shall be paving asphalt grade PG 64-10 in conformance with Section 92, "Asphalts," of the Caltrans Standard Specifications.
- C. The aggregate shall be 1/2 inch Type A for the asphalt concrete pavement structural sections in conformance with Section 39, "Hot Mix Asphalt," of the Caltrans Standard Specifications. The minimum asphalt concrete thickness for the top lift shall be 1.5 inches.

ASPHALT PAVEMENT, AGGREGATE BASE AND AC GRIND 32 12 00- 2

2.4 FINE ASPHALT CONCRETE PAVING

- A. Fine asphalt concrete for patch paving shall be Type A, 3/8 inch maximum size. The asphalt binder shall be paving asphalt grade PG 64-10 in conformance with Section 39, "Asphalt Concrete," of the Caltrans Standard Specifications.

PART 3 - EXECUTION

3.1 GENERAL

- A. All work adjacent to existing pavement structural section shall butt up to the full existing structural section. Where the full pavement structural section is not encountered, continue removal of additional pavement structural section until a full pavement structural section is found.

3.2 ORDER OF WORK

- A. All underground utilities shall be installed, inspected and approved, and all backfill and compaction operations shall be completed prior to commencement of pavement structural section construction.
- B. All asphalt concrete patch and pavement repair work shall be installed flush and level with adjacent (existing) pavement.
- C. Cutting or patching of finished pavement will not be allowed.

3.3 PREPARATION OF SUBGRADE

- A. The subgrade shall be prepared in conformance with Section 19, "Earthwork," of the Caltrans Standard Specifications, and the geotechnical engineering study.
- B. The surface of the subgrade after compaction shall be hard, unyielding, uniform, smooth, self-draining, and true to grade and cross-section.
- C. All soft material which will not compact readily and all unstable material shall be removed in conformance with the geotechnical engineer. All materials for subgrade replacement shall be in conformance with the written recommendations of the geotechnical engineer.
- D. Subgrade preparation and compaction and determination of subgrade stability shall be performed under the observation of the DISTRICT.
- E. Finish subgrade shall be within the tolerances established in Section 19-1.03C, "Grade Tolerance," of the Caltrans Standard Specifications.

3.4 AGGREGATE BASE

- A. Aggregate base shall be spread and compacted in conformance with Section 26, "Aggregate Bases," of the Caltrans Standard Specifications for Class 2 Aggregate Base. Finished aggregate base shall not vary more than 0.05 foot above or below the established grade. The aggregate base shall be compacted to 95 percent relative compaction in conformance with ASTM D 1557. The surface of the aggregate base after compaction shall be hard, unyielding, uniform, smooth, self-draining, and true to grade and cross-section.

ASPHALT PAVEMENT, AGGREGATE BASE AND AC GRIND 32 12 00- 3

3.6 PAVEMENT GRINDING

- A. Grinding necessary to perform edge and transverse pavement conforms shall be performed on all areas to be overlaid and shall be completed in conformance with Section 39-3.04 "Cold Planing Asphalt Concrete Pavement," of the Caltrans Standard Specifications and this Section.
- B. All materials removed shall become the property of the CONTRACTOR and shall be disposed of in a legal manner. Residue from the grinding operations may be removed from the asphalt surface by a vacuum sweeper after the grinding operations. The CONTRACTOR shall be responsible for maintaining a clean condition during the course of the grinding operations. All loose materials shall be removed prior to the application of the tack coat.
- C. Areas that cannot be reached with the grinding machine shall be jack-hammered or otherwise removed by hand.

3.7 TACK COAT

- A. The CONTRACTOR shall be responsible for the proper use of tack coats and shall be in conformance with applicable regulatory requirements.
- B. Tack Coat or Paint Binder - Prior to placement of asphalt concrete a tack coat or paint binder shall be applied to existing paved and vertical surfaces where new asphalt concrete is to be placed on or against existing pavement at an approximate total rate from 0.02 gallon to 0.10 gallon per square yard to all areas receiving asphalt concrete. Care shall be taken to prevent over application of tack coat material onto finish surfaces that will not be in contact with the new asphalt concrete pavement.

3.8 ASPHALT CONCRETE PAVEMENT OR PATCH PAVING

- A. Surface preparation for asphalt concrete overlay on existing asphalt concrete surfaces shall include all grinding, patching, and sweeping.
- B. Application of a prime coat and/or tack coat shall not occur until all surface preparation has been performed.
- C. Asphalt concrete shall be spread and compacted on the existing asphalt concrete in conformance with the lines, grades and dimensions shown on the Drawings and in conformance with Section 39, "Asphalt Concrete," of the Caltrans Standard Specifications.
- D. Spreading and compaction equipment and methods shall be in conformance with Section 39, "Asphalt Concrete," of the Caltrans Standard Specifications and this Section. The DISTRICT may, at its option, call for continuous and/or random testing of asphalt concrete compaction. Asphalt concrete shall not be placed or stockpiled in windrows when the underlying layer or surface is frozen, or when, in the opinion of the DISTRICT, weather conditions will prevent the proper handling, finishing, or compaction of the asphalt concrete.
- E. The finished grade shall be flush with the adjacent existing pavement. The CONTRACTOR shall be responsible for all damage to fresh surfacing until it is ready for use. Damaged areas shall be repaired to the satisfaction of the DISTRICT.
- F. The depositing, distribution, and spreading of each lift of the asphalt concrete shall be accomplished in a single, continuous operation.

ASPHALT PAVEMENT, AGGREGATE BASE AND AC GRIND 32 12 00- 4

3.9 PAVEMENT FLOOD TESTING

- A. Flood testing of asphalt pavement must be made prior to the placement of striping and legends. The DISTRICT must be present to witness the flood tests. The CONTRACTOR shall notify the DISTRICT a minimum of 3 working days prior to the flood test.
- B. The CONTRACTOR shall repair any areas which are damaged or in which excessive ponding occurs. Excessive ponding is defined as areas in which water stands more than 3/16-inch in depth. Any areas requiring remedial overlay shall be prepared by grinding the pertinent area as defined by the DISTRICT and placing fine asphalt concrete patch mix over a tack coat. The corrective work shall be done prior to the placement of striping and legends.

END OF SECTION

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SECTION 32 13 16

DECORATIVE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The scope of work outlined in this Section includes the following items of work, as detailed in these Contract Specifications, as shown on the Contract Drawings or reasonably implied therefrom and is not limited to the following items:
 - 1. Concrete Mowband
 - 2. Concrete Paving
 - 3. Concrete Footings associated with site furnishings
 - 4. Play Curb at PIP
 - 5. Play Curb at Sand
 - 6. Play Ramp
 - 7. Final Subgrade Preparation
 - 8. Landscape Wall

1.3 RELATED REQUIREMENTS

- A. These Contract Specifications are part of the Contract Drawings and shall include all labor, materials, equipment, reasonable incidentals, and services necessary for the execution of the Work installed complete in place.
- B. Refer to all other sections, determine the extent and character of related work, and coordinate all work to produce a complete, properly constructed product.

1.4 RELATED SECTIONS

- A. Section 03 3000: Cast-in-Place Concrete
- B. Section 31 0000: Earthwork
- C. Section 32 1113: Lime Treated Subgrade
- D. Section 32 8400: Irrigation System
- E. Geotechnical Report

1.5 QUALITY CONTROL AND ASSURANCE

- A. Materials and methods of construction shall comply with the following standards:
 - 1. ASTM International, (ASTM):
 - a. ASTM C309 – Liquid Membrane-Forming Compounds for Curing Concrete.
 - b. ASTM C979 – Pigments for Integrally Colored Concrete.
 - 2. American Concrete Institute, (ACI):
 - a. Specification for Measuring, Mixing and Placing Concrete, (ACI 304)
 - b. Specification for Hot Weather Concreting (ACI 305)
 - c. Specification for Cold Weather Concreting (ACI 306)
 - d. Building Code Requirements for Structural Concrete (ACI 318)
 - e. Specification for Formwork for Concrete (ACI 347)
 - 3. State Standard Specifications, California Department of Transportation.
 - 4. American National Standards Institute, (ANSI).
 - 5. Bay Area Air Quality Management District, Sandblasting Guidelines.
- B. Inspection by Owner and Other Governing and Regulatory Authorities: Allow the Owner and other governing and regulatory authorities to perform testing and inspection of materials and practices associated with construction within their jurisdiction on the Worksite during business hours for the purpose of ensuring that the Work is in compliance with the requirements of the Contract Drawings, Contract Specifications, and other local, state and federal laws and regulations.
- C. Contractor Quality Control:
 - 1. Sampling, Testing and Inspection:
 - a. Hire an independent Quality Control Testing Firm to perform sampling, testing, and inspections in accordance with the provisions herein and Section 01 45 00 - Quality Control.
 - b. Wherever it is specified herein that sampling, testing, or inspection shall be performed by the Contractor, it shall be understood to mean that said sampling, testing, or inspection shall be performed by the Quality Control Testing Firm.
 - c. Cooperate with and notify the Owner at least 48 hours in advance of sampling, tests and inspections, being performed by the Quality Control Testing Firm. The Owner may elect to observe these procedures. Provide samples and facilities for inspection to the Owner without extra charge if requested.
 - d. The Quality Control Testing Firm shall collect samples of materials for testing in accordance with the provisions outlined herein and as directed by the Owner.
 - e. The Quality Control Testing Firm shall perform quality control through observation, inspection, sampling and testing in accordance with the requirements of Section 03 30 00 - Cast-in-Place Concrete.
 - 2. Qualifications of the Quality Control Testing Firm: Refer to Section 01 45 00 - Quality Control.
- D. Engineer Quality Assurance:

1. The Owner or Owner's representative will monitor the implementation of the Contractor's quality control programs through observation, inspection, sampling and testing in accordance with Section 01 40 00 - Quality Requirements.
- E. All manufacturer's specifications and details shall be included as part of the Contract Documents. Contractor shall review all manufacturer requirements, standards, specifications and details prior to bid and include all mix designs, additives, and incidentals required.
- F. Installing contractor shall assign experienced mechanics to this project, of which one will serve as lead mechanic for the complete duration of the project.
- G. Supervision: On site Decorative Concrete foreman must have experience installing Architectural Cast-in-place concrete. Submit project list of installer qualifications, demonstration of square footage installed, number of projects, and contact information to verify experience. The supervising foreman shall be onsite during all decorative concrete placement and finishing work for the complete duration of the project.
- H. Maintain field records of time, date of placing, curing and removal of forms of concrete in each portion of work.
- I. Samples:
 1. Sample panel: Before ordering material for concrete paving, provide sample panels, minimum 4' x 4' of each color and finish, using specified materials. Show color, texture, pattern, edging, and joint treatments. Contractor to provide additional samples at no additional cost to contract until all colors and finishes have been approved by the Landscape Architect.
 - a. Approved samples will not be a portion of the work and will remain in place throughout the construction period for comparison. Location as selected by the contractor and approved by the Landscape Architect. Contractor will be required to provide additional panels as necessary, until approved.
 2. Sample wall: Before ordering material for concrete walls and benches, provide sample panel, minimum 3-foot section of wall, using specified materials. Show color, texture, pattern, edging, graffiti coating, and joint treatments. Contractor to provide additional samples at no additional cost to contract until all colors and finishes have been approved.
 - a. Approved samples will not be a portion of the work and will remain in place throughout the construction period for comparison. Location as selected by the contractor and approved by the Landscape Architect. Contractor will be required to provide additional panels as necessary, until approved.

1.6 SUBMITTALS

- A. General: Refer to Section 01 33 00 – Submittal Procedures, and Section 01 33 23 – Shop Drawings, Product Data, and Samples for submittal requirements and procedures.
- B. Submit concrete mix designs for each concrete type. Obtain approval before placing concrete.
 1. Pedestrian and Vehicular flatwork Concrete
- C. Product data:
 1. Submit complete materials list of items proposed for the work. Identify materials source.

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2. Submit admixture, curing compound, retarder, and accessory item product data, if used.
 3. Submit material certificates for aggregates, fly ash, slag, reinforcing, dowels, sealants, diamond dowels, and joint fillers.
 4. Submit manufacturer's product data and specifications for all accessories and incidentals.
- D. Submit concrete delivery tickets. Show the following:
1. Batch number.
 2. Mix by class or sack content with maximum size aggregate.
 3. Admixtures.
 4. Slump.
 5. Time of loading.
- E. Submit concrete test reports.
- F. Trial batch shrinkage tests, when required as specified herein, shall show conformance with the "Drying Shrinkage" requirements specified in Article 2.01I.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Work notification: Notify Landscape Architect and Owner at least 24 hours prior to installation of concrete.
- B. Establish and maintain required lines and grade elevations. All concrete shall slope to drain with no ponding of water.
- C. Do not install concrete work over wet, saturated, muddy, or frozen subgrade.
- D. Do not install concrete when air temperature is below 40 degrees F. Use of calcium chloride, salt, or any other admixture to prevent concrete from freezing is prohibited.
- E. Protect adjacent work.
- F. Provide temporary barricades and warning lights as required for protection of project work and public safety.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Portland Cement: ASTM C150, Type II, natural color, unless otherwise noted.
- B. Supplementary Cementitious Materials (SCM):
 1. Fly Ash: ASTM C618, Type F. Combined Fly ash and slag shall equal no more than 25% total.
 2. Slag Cement: ASTM 989, GR 100 or GR 120. Combined Fly ash and slag shall equal no more than 25% total.
 3. Metakaolin: ASTM C618, Type N.

- a. MetaMax by BASF Kaolin (Part of BASF Corporation) (or approved equal)
- C. Aggregate: Provide minimum 50% ASTM C33 normal weight aggregates, 3/4" maximum size, clean, uncoated crushed stone or gravel coarse aggregate free of materials which cause staining or rust spots; fine aggregate shall be clean natural sand.
- D. Recycled Aggregate: Provide minimum 30%, maximum 50% Class 2 aggregate subbase, 3/4" size, meeting Caltrans Section 25 and Section 26 of the standard specifications.
- E. Water: ASTM C 1602, Clean, fresh, and potable.
- F. Chemical admixtures: ASTM C494.
 - 1. BASF Corporation – (800) 628-9990 (or approved equal)
- G. Latex Portland Cement Grout: ANSI A108.10. Color of grout to blend with stone veneer. Submit sample for review.
- H. Concrete Admixtures and Color Additives: Color per Contract Drawings, as approved by the Landscape Architect.
- I. Drying Shrinkage of Concrete:
 - a. A trial batch of the proposed (mix design) concrete shall be prepared using the aggregates, cement, and admixture proposed for this work. From the trial batch, three specimens (4 inches by 4 inches by 11 inches) for determining "Drying Shrinkage" shall be prepared, cured, dried, and measured. Shrinkage of specimens for cast-in-place concrete shall not exceed 0.040 percent when measured in accordance with ASTM C157/C157M and ASTM C490/C490M after 21 days of drying.

2.2 MIXES

- A. Provide Class A ready-mixed concrete. Batch mixing at site not acceptable.
 - 1. For all decorative site concrete: Use Portland Cement Concrete containing not less than 658 pounds of cementitious materials cubic yard, with a 28 day compressive strength of not less than 4000 p.s.i.
- B. Indicate water added to mix at Worksite on each delivery ticket. Show quantity of water added. Site water tempered mixes exceeding specified slump range will be rejected as not complying with specification requirements.

2.3 ACCESSORIES

- A. Granular base: Class II Aggregate Base.
- B. Forms: Wood or metal of sufficient strength to resist concrete placement pressure and to maintain horizontal and vertical alignment during concrete placement. Provide forms straight, free of defects and distortion, and height equal to full depth of concrete work.
 - 1. Provide 2" nominal thickness, surfaced plank wood forms for straight sections. Use flexible metal, 1" lumber or plywood forms to form radius bends.

2. Lumber to be new #2 grade or better. Do not use used form lumber.
 3. Perform form layout with a digital electronic transit for line layout accuracy.
 4. Allow forms to remain in place long enough to allow concrete to set properly. Remove forms when appropriate.
- C. Joint Filler: ASTM D1751, pre-molded non-extruding asphalt-impregnated fiberboard, thickness indicated.
- D. Curing compound: ASTM C309, non-yellowing, non-staining liquid membrane-forming type containing a fugitive dye. Chlorinated rubber compounds not acceptable for exterior use.
1. BASF Corporation; MasterKure 1315 WB – (800) 243-6739
 2. Admixtures Inc.; Colorful Clear Curing Compound – (626) 357-3263 or <http://admixtures.home.att.net/>
- E. Joint Sealants: Two-component polysulfide or polyurethane elastomeric type complying with FS TT-S-00227, self-leveling, designed for foot traffic. Provide vehicular rated sealant in all vehicular areas. Colors shall match paving.
- F. Reinforcing steel: ASTM A615, A616, or A617, Grade 60, new domestic deformed steel bars
- G. Welded Steel Wire Reinforcement - Plain Wire: ASTM A1064/A1064M, wire sizes and center-to-center spacings as indicated.
- H. Welded Steel Wire Reinforcement - Deformed Wire: ASTM A1064/A1064M, wire sizes and center-to-center spacings as indicated.
- I. Steel Bar Mats - Deformed Bars: ASTM A184/A184M, using ASTM A706 deformed bars, sizes and spacings of members as indicated, welded or clipped at intersections.
- J. Accessories: Provide reinforcement accessories, consisting of bar supports, spacers, hangers, chairs, ties, and similar items as required for spacing, assembling, and supporting reinforcement in place. Conform with CRSI referenced standards and the following requirements:
1. For footings, grade beams, and slabs on grade, provide supports with precast concrete or mortar bases or plates or horizontal runners where wetted base materials will not support chair legs.
- K. Form release agent: Non-staining chemical form release agent free of oils, waxes, and other materials harmful to concrete.
1. BASF Corporation; “MasterFinish RL” Series – (800) 628-9990
- L. Reveals/Chamfer strips: Shall be plastic or polyvinyl coated for easy release. Available from Barker Steel, www.barker.com, or approved equal.
- M. Provide all stirrups, ties, anchors, shown or required to be cast into precast members.
- N. Bolts, Nuts, and Washers: ASTM A307. Provide hot-dip galvanized fasteners for exterior use. Paint to match adjacent metal work.
- O. Waterproofing at Walls
1. Tremco 250GC, Tremco 150

2. Approved equal
- P. Glare Reducing Agents
1. Lampblack in dry form, in accordance with the requirements of ASTM “ Standard Specification for Lampblack”, Designation D 209, in the proportion of from $\frac{1}{2}$ to $\frac{3}{4}$ pound over cubic yard of concrete.
 2. An approved liquid or semi-paste black colorant intended for use integrally in concrete mixes. The proportion required, generally from 10 to 40 ounces liquid measure per cubic yard of concrete, may be affected by the colorant used. Curing in this case shall be by the pigmented curing compound method.
 3. All visible Standard Gray concrete work shall include Lampblack as indicated above.
- Q. Sealer
1. Repello by Scofield.
- R. Surface retarder
1. BASF Corporation; “MasterFinish” Series
 2. Dayton Superior Top Cast
 3. Or approved equal
- S. Formliners: per Section 32 13 30- Concrete Formliner and as specified within the Contract Drawings
- T. Graffiti coatings to be applied to Decorative Concrete shall be in compliance with Section 09 96 33 – Graffiti Resistant Coatings.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine subgrades and installation conditions. Do not start concrete work until unsatisfactory conditions are corrected.
- B. Review all Architectural, Civil and Structural Contract Drawings for items which require coordination.
- C. Contractor, Engineer and Landscape Architect to field review location, orientation, and elevations of all utility boxes, structures, drainage elements, and footings with the proposed grades, walls, score pattern and joint layouts prior to the placement of work. Correct any deficient items prior to proceeding with Decorative Concrete work.

3.2 PREPARATION

- A. Prepare subgrade in accordance with Earthwork, Section 31 0000.
- B. Prepare all Aggregate base in accordance with the Geotechnical Report.

- C. Provide compacted base material as shown on Contract Documents. Compact base to 95% of the maximum dry density in accordance with ASTM D1557.
- D. Remove loose material and debris from base surface before placing concrete.
- E. Install, align, and level forms. Stake and brace forms in place. Maintain following grade and alignment tolerances:
 - 1. Top of form: Maximum 1/8" in 10'-0".
 - 2. Vertical face: Maximum 1/2" in 10'-0".
- F. Coat form surfaces in contact with concrete with form release agent. Clean forms after each use and coat with form release agent as necessary to assure separation from concrete without damage.
- G. Install, set, and build-in work furnished under other specification sections. Provide adequate notification for installation of necessary items.
- H. Install pipe sleeves for irrigation system furnished under Section 32 8400. Stake location of irrigation sleeves.
- I. All waterproof membranes and drainage courses shall be reviewed and approved in writing by the associated manufacturer's representative and Contractor.

3.3 PLACING REINFORCEMENT

- A. Place all reinforcement as shown on the Contract Drawings. Place accurately and securely fasten and support reinforcement to prevent displacement before or during pouring. Hang footing bars from forms. Support wire mesh with suitable metal cradles.
- B. Clean, bend and place reinforcement in accordance with current requirements of the ACI Manual of Concrete Practice.
- C. Dowels: Provide dowels where indicated or required for connecting construction and for maintaining structural and reinforcement continuity. Dowels shall be tied securely in place before concrete is deposited. Provide additional bars for proper support and anchorage where required. Do not bend dowels after embedment.
- D. Welded Wire Reinforcement:
 - 1. Wire fabric shall be installed in lengths as long as practicable and shall be wire-tied at all laps and splices. End laps shall be offset in adjacent widths. Lap welded wire fabric in accordance with applicable requirements of ACI 318.
 - 2. Where required welded wire fabric shall be secured in position with suitable supports, accessories, and tie wire as indicated and required to ensure against movement from workers and placement of concrete lift fabric as concrete is placed to assure proper embedment at position indicated.
- E. Reinforcement Splices:
 - 1. Reinforcing bars - 24 bar diameter minimum, except as otherwise noted.

3.4 INSTALLATION

A. Concrete placement:

1. Comply with ACI 304 “Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete”, and as specified.
2. Protect concrete from physical damage or reduced strength due to weather extremes during mixing, placing, and curing. In cold weather comply with ACI 306, “Standard Specification for Cold Weather Concreting”. In hot weather comply with ACI 305, “Standard Specification for Hot Weather Concreting”.
3. Moisten base to provide a uniform dampened condition at the time concrete is placed. Verify structures are at required finish elevation and alignment before placing concrete.
4. Place and spread concrete to the full depth of the forms. Use only square-end shovels or concrete rakes for hand-spreading and consolidating operations to prevent segregation of aggregate and dislocation of reinforcement.
5. Place concrete in a continuous operation between expansion joints. Provide construction joints where sections cannot be placed continuously.
6. Place concrete as indicated on the Contract Drawings in one course, monolith construction, for the full width and depth of concrete work.
7. Strike-off and bull-float concrete after consolidating. Level ridges and fill voids. Check surface with a 10'-0" straightedge. Fill depressions and refloat repaired areas. Darby the concrete surface to provide a smooth level surface ready for finishing.

B. Joints:

1. Provide expansion joints using pre-molded joint filler at concrete work abutting curbs, walls, structures, walks, utility boxes and other fixed objects.
 - a. Locate expansion joints as indicated or at a distance at 20' maximum, where paving patterns collide, between existing and new work, between pedestrian and vehicular paving, around all light post foundations and around all structural foundations.
 - b. Coordinate all expansion joints with interlocking paver fields and fixed objects.
 - c. Install joint fillers full-width and depth of joint. Recess top edge below finish grade for joint sealants.
 - d. Provide joint fillers in single lengths for the full slab width, whenever possible. Fasten joint filler sections together when multiple lengths are required.
 - e. Protect the top edge of the joint filler during concrete placement.
 - f. Brooming. After the curing period, expansion joints shall be carefully cleaned and filled with approved joint sealant to just below adjacent paved surface in such a manner as to avoid spilling on paved surfaces or overflow from joint.
2. Saw cut joints $\frac{1}{4}$ depth of slab as indicated on the Contract Drawings. Contractor to allow concrete to cure as required before beginning operations.
3. Saw cuts shall be of a consistent depth, and visually straight.

C. Finishes:

1. Broom Finish: Shall be obtained by drawing a stiff bristled broom across a floated finish. Direction of brooming to be perpendicular to direction of work or otherwise shown on Contract Drawings.

2. Sand Blast Finish:
 - a. Perform in as continuous an operation as possible, utilizing the same work crew to maintain continuity of finish.
 - b. Depth of Cut: Use an abrasive grit of the proper type and gradation to expose the aggregate and surrounding matrix surfaces to match approved sample panel.
 - c. Blast corners and edge patterns carefully, using backup boards, in order to maintain a uniform corner or edge line.
 - d. Use same nozzle, nozzle pressure and blasting technique as used for sample panel.
 - e. Maintain control of abrasive grit and concrete dust in each area of blasting. Clean up and remove all expended abrasive grit, concrete dust, and debris at the end of each day of blasting operations.
3. Top Cast Finish: Install per manufacturer's specifications and details.
 - a. Top cast finish shall not be removed with a pressure washer. Contractor shall utilize an appropriate rotary power broom to remove top cast finish.

D. Curing:

1. Cure concrete with a clear, non-staining liquid membrane-forming compound. Spray apply in accordance with manufacturer's recommended coverage rate. Apply curing compound immediately after completing surface finish.
2. After Concrete is placed, cure concrete for a minimum of seven (7) days without foot traffic and a minimum thirty (30) days without vehicular traffic. If a curing compound is required, refer to Section 2.03 of this specification for acceptable curing compounds or install a moisture retaining, non-staining, non-woven, curing cover and maintain sufficient moisture under cover to provide for 100% humidity conditions at concrete surface for a minimum of 7 days. Cover shall be reflective in nature to prevent excessive heat build-up under cover and allow for optimal curing conditions.

E. Sealer:

1. All concrete paving within the project interior (patios, center concourse areas, and promenades) shall be protected with Scofield Repello sealer. Install per manufacturer specification and details.

F. Stain:

1. Sandblast concrete in accordance with mfr's specifications. Protect all adjacent work. Finish all stain work with a uniform and even finish.

3.5 FIELD QUALITY CONTROL AND ASSURANCE

- A. The Quality Control Testing Firm shall perform field quality control in accordance with the requirements of Section 03 30 00 - Cast-in-Place Concrete.
- B. Engineer Quality Assurance:
 1. The Owner's representative will monitor the implementation of the Contractor's quality control programs through observation, inspection, sampling and testing in accordance with Section 01 4300 - Quality Assurance.

2. Failure of the Owner's representative, Engineer, or Landscape Architect to detect defective work or material shall not prevent later rejection when such defect is discovered, nor shall it obligate the Engineer for final acceptance.

3.6 TOLERANCES

- A. Comply with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials"

3.7 PROTECTION

- A. Protect concrete work from damage due to construction and vehicular traffic until Final acceptance. Exclude construction and vehicular traffic from concrete pavements for at least 14 days.
- B. Protection: Protect all concrete work items from chipping, spalling, cracking, or other damage until the work is accepted by the Landscape Architect.
- C. Concrete work subject to traffic shall be heavily protected by the contractor as required to ensure damage does not occur. Damaged concrete shall be considered Defective Concrete as specified in Article 3.08 herein.

3.8 DEFECTIVE CONCRETE

- A. Concrete work which does not meet the Contract Specifications or Contract Drawings shall be considered defective concrete.
- B. Color and finish of all concrete work shall match. Inconsistent color, and finishing shall be considered defective concrete.
- C. All walls shall be plumb, straight with top of wall held level. Walls which are not plumb, straight, or level shall be considered defective concrete.
- D. All joints shall be straight and true. Joints which are not straight shall be considered defective concrete.
- E. Concrete work which ponds, does not conform to ADA requirements, does not match grading, is of poor finish, has poor scoring depth, map cracking, chipped, cracked, or otherwise deemed non acceptable shall be considered defective concrete.
- F. Defective concrete shall be repaired or replaced as directed by the Landscape Architect, at no added expense to the Contract.
 1. Landscape Architect's authorization for the Contractor to repair defective concrete work does not provide an acceptance of defective concrete work. All final repair work that does not meet the approval of the Landscape Architect shall be rejected, removed and replaced at no additional cost to the contract.
 2. In general, minor defective work may be repaired by use of dry pack. If defective work is serious or affects the strength of the structure or the appearance, the Landscape Architect may require the removal and replacement of the portion or all of the work.

3. Immediately after removing forms, all concrete surfaces shall be inspected any poor joints voids, rock pockets, tie holes, except as specified, etc., shall be patched at once, but not until the surfaces have first been reviewed by the Landscape Architect. Submit patching mixture and method proposed for use, for review prior to commencing work.
4. Repaired or Replaced work shall match existing work. Work which does not match may require full removal and replacement.
5. All labor, materials, equipment, incidentals, and work related to the repairs or replacement of Concrete work shall be done at no additional cost to the Contract.

3.9 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from concrete operations.
- B. Sweep concrete sidewalks and pavement; wash free of stains, discoloration, dirt, and other foreign material immediately prior to final acceptance.

END OF SECTION

SECTION 32 18 14

SYNTHETIC SURFACING BASE

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. The Contractor's scope of work includes site preparation, excavation, disposal of excess or unsuitable material, subgrade grading, installation of subsurface drainpipe and perimeter header, and the selection, purchase, grading and compaction of permeable material in accordance with the lines, grades, and cross-sections shown on the drawings.

1.2 RELATED SECTIONS

- A. Section 01 40 00 – Quality Control
- B. Section 31 20 00 – Earthwork
- C. Section 32 18 16 – Synthetic Poured-In-Place Surfacing

1.3 REFERENCES

- A. ASTM: American Society for Testing and Materials
- B. Caltrans: California Department of Transportation

1.4 QUALITY ASSURANCE

- A. Contractor's Materials Testing Agency Qualifications: An independent testing agency qualified to conduct soil materials and rock-definition testing that complies with ASTM E329 or D3740 and has personnel with at least 5 years of experience performing the following ASTM standard test methods and practices.
 - 1. D75: Standard Practice of Sampling Aggregates.
 - 2. ASTM C88 - 05 Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
 - 3. C125: Standard Terminology Relating to Concrete and Concrete Aggregates
 - 4. C131: Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
 - 5. C136: Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - 6. C702: Standard Practice for Reducing Samples of Aggregate to Testing Size.
 - 7. D1557: Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.
 - 8. D2167: Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method
 - 9. D2434: Standard Test Method for Permeability of Granular Soils (Constant Head).
 - 10. D4253: Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.
 - 11. D5821: Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate

12. D6938: Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
 13. F2898: Standard Test Method for Permeability of Synthetic Turf Sports Field Base Stone and Surface System by Non-Confined Area Floor Test Method
- B. Owner's Testing Agency shall review Contractor's submittals under this Specification and recommend action as defined under Section 01 33 00 – 1.2.1 Submittal Procedures.
 - C. The Owner shall reject material delivered to the site not meeting specifications. All material rejected by the Owner shall be removed from the site and replaced with suitable material at the Contractor's expense.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store all products to be installed as part of the field base neatly and orderly, stacked and blocked to prevent damage. Cracked, warped, uneven, or otherwise damaged material shall be removed from the site.

1.6 PROJECT CONDITIONS

- A. Contractor shall be responsible for stabilizing all top of subgrade elevations for the surfacing areas prior to receiving the stone aggregate base and for executing any fine grading as may be necessary or incidental to placement of the surfacing.
- B. The stone base shall not be contaminated with other soil. Contaminated stone material will be rejected. In addition, if at any time the stone material is tested at the site and is not in compliance with the specifications, Contractor shall remove all material not in compliance with the project specifications at its sole expense and replace it with material that conforms to the Contract Documents.
- C. Contractor shall prevent surface water and subsurface or groundwater from flowing into excavations and flooding project site and surrounding area. Contractor must not allow water to accumulate in excavations. Contractor shall remove water to prevent softening of sub grades.

1.7 SUBMITTALS

- A. Conform to requirements of Section 01 3300 - Submittals and/or applicable Division One and Division Two specifications, General Conditions and Special Provisions.
- B. Product Data
 1. Permeable Stone Material
 2. Pipe accessories, filter fabric, impermeable membranes and porous drainage composite as applicable.
- C. Test Reports
 1. ASTM F2898 - Permeable Stone Material
- D. Certifications
 1. Submit certification signed by Contractor and drainage system Installer that installed materials conform to specified requirements and system was successfully checked and tested prior to covering with leveling course, drainage sand or gravel aggregate.

2. Submit certification signed by the Synthetic Rubber Surfacing Installer stating that they have visited the site and observed the initial placement and compaction of a test area of permeable stone; and find the surface suitable to install the respective products and materials.
 3. All certifications shall be approved by the Owner's Representative prior to installation of synthetic rubber surfacing.
- E. Physical Samples
1. Submit two one-quart samples of each rock material to the Owner's Representative, and one five-gallon sample of each rock material to the Owner's testing agent.
- F. Project Record Drawings:
1. Conform to Section 01 78 39 and/or applicable Division One and Division Two specifications, General Conditions and Special Provisions.
 2. Accurately record locations of utilities remaining, re-routed utilities, new utilities, and newly discovered utilities by horizontal dimensions, elevations, inverts, and slope gradients.
- 1.8 MATERIAL TESTING
- A. The Owner's Testing Agent will be present intermittently to observe the Contractor's operation, to perform tests and measurements. Such observations, tests, measurements shall not alter the requirements of the drawings or specifications nor imply any superintendence or control of the Contractor's operation, nor warranty the Contractor's work.
- B. During construction, the Contractor shall perform its own inspection and testing by Contractor's Materials Testing Agency or Rock Manufacturer on rock materials to the degree it deems necessary to assure compliance of the rock materials with the specifications. This inspection and testing shall be in addition to that which is specifically required by this Specification.
- C. Testing of proposed base rock (which includes all rock materials outlined in this specification section) will be performed in the following steps:
1. For Porous Rock Bases:
 - a. *Pre-construction Testing:* Contractor shall submit a five-gallon separate composite (the District's Testing Agent may elect to pull the sample directly at the quarry, and may also want the test samples or varying quantity based on the testing labs' needs) of each porous base rock material. The District's testing agent will evaluate these materials using ASTM C136 and ASTM D75 testing protocol as a guideline. This representative sample will be used for comparison with all subsequent samples submitted for acceptance during construction.
 - b. *Testing During Construction:* The District's Testing Agent shall obtain a five-gallon composite sample (project geotechnical engineer may elect to pull the sample directly at the quarry, and may also want the test samples or varying quantity based on the testing labs' needs) of all base rock materials at the rock source representing each 500 tons per site of crushed permeable field rock. Material shall not be delivered to the project site until tests show it complies with the accepted material.
- D. Payment for initial material testing is the responsibility of the District. Any test, which must be repeated on materials that have failed to meet specifications or are as a result of shortages, will be borne by the Contractor.

- E. The testing reports shall be submitted to the District for approval ten (10) calendar days prior to scheduled placement on the synthetic surfacing subgrade.
- F. The Contractor shall include the following items:
1. Identification of proposed source and supplier.
 2. Current lab mechanical analysis of the proposed stone using ASTM standards for sieve analysis.
 3. Sample sizes as determined by the District.
 4. Certification that the supplier can deliver the total quantity of material needed to complete the project in a timely manner.
- G. All crushed stone must come from one supplier only. During construction, samples may be taken in the field and analyzed periodically by the Contractor or District to assure strict compliance with the specifications. The rock shall be sampled at the source. Material delivered to the site not meeting specifications shall be rejected by the District. All material rejected by the District shall be removed from the site at the Contractor's expense.
- H. The following tests shall be performed by the Owner's Testing Agent prior to acceptance of either any rock identified in this specification section. All submitted rock for a porous rock base is required to pass the following qualifications:

Restrictions:

To ensure structural stability:

$$\frac{D_{60}}{D_{10}} > 5 \text{ and } \frac{D_{30}^2}{D_{10} * D_{60}} < 3$$
 Fragmentation must be 100%.

D"x" is the size of the sieve (in millimeters) that lets pass "x" percent of the stone. For example, D60 is the size of the sieve that lets 60% of the stone pass. For calculation purposes, these sizes may be obtained by interpolation on a semi-log graph of the sieve analysis.

To ensure proper drainage: Porosity of both stones > 25% (when stone is saturated and compacted to 92% Modified Proctor)

Permeability of stone base > 30 in/hr (Tested thru ASTM D2434 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.

- I. Rock shall also comply with the following material requirements:
1. Soft rock materials (i.e. sandstone, limestone and shale materials) are not suitable. Rock supplier shall certify that all supplied rock will be void of this type of rock. The rock should meet the following stability requirements:

TEST METHOD	CRITERIA
LA Abrasion (Calif. Test 211)	Not to exceed 35
Durability Index (Calif. Test 229)	Not less than 40
Sulfate Soundness (ASTM C-88)	Not to exceed 12% loss for coarse aggregate, 10% for fine aggregate (based on a sulfate solution)

PART 2 - PRODUCTS

2.1 NONWOVEN GEOTEXTILE

- A. Nonwoven geotextile (Filter Fabric) placed in the subsurface drainage trenches shall conform to the following specifications.

<u>Mechanical Properties</u>	<u>Test Method</u>	<u>Unit</u>	<u>Min. Ave. Roll Value</u>
Grab tensile strength	ASTM D4632	lbs	120(MD), 120(CD)
Grab tensile elongation	ASTM D4632	%	50(MD), 50(CD)
Trapezoid tear strength	ASTM D4533	lbs	45(MD), 45(CD)
CBR Puncture strength	ASTM D6241	lbs	300
Apparent opening size	ASTM D4751	mm	0.20
Flow rate	ASTM D4491	gal/min/ft ²	130

2.2 WOVEN GEOTEXTILE

- A. Woven geotextile (Separation Fabric) placed on the subgrade shall conform to the following specifications.

<u>Mechanical Properties</u>	<u>Test Method</u>	<u>Unit</u>	<u>Min. Ave. Roll Value</u>
Tensile Strength (ultimate)	ASTM D4595	lbs/ft	2000(MD), 1500(CD)
Grab tensile strength	ASTM D4632	lbs	250(MD), 250(CD)
Grab tensile elongation	ASTM D4632	%	20(MD), 20(CD)
Trapezoid tear strength	ASTM D4533	lbs	100(MD), 50(CD)
CBR Puncture strength	ASTM D6241	lbs	500
Apparent opening size	ASTM D4751	mm	0.30
Flow rate	ASTM D4491	gal/min/ft ²	30

2.3 DRAINAGE SYSTEM

- A. Refer to storm drain specifications for drainage elements.

2.4 PERMEABLE STONE MATERIAL

- A. The permeable stone material base may consist of either one uniform stone material or a dual stone profile, as described below.
- B. Permeable stone material:
1. Permeable Stone Material shall meet the requirement of Caltrans (Section 68) Class 2 Permeable Stone. One uniform permeable stone material be a virgin (i.e. un-recycled) stone and shall have a sand equivalent value of not less than 75.

<u>Sieve Size</u>	<u>Percentage Passing</u>
1"	100
3/4"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

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2. Permeable Stone Material shall be 16392 Turf Perm supplied by Vulcan Materials Company; Pleasanton or approved equal.

<u>Sieve Size</u>	<u>Percentage Passing</u>	<u>Caltrans Section 68</u>
1"	100	100
3/4"	96	90-100
1/2"	67	
3/8"	57	40-100
No. 4	40	25-40
No. 8	30	18-33
No. 16	18	
No. 30	12	5-15
No. 50	6	0-7
No. 100	3	
No. 200	1.8	0-3

PART 3 - EXECUTION

3.1 GENERAL

- A. Excavating and grading shall be performed in conformance with the alignment, grade and cross-sections indicated on the drawings.

3.2 SUBGRADE SLOPES AND GRADE TOLERANCES

- A. Final subgrade grades shall conform to the lines and grades shown on the drawings.
- B. Subgrade shall be free of debris, non-compactable material, topsoil, or organics prior to beginning work.
- C. The subgrade shall be excavated to create a positive slope towards the subsurface drainpipes. Unless otherwise specified on the drawings, the minimum slope of the subgrade shall be 0.7%.
- D. The final subgrade grade shall be rolled with a smooth drum roller to remove all localized depressions deeper than ½ inch caused by construction and compaction equipment tires or rollers.
- E. The measured grades shall not deviate more than 0.08 feet from the planned grades and not vary more than 0.04 feet in 10 feet in any direction. Top of subgrades shall be verified. Laser grading is required.
- F. All subgrade grades shown on the drawings shall be completed by the Contractor and inspected by the Owner and Engineer prior to commencing with the subsequent work items.
- G. A conformance survey shall be performed by a licensed surveyor in accordance with Section 01 07 00 - Conformance Surveying.
- H. Once the subgrade conformance has been accepted and compaction has been properly achieved, the geotextile fabric or membrane shall be installed over the compacted and prepared subgrade, as shown on the Drawings, without disturbing grades.

- I. Geotextile fabric shall be installed with 6" overlap and stapled 6' on-center along seams. Staples to be 6" staples. Impermeable membranes shall be taped according to the manufacturer's specifications.

3.3 GEOTEXTILE

- A. Geotextile shall not be installed until a perimeter header has been installed.
- B. Geotextile shall not be installed until subdrainage trenches have been excavated.
- C. Geotextile rolls shall be handled in such a way that they are not damaged.
- D. Geotextile shall be placed on exposed subgrade surfaces in accordance with the drawings. The geotextile shall be rolled out parallel to the long direction of the playfield.
- E. Geotextile shall be securely anchored and then rolled in such a manner as to continually keep the geotextile sheet in tension.
- F. Geotextile seams shall be anchored using 60d nails through 1-1/2" round washers placed at 36 to 48 inches on center during placement. Additional anchoring shall be installed as required to prevent bunching of the geotextile.
- G. Adjacent widths of geotextile shall be "shingled" and have a 6-inch overlap at all edges.
- H. Holes or tears in the geotextile shall be repaired with a fabric patch spot-seamed with a minimum 24 inch overlap in all directions.
- I. Impervious liners shall be installed in accordance with the manufacturer's recommendations.

3.4 PERMEABLE STONE BASE

- A. The Contractor's surface material Installer shall observe the initial placement and compaction of permeable stone in a 20-foot by 20-foot trial area and determine whether the surface is suitable to install the synthetic surfacing. The Contractor shall modify installation procedures and/or material used until the Contractor's surface material Installer is satisfied.
- B. Should any segregation of the material occur, during any stage of the stockpiling, spreading or grading, the Contractor shall immediately remove and dispose of segregated material and correct or change handling procedures to prevent any further separation.
- C. The crushed stone must be laid without damaging the soil subgrade (and the in-field drainage system as applicable). It is very important to not create any depressions with heavy equipment. The specified stone or aggregate supplied must conform to the recommended specifications. The finished crushed stone or aggregate base supplied must be stable, unyielding, and permeable.
- D. 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 plans.
- E. The specified permeable stone shall be carefully placed and compacted over the subgrade to the grades and elevations shown on the drawings. If the thickness of the planned permeable stone exceeds 8-inches, the rock shall be placed in horizontal layers not exceeding 8 inches and each

layer compacted to 92% of the maximum density to form a firm and unyielding surface with a vibratory smooth drum roller.

- F. 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.
- G. Crushed stone shall be smoothed and compacted uniformly to design grades by alternating raking, water settling, and rolling operations. Contractor shall be advised not to overwork the stone material, thus modifying its gradation characteristics. Minimal rolling is advisable to achieve design grades and compaction. Only static (absolutely no vibratory rolling of the permeable stone is allowed) rolling is allowed, and max 3-5 ton rollers should be used on the permeable stone base.
- H. Top of porous rock elevations and slopes shall be verified using laser-operation survey instruments. The measured grades shall not deviate more than 0.04 feet from the planned grades and not vary more than 0.02 feet in 10 feet in any direction. Refer to Conformance Surveying specifications for requirements.
- I. The final grade shall be ideally compacted to a uniform 90 - 92% relative compaction. Contractor shall be advised not to overwork the stone material, thus modifying 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. Compaction shall not be above 95%.
- J. Top of rock elevations shall be verified using laser-operation survey instruments. Refer to Conformance Surveying specifications for requirements.
- K. Contractor shall manually screed the top stone surface to ensure tolerances are met. Finish surface planarity shall be verified, and if necessary adjusted, by the Contractor using string line method. A mason's line held taught between two workmen separated by a distance of approximately 40 feet, shall be placed directly on the finished surface, parallel to the direction of greatest slope. A third workman shall check for separations between the mason's line and the finished surface that are equal to or greater than the specified tolerances. Areas of separation shall be outlined with marking paint and the depth of separation indicated.
- L. Entire finished surface shall be "walked" with mason's line in increments of approximately 3 feet.
- M. 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.
- N. Final finished surface planarity shall be approved by the District and the Synthetic surfacing Installer.
- O. Once the top of the permeable rock base is installed and compacted, the Contractor shall notify the District Testing Agent that it is ready for the field permeability test per ASTM F2898. The Agent shall be given two business days' notice and have 2 days to complete the in-field test, which will consist of a minimum of four controlled field permeability tests for the synthetic synthetic surfacing. Tests shall be by a single ring infiltrometer or equivalent test method. If the test does not achieve a minimum of 20 inches per hour, the Contractor shall provide within 48 hours a written repair procedure to correct the permeability deficiency. All repair work,

SYNTHETIC SURFACING BASE 32 18 14 - 8

including any associated delays, shall be the Contractor's sole responsibility. Any fine tuning of the field base due to the testing operations is the responsibility of the Contractor.

- P. Permeable stone grades shall be completed by the Contractor and inspected by the Owner and Engineer prior to commencing with the subsequent work items.

3.5 INSTALLATION OF MANUFACTURED COMPOSITE BASE MATERIAL

- A. Upon successful completion of installing the base, the porous composite base material shall be installed per the Contract 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. Any product that exceeds this time duration shall be removed from the project site immediately and not used on the project.
- C. All sections of the material shall be interlocked and/or connected to adjacent pieces of the base material in strict conformance with the manufacturer's written recommendations.

END OF SECTION

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SECTION 32 18 16
SYNTHETIC POURED-IN-PLACE SURFACING

PART 1 - GENERAL

2.1 SECTION INCLUDES

- A. Drawings and general provisions of the Contract, including Section 00700, General Conditions and Division 01, General Requirements, apply to this Section.
- B. Work shall include but not limited to: Furnish all labor, materials, equipment, rentals, facilities, transportation, incidentals, excavations, footings, and services to complete all Synthetic Poured-In-Place Surfacing and related work as shown on the Plans and/or specified herein and as necessary for a complete installation.

2.2 RELATED REQUIREMENTS

- A. These Contract Specifications are part of the Contract Drawings and shall include all labor, materials, equipment, reasonable incidentals, and services necessary for the execution of the Work installed complete in place.
- B. Refer to all other sections, determine the extent and character of related work, and coordinate all work to produce a complete, properly constructed product.

2.3 RELATED SECTIONS

- A. Related Work:
 - 1. Section 03 30 00: Cast-In-Place Concrete
 - 2. Section 31 00 00: Earthwork
 - 3. Section 12 93 10: Play Structures
 - 4. Section 12 93 00: Site Furnishings

- B. References

The publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by basic designation only.

2.4 DEFINITIONS

- A. ASTM: American Society for Testing and Materials
- B. Critical Fall Height: Standard Measure of shock attenuation. The fall height below which life-threatening head injury would not be expected to occur.
- C. EPDM: Ethylene Propylene Diene Monomer

- D. Fall Height: The Vertical distance between the highest designated play surface on a piece of equipment and the protective surfacing beneath it.
- E. IPEMA: International Play Equipment Manufacturers Association
- F. SBR: Styrene Butadiene Rubber

2.5 QUALITY ASSURANCE

A. Installer Performance Requirements:

1. Installer Qualifications: Engage an experienced installer or applicator that has specialized for a minimum of 5 years in installing the specific playground equipment required for this Project and who is acceptable to Manufacturer of primary materials. Installer must provide a minimum of 3 documented and inspectable poured-in-place surfacing installations within the past 5 years with project names, dates, and contacts provided with the submittal. The Contractor shall furnish a list of projects using either specified material or equivalent that they have installed during the last five years. Information shall include project name, square footage, contact name with address and phone number. Also, the Contractor shall furnish resumes detailing the experience of key personnel, including supervisors and mechanics. The Contractor shall be approved in writing by the material primary manufacturer for the system being installed.
2. IPEMA certified.
3. Assign a full-time employee to the job as supervisor for the duration of the Contract with a minimum of four (4) years' experience in site furnishing installation.
4. Labor Force: Provide installation and maintenance force thoroughly familiar with, and trained in, the work to be accomplished to perform the task in a competent, efficient manner, acceptable to the District.

B. Manufacturer's Services

1. Services of a manufacturer's representative, or manufacturer's certified or authorized installer, who is experienced in installation of the specified playground safety surface, shall be provided. The representative shall supervise or inspect the installation to ensure that the safety surfacing meets the impact attenuation requirements as specified herein.
2. The manufacturer's representative shall certify that, regardless of the installer, the installation complies with the manufacturer's instructions and specifications, as specified herein.

C. American Society for Testing and Materials (ASTM)

1. ASTM D 412 (1992) Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension.
2. ASTM C 136 (1984a; R 1993) Sieve Analysis of Fine and Coarse Aggregates
3. ASTM D 1682 (1964; R 1975) Breaking Load and Elongation of Textile Fabrics
4. ASTM D 2240 (1991; R 1993) Rubber Property—Durometer Hardness
5. ASTM D 3776 (1985; R 1990) Mass per Unit Area (Weight) of Woven Fabric
6. ASTM D 4491 (1989; R 1992) Water Permeability of Textiles by Permeability
7. ASTM D 4533 (1985; R 1991) Trapezoid Tearing Strength of Geotextiles
8. ASTM D 4632 (1991) Grab Breaking Load and Elongation of Geotextiles

9. ASTM D 5199 (1991; R 1992) Measuring Nominal Thickness of Geotextiles and Geomembranes
 10. ASTM D 624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
 11. ASTM D 2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
 12. ASTM D 2859 Standard Test Method for Flammability of Finished Textile Floor Covering Materials.
 13. ASTM E 303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.
 14. ASTM F 1292 (1995) Impact Attenuation of Surface Systems Under and Around Playground Equipment
 15. ASTM F 1487 (1995) Playground Equipment for Public Use
 16. ASTM F 1951 Standard Specification for Determination of Accessibility of Surface Systems
- D. Code of Federal Regulations (CFR) CFR 28 Part 36 (1991) Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities, Final Rule
- E. U.S. Consumer Product Safety Commission (CPSC) PSC (1991) Handbook for Public Playground Safety or current edition, U.S. Consumer Product Safety Commission, Washington, D.C. 20207, 301-504-0494

2.6 SYSTEM DESCRIPTION

- A. General: Provide a two (2)-layer SBR rubber, polyurethane binder and high performance EPDM rubber playground surfacing system which has been designed, manufactured, and installed to meet the performance requirements stated herein.
- B. Performance Requirements:
1. Shock Attenuation (ASTM F1292):
 - a. Gmax: Less than 200.
 - b. Head Injury Criteria: Less than 1000.
 2. Flammability (ASTM D2859): Pass.
 3. Tensile Strength (ASTM D412): 60 psi (413 kPa).
 4. Tear Resistance (ASTM D624): 140%.
 5. Water Permeability: 0.4 gal/yd²/second.
 6. Accessibility: Comply with requirements of ASTM F1951.
 7. Dry Static Coefficient of Friction (ASTM D2047): 1.0
 8. Wet Static Coefficient of Friction (ASTM D2047): 0.9
 9. Dry Skid Resistance (ASTM E303): 89
 10. Wet Skid Resistance (ASTM E303) 57
- C. Installer Performance Requirements:
1. Installer Qualifications: Engage an experienced installer or applicator that has specialized for a minimum of 5 years in installing the specific playground equipment required for this

SYNTHETIC POURED-IN-PLACE SURFACING 32 18 16 - 3

Project and who is acceptable to Manufacturer of primary materials. Installer must provide a minimum of 3 documented and inspectable poured-in-place surfacing installations within the past 5 years with project names, dates, and contacts provided with the submittal. The Contractor shall furnish a list of projects using either specified material or equivalent that they have installed during the last five years. Information shall include project name, square footage, contact name with address and phone number. Also, the Contractor shall furnish resumes detailing the experience of key personnel, including supervisors and mechanics. The Contractor shall be approved in writing by the material primary manufacturer for the system being installed.

2. Assign a full-time employee to the job as supervisor for the duration of the Contract with a minimum of four (4) years' experience in site furnishing installation.
3. Labor Force: Provide installation and maintenance force thoroughly familiar with, and trained in, the work to be accomplished to perform the task in a competent, efficient manner, acceptable to the District.

D. Manufacturer's Services

1. Services of a manufacturer's representative, or manufacturer's certified or authorized installer, who is experienced in installation of the specified playground safety surface, shall be provided. The representative shall supervise or inspect the installation to ensure that the safety surfacing meets the impact attenuation requirements as specified herein.
2. The manufacturer's representative shall certify that, regardless of the installer, the installation complies with the manufacturer's instructions and specifications, as specified in paragraph 1.4.A.

2.7 REGULATORY REQUIREMENTS

- A. Conform to all Federal, State, and City codes and requirements for installation and disabled accessibility as referenced herein and as applicable.

2.8 SUBMITTALS

A. General

1. Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.

- B. Shop Drawings: Layout Plans and elevations drawn to scale for the coordination of the playground equipment with playground safety surface systems. Indicate playground equipment locations, use zones, fall heights, extent of protective surfacing, depths of material, critical heights, sub-base materials, hardware, edge details, and drainage. Include dimensioned layout of decorative patterns with all colors identified.

- C. Product Data: Submit manufacturer's product data, color sample and installation instructions, including IPEMA certification.

- D. Verification Samples: Submit manufacturer's standard verification samples of 9" x 9" minimum.

- E. Quality Assurance/Control Submittals: Submit the following:

1. Certificate of qualifications of the playground surfacing installer.
2. Manufacturer recommended cleaning and maintenance instructions.

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- F. Submit a list of materials and components to be installed as part of the system, by weight and/or volume and recommended coverage, including manufacturer's name, shipment date, storage requirements, and precautions, and that shall state chemical composition and test results to which material has been subjected in compliance with these Specifications.
- G. Proposed substitutions for specified products: Submit a listing of at least five (5) installations where products similar to those proposed for use have been installed and have been in successful service for a minimum period of three (3) years. This list shall include owner or purchaser; address of installation; service or maintenance organization; date of installation; contact person; and phone number of the contact person.
- H. An official authorized to certify on behalf of the synthetic safety surfacing shall sign a statement attesting that the surfacing meets the requirements of ASTM F 1292 for a head-first fall from the highest accessible portion of installed play equipment. The impact attenuating qualities of the surfacing system shall not be diminished in the surface areas covering hardware. Testing of product shall include tests conducted over hardware. The statement shall be dated after the award of the Contract, shall state the Contractor's name and address, and shall name the project and location. The statement shall also provide the name, address, and telephone number of the testing company, the date of the test, and the test results.
- I. The authorized manufacturer's representative shall certify upon completion of the installation that the safety surfacing has been installed in accordance with manufacturer's instructions and complies with all specifications.
- J. A Certificate of Insurance shall be provided by manufacturer of safety surfacing, covering both product and general liability, of not less than \$1,000,000. The issuing underwriter shall be AA rated.
- K. Provide manufacturer's Warranty

2.9 MOCKUPS

- A. Provide at the Project site one (1) 4'x6' mock-up panel section depicting final colors and patterns as directed by the Owner's Representative.
- B. Repeat mock-ups at no additional cost to the contract until the Owner's approval is obtained.
- C. Protect approved mock-up, which will be used as a standard for the Project, until their removal is authorized.

2.10 MAINTENANCE DATA

- A. Submit maintenance data under provisions and as follows:
 - 1. Prepare and deliver to the District, ten (10) days prior to completion of construction, all required and necessary descriptive material in complete detail and sufficient quantity, properly prepared in two (2) individually bound copies of the operation and maintenance manual.
 - 2. The manual shall describe the material installed and shall be in sufficient detail to permit operating personnel to understand and maintain installation. Each manual in digital format (PDF) shall include the following information:

- a. Index sheet stating Contractor's address and telephone number.
 - b. Duration of guarantee period.
 - a. List of components with names and addresses of local manufacturer's representative.
 - c. Complete maintenance instructions.
- 3. Include maintenance information on regular cleaning, damage and stain removal.

2.11 WARRANTY

- A. Safety surfacing shall maintain required impact attenuation characteristics and be guaranteed against defects in workmanship and materials for the following time periods dating from final acceptance by the Owner, a minimum of seven (7) years or as specified and agreed upon per contract.
- B. Project Warranty: Refer to Conditions of the Manufacturer's Contract for project warranty provisions.
- C. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.
- D. Proper drainage is critical to the longevity of the Poured-in-Place surfacing system. Inadequate drainage will cause premature breakdown of the poured system in affected areas; and void the warranty.
- E. The manufacturer's standard warranty must extend to the installation of Synthetic Poured in Place safety surfacing upon compacted permeable base rock.

2.12 DELIVERY, STORAGE, AND HANDLING

- A. Materials and equipment shall be delivered in manufacturer's original, unopened, undamaged containers with identification labels in tact and stored, if necessary, in accordance with the manufacturer's recommendations, in an area as directed by the Owner.
- B. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at a minimum temperature of 40 degrees F (4 degrees C) and a maximum temperature of 90 degrees F (32 degrees C).

PART 2 - PRODUCTS

2.1 GENERAL

- A. The playground surface shall consist of synthetic material meeting the requirements of this specification. Playground safety surfacing shall comply with ADA and CPSC guidelines, ASTM standards and certified by IPEMA.
- B. Safety: Safety surfacing within playground equipment use zones shall meet or exceed the performance requirements of CPSC and ASTM F 1292 that a surface yield both a peak

SYNTHETIC POURED-IN-PLACE SURFACING 32 18 16 - 6

deceleration of no more than 200 G-max, and a Head Injury Criteria (HIC) value of no more than 1,000 g, for a head-first fall from the highest accessible portion of play equipment being installed. The highest accessible portion of playground equipment being installed as shown in drawings. The contractor is responsible for obtaining a determination from the safety surfacing manufacturer of the product depth required to meet performance requirements for all play equipment.

1. The impact attenuation performance of the synthetic safety surfacing and manufactured wood fiber proposed for installation shall be documented by certificates of compliance, as specified in paragraphs 1.5 submittals, F and G.
2. Accessibility: Safety surfaces intended to serve as accessible paths of travel for persons with disabilities shall be firm, stable and slip resistant and shall meet the requirements of FEDSTD 795, 28 CFR Part 36 ASTM F 1487, 1292, 1951 and the Architectural and Engineering Instructions (9AEI) Design Criteria.

2.2 CRITICAL FALL HEIGHTS

- A. Safety Surfacing depth is based upon Critical Fall heights established for each Play structure/apparatus. It is the Contractor's responsibility to verify critical fall heights of play structures prior to determining depth requirements for safety surfacing. Contact manufacturer of play structures for more information.

2.3 SYNTHETIC POURED-IN-PLACE SURFACING

Synthetic surfacing shall be a poured-in-place system, consisting of an impact attenuating substrate and a wear surface bonded to produce a uniform material. Surfacing shall be:

1. MFR: Playgrounds Unlimited or approved equal
2. MDL: Safepour-Premium-Elite
3. Color: Per Plan

2.4 BASE LAYER

- A. Safepour Primer: Polyurethane
- B. SBR Color: Black
- C. Safepour Poured-In-Place Base: Blend strand 100% recycled SBR and polyurethane to the proper ratios based on weight: 86% SBR rubber and 14% polyurethane (as divided by total combined weight) or (16+% when urethan divided by SBR weight)
- D. Base Thickness: Per Plan. Add 0.5" Top Coat for Total system thickness.

2.5 TOP LAYER

- A. Safepour Primer: Polyurethane-Aliphatic
- B. Safepour HP EPDM rubber: 0.5-1.5mm small granule.
- C. Colors: Per Plan

PART 3 - EXECUTION

2.1 COORDINATION

- A. All concrete footings, concrete curbs, posts, walls and elements to support Poured in Place surfacing shall be installed in accordance with the Contract Documents
- B. All electrical work conduits shall be properly located and encased in concrete per the Contract Documents prior to the installation of Poured in Place Surfacing.
- C. Prepare, place, and cure all concrete footings and other cast in place concrete in accordance with Section 32 13 16 – Decorative Concrete
- D. Synthetic safety surfacing shall be installed on dry subsurfaces. Temperatures and weather conditions shall be as recommended by the manufacturer, with no prospect of rain within the initial drying period.
- E. Safety surfacing shall be installed after the playground equipment is installed. The installation shall be coordinated with playground equipment and site element installation.

2.2 PREPARATION

- A. Finished Grade: Verify that finished grade elevations are as indicated on the drawings, that the appropriate subgrade has been established for the specified safety surfacing.
- B. Subsurface: The appropriate subgrade elevation shall be as established for the particular safety surfacing to be installed. The subsurface shall be installed in a true, even plane, and sloped to drain. Subsurface irregularities shall be corrected. Subsurface: Tolerance of concrete or bituminous subsurface shall be within 1/8 inch (3.0 mm) in 10 feet (3050 mm). The tolerance of aggregates sub-base and concrete base shall be within 3/8 inch (10mm) in 10 feet (3050mm). Verify that aggregate sub-base has been fully compacted.
 - 1. Substrate preparation must be in accordance with surfacing manufacturer's specification. New concrete must be fully cured – 28 days minimum.
- C. Drainage
 - 1. The Contractor shall verify that subsurface drainage, has been installed in the playground area to provide positive drainage.

2.3 COORDINATION

- A. Coordinate with work of other sections to insure appropriate sequencing of events.

2.4 SYNTHETIC POUR-IN-PLACE SURFACING INSTALLATION

- A. Preparation and installation shall be in accordance with manufacturer's specifications and directions.

- B. Do not proceed with playground surfacing installation until all applicable site work, including substrate preparation, playground equipment installation and other relevant work, has been completed.
- C. Poured-in-Place System: Components of the poured-in-place safety surface system shall be mixed mechanically on site in accordance with manufacturer's recommendations to ensure a uniform distribution of binder. Hand-mixing shall not be allowed. Installation of poured-in-place surfacing shall be seamless and completely bonded to subsurface. Material shall cover all foundations and fill around all elements penetrating the surface. Manufacturer's Services: For safety surfacing, service of the manufacturer's representative who is experienced in installation of playground safety surface shall be provided. The representative shall supervise the installation to ensure that the safety surfacing meets the impact attenuation requirements as specified herein.
1. Thickness:
 - a. Construction methods, such as use of measured screeds 1 mm (1/16") thicker than the required surfacing depth, shall be employed to ensure full depth of specified surfacing material is installed.
 - b. Surfacing system thickness throughout the playground equipment use zone shall be as required to meet the impact attenuation requirements for a head-first fall from the highest accessible portion of installed play equipment.
 - c. Critical Fall Height of Play Area is based on the highest accessible part of the equipment. See Plans for Maximum Critical Fall Height and Poured-in-Place thickness.
 2. Geotextile Fabric: When poured-in-place safety surfacing is installed over a compacted aggregate base, geotextile fabric shall be installed as shown on Drawings. Fabric shall cover the entire area to receive safety surface, and be lapped a minimum 100 mm (4") at seams. Seams shall be adhered in accordance with manufacturer's recommendations.
 3. Poured-in-Place Substrate: Whenever practical, the substrate layer of poured-in-place surfacing material shall be installed in one continuous pour on the same day. When a second pour is required, the edge of the previous work shall be fully coated with polyurethane binder to ensure 100% bond with new work. Adhesives shall be applied in small quantities so that new substrate can be placed before the adhesive dries.
 4. Poured-in-Place Wear Surface: Wearing surface shall be TPV (Thermal Plastic Vulcanized) granules and be bonded to substrate. Apply adhesive to substrate in small quantities so that wearing surface can be applied before adhesive dries. Surface shall be hand troweled to a smooth, even finish. Except where wearing surface is composed of different color patterns, pour shall be continuous and seamless. Where seams are required due to color change a step configuration will be constructed to maintain wear surface integrity. The edge of the initial pour shall be coated with adhesive and wearing surface mixture immediately applied. Butt joint seams are not acceptable except for repairs.
 5. Perimeter: Concrete perimeter must be formed during pour, with surfacing rolled down inside void. Primer adhesive must be applied to all sides of void. The hardened edge of the concrete curb shall be primed with an adhesive and the final 1-1/4" shall be tapered to allow the wear surface material to be a minimum of 1-3/4" thick where it joins the concrete edge.
 6. Thickness:

SYNTHETIC POURED-IN-PLACE SURFACING 32 18 16 - 9

- a. Construction methods, such as use of measured screeds 1 mm (1/16") thicker than the required surfacing depth, shall be employed to ensure full depth of specified surfacing material is installed.
 - b. Surfacing system thickness throughout the playground equipment use zone shall be as required to meet the impact attenuation requirements for a head-first fall from the highest accessible portion of installed play equipment.
- D. UV Protective Sealer: Apply per manufacturer's recommendations.
- E. Clean-up: Do not allow adhesives on adjacent surfaces or play equipment. Immediately clean up spills or excess adhesive.
- F. Protection: The synthetic safety surfacing shall be allowed to fully cure in accordance with manufacturer's instructions. The surface shall be protected from all traffic during the curing period for forty-eight (48) hours or as instructed by the manufacturer. Protect from damage at all times, until final acceptance of the Work. If damage occurs to any safety surfacing prior to final acceptance, Contractor shall, at his own expense, make repair or replacement to satisfaction of the District.

2.5 CLEANING

- A. Prior to final acceptance clean safety surface in accordance with manufacturer's directions.

END OF SECTION

SECTION 31 31 13
CHAIN LINK FENCES

PART 1- GENERAL

1.1 SECTION INCLUDES

- A. The scope of work outlined in this Section includes the following items of work, as detailed in these Contract Specifications, as shown on the Contract Drawings or reasonably implied therefrom and is not limited to the following items:
 - 1. Furnish and install all chain link fencing and gates as shown and as specified, including all accessories for a complete and proper installation.
 - 2. Furnish all labor, materials, equipment, facilities, transportation, and services to complete all gates, fencing, repairs and accessories and related work as shown on the drawings and/or specified herein.

1.2 RELATED SECTIONS

- A. Section 31 20 00 Earthwork
- B. Section 31 22 00 Grading
- C. Section 32 13 16 Site Concrete

1.3 REFERENCES

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to the Section.
- B. CLFMI – Chain Link Fence Manufacturers Institute, “Product Manual”, 10015 Old Columbia Road, Suite B-215, Columbia, MD.
- C. Americans with Disabilities Act (ADA)
- D. California Building Code (CBC); Current Edition
- E. ASTM:
 - 1. A392 Specification for Zinc-Coated Steel Chain Link Fence Fabric
 - 2. A780 Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
 - 3. F552 Standard Terminology Relating to Chain Link Fencing.
 - 4. F567 Standard Practice for Installation of Chain Link Fence.
 - 5. F626 Specification for Fence Fittings
 - 6. F668 Specification for Polymer Coated Chain Link Fence Fabric.
 - 7. F900 Specification for Industrial and Commercial Swing Gates.
 - 8. F934 Specification for Standard Colors for Polymer-Coated Chain Link.
 - 9. F1043 Specification for Strength and Protective Coatings of Steel Industrial Chain Link Fence Framework.

- 10. F1083 Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.
- 11. F2000 Specification for Automated Vehicular Gate Construction

1.4 SUBMITTALS

- A. All submittal data shall be forwarded in a single package to the Owner's Representative within 30 days of award of contract.
- B. Product data: For each type of product indicated, include material and finish descriptions, construction details, and component profiles for the following:
 - 1. Fence and gate posts, framework, rails, finishing systems, and fittings.
 - 2. Chain link fabric, reinforcements, accessories, and attachments.
 - 3. Hardware and accessories.
 - 4. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
- C. Shop drawings:
 - 1. A single, standalone PDF shop drawing package shall be submitted identifying each fence and gate type. All shop drawing content shall be produced by the Contractor and drawn to scale without external references.
 - 2. Naming Conventions: All fence and gate types shall be identified and replicate the naming conventions as shown on the Drawings unless otherwise directed by the Owner's Representative.
 - 3. Fence(s) Shop Drawings:
 - a. Site Plan showing layout, locations and dimensions of all fence types.
 - b. Site Plan showing post locations and embedment or attachment types.
 - c. Plans, Details, Elevations and Sections of all faces showing:
 - 1) Materials, sizes, types, heights, attachments, hardware and accessories.
 - 2) Embedment type and attachments to other work.
 - 4. Gate(s) Shop Drawings:
 - a. Site Plan showing layout, locations and dimensions of all gate types.
 - b. Site Plan showing post locations and embedment or attachment types.
 - c. Gate frame size, clear opening size and direction of opening.
 - d. Plans, Details, Elevations and Sections of all faces showing:
 - 1) Materials, sizes, types, heights, attachments, hardware, and accessories.
 - 2) Embedment type and attachments to other work.
- D. Material Samples: Upon request of the Owner's Representative, provide representative samples of all material and parts for the proposed work.
- E. Maintenance Data: For the following to include in maintenance manuals specified in Division 1:
 - 1. Gate hardware.

F. Warranty and Guarantee

1. Provide manufacturer information on chain link system and galvanization 15-year warranty.
2. Provide manufacturer information of all hardware and accessories warranty.
3. Provide one (1) year written guarantee against workmanship.

1.5 QUALITY ASSURANCE

- A. Prior to the commencement of all work the contractor shall inspect all areas to receive work for extents of demolition, extents of replacement, conflicts, utilities, trees, irrigation systems, planting, paving, grades, conforms, footings, walls, and alignments. Notify the District in writing of any deficient items.
- B. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work in this section.
- C. Make all field measurements as required prior to fabrication and installation.
- D. Coordination: Coordinate with other trades to ensure proper sequencing and fitting of construction.
- E. Shop Assembly: Preassemble items in shop to greatest possible extent to minimize field slicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordination of installation.
- F. Welding:
 1. Perform in accordance with regulatory agencies.
 2. Welding qualifications: Qualify welding processes and welding operations in accordance with AWS D1.1, D1.2, and D1.3 as applicable. Certify that each welder has satisfactorily passed AWS qualification test for welding processes involved.

1.6 JOB CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by District or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 1. Notify the Owner's Representative not less than 2 days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Owner's Representative's written permission.
- B. Field Measurements: Verify layout information for chain link fences and gates shown in Drawings in relation to property survey and existing structures. If discrepancies occur, notify the Owner's Representative.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Product Delivery Requirements, Storage and Handling Requirements – Comply with pertinent provisions of Section 01 65 00 and 01 66 00.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General

1. All hardware, fencing and gates to be per Owner Standards.
2. All steel materials shall be hot dip galvanized and conform to ASTM F1083 and ASTM A392 ferrous metals, zinc coated, and detailed specifications forming the various parts thereto; and other requirements specified herein. Zinc-coat metal members (including fabric, gates, posts, rails, hardware, and other ferrous metal items) after fabrication shall be reasonably free of excessive roughness, blisters, and sal-ammoniac spots.
3. DSA IR-10-08 (revised 4/28/09) Hardware (including panic hardware) shall not be provided with “night latch” (NL) function for any accessible doors or gates unless the following conditions are met. Such conditions must be clearly demonstrated and indicated in the specifications.
 - a. Such hardware has “dogging” features.
 - b. It is dogged during the time the facility is open.
 - c. Dogging operation is performed only by employees as their job function (non-public use).

B. Chain Link Fabric (Galvanized)

1. Height: As shown on the Drawings
2. Zinc-Coated Steel Fabric: ASTM A392 hot dipped galvanized before weaving (GBW) Class 1 – 1.2 oz/ft²
3. Fabric Size: Steel chain link mesh and gauges produced in one-piece widths 3’ to 12’. Fabric Size shall be as indicated on the Drawings:
 - a. 2”, 9-gauge core
 - b. 1-3/4”, 9-gauge core
 - c. 1”, 9-gauge core
4. Fabric Selva: Knuckle finish top and bottom unless otherwise indicated.

C. Chain Link Fence Pipe Framework (Galvanized)

1. Height: As shown on the Drawings
2. Polymer Coated Pipe: Polymer coated pipe shall have a coating fused and adhered to the exterior zinc coating of the galvanized pipe in accordance with ASTM F1043. The minimum thickness of the PVC coating shall be 10-mils, for polyester 3 mils.
3. Round steel pipe and rail: Schedule 40 standard weight pipe, in accordance with ASTM F1083, 1.8 oz/ft² hot dip galvanized zinc exterior and 1.8 oz/ft² hot dip galvanized zinc interior coating. Regular grade minimum steel yield strength 30,000 psi.
4. Top Rail and Bottom Rail: Required, fitted with suitable expansion sleeves, and means for securing rail to each gate, corner, and/or end post.
5. Mid Rail: Required for all fences greater than 7’ - 0” tall. Fitted with suitable expansion sleeves, and means for securing rail to each gate, corner, and/or end post
6. Post and Rail Size unless otherwise indicated on the Drawings.

Item	Fence Height	Outside Diameter Inches Decimal (fraction)	F1083 Sch 40 Weight lb/ft
Line Post	Up to 6 ft.	1.900 (1-7/8)	2.72
	Over 6 ft. to 8 ft.	2.375 (2-3/8)	3.65
	Over 8 ft. to 12 ft.	2.875 (2-7/8)	5.79
	Over 12 ft. to 16ft.	4.000 (4)	9.11
End/Terminal Post	Up to 6 ft.	2.375 (2-3/8)	3.65
	Over 6 ft. to 8 ft.	2.875 (2-7/8)	5.79
	Over 8 ft. to 12 ft.	4.000 (4)	9.11
	Over 12 ft. to 16ft.	6.625 (6-5/8)	18.97
Rails		1.660 (1-5/8)	2.27

7. Tension Wire:

- a. Metallic Coated Steel Marcellled Tension Wire: 7-gauge core marcellled wire complying with ASTM A824 Type II Zinc-Coated, ASTM A817 Class 4-1.2
- b. Polymer Coated Steel Tension Wire: 7 gauge core wire complying with ASTM F1664, Class 1.

8. Fittings

- a. Tension and Brace Bands: Galvanized pressed steel complying with ASTM F626, minimum steel thickness of 12 gauge, minimum width of 3/4 inch and minimum zinc coating of 1.20 oz/ft². Secure bands with 5/16 inch galvanized carriage bolts.
- b. Terminal Post Caps, Line Post Loop Tops, Rail and Brace Ends, Boulevard Clamps, Rail Sleeves: In compliance to ASTM F626, pressed steel galvanized after fabrication having a minimum zinc coating of 1.20 oz/ft².
- c. Truss Rod Assembly: In compliance with ASTM F626, 3/8 inch or 5/16 inch diameter steel truss rod with a pressed steel tightener, minimum zinc coating of 1.2 oz/ft², assembly capable of withstanding a tension of 2,000 lbs.
- d. Tension Bars: In compliance with ASTM F626. Galvanized steel one-piece length 2 inches less than fabric height. Minimum zinc coating 1.2 oz/ft².
 - 1) Bars for 2 in. and 1 3/4 in. mesh shall have a minimum cross section of 3/16 in. by 3/4 in.
 - 2) Bars for 1 in. mesh shall have a cross section of 1/4 in. by 3/8 in.

9. Polymer Coated Color Fittings: In compliance with ASTM F626, minimum coating thickness 0.006 inches fused and adhered to the zinc coated fittings.

10. Tie Wire and Hog Rings

- a. 9-gauge core aluminum alloy ties and hog rings per ASTM F626

D. GATE FRAME AND POSTS

1. Gate Post: per plan

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2. Header: per plan
3. Gate frames: per plan
4. All posts shall have tops which exclude moisture.
5. End, corner, pull, and gate posts shall have braces with same material as top rail and trussed to line posts with 3/8" rods and tighteners.
6. Hardware and Accessories:
 - a. Hinges: Per Plan
 - b. Drop Rods: Manufactured cane bolt located on each vehicular gate panel with concrete footings in both the open and closed position.
 - c. Kick Plates: per plan
 - d. Gate Stops: Provide gate stops consisting of mushroom type or flush plate type with anchors, set in concrete to engage the center drop-rod.
 - e. Keeper: Provide keeper, which automatically engages the gate leaf and holds it in the open position until it is manually released, for all gate leaves.
 - f. Padlock: Provide one padlock for each vehicular gate. Padlocks shall conform to FSFF-P- 101 E (1) and as follows: Type EPC, Size 2-inches (solid brass body), 6 pin tumbler mechanism, stainless steel spring extension type shackles with 2-inch clearance, and 2 nickel-chrome plated keys per padlock.
 - g. Knox Box: As required by the governing Fire Department.
 - h. Signage: Exterior rated commercial signage on aluminum plate. Back face and sides to be black.
 - i. Post Footings: Shall be concrete foundation of 1-2-4 mix. Footing diameter and depth per drawings. Concrete footing shall be at minimum of 3,000 psi unless otherwise indicated on the Drawings.

2.2 TOLERANCE

- A. Standard mill tolerances will apply. Installation shall be by experienced fence erectors, on lines and grades furnished by the District. All material will be tested for meeting of specifications for design, strength, shape, weight, and coating. Mill certificates confirming compliance with the herein described components will be submitted for approval upon request.

2.3 FABRICATION

- A. Obtain all parts, accessories, fittings, brackets, light fixtures, connections, clips, and incidental pieces required for the coordination and complete fabrication of work prior to the start of fabrication.
- B. Shop Assembly: Preassemble items in shop to greatest possible extent to minimize splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordination of installation.
- C. Site fencing and gates shall be fabricated by firms or shops experienced and skilled in the custom fabrication of fencing and gates. Form and fabricate the work as indicated and as required to meet installation conditions. Verify dimensions on site prior to shop fabrication.
- D. Fabricate items with joints tightly fitted and secured.

- E. Weld all shop connections. Welds shall be smooth, continuous beads, free to excessive roughness and spatter. Grind surface welds smooth and flush to match and blend with parent metal surfaces.
- F. All edges and corners shall be radiused and smooth with no sharp points.
- G. Bends in tubes or pipes shall be precision-formed to a smooth continuous radius by skilled workers, true to detail. Butt joints shall have tight-fitting internal pipe sleeve or dowel.
- H. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- I. Assemble to give ample strength and stiffness.
- J. Scribe and fit for best appearance where exposed.
- K. Shop fabricate frames to the greatest extent possible in the sizes as indicated. Unless otherwise indicated, provide each as a single unit. Do not exceed the manufacturer's recommended size and layout for units that are removed for maintenance and cleaning.
- L. Fabricate frame members in single lengths.
- M. All work shall be hot dip galvanized.

2.4 GROUT AND ANCHORING CEMENT

- A. Nonshrink, nonmetallic grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107. Provide grout, recommended in writing by the manufacturer, for exterior applications.
- B. Erosion-Resistant Anchoring Cement: Factory-packaged, nonstaining, hydraulic controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended, in writing by the manufacturer, for exterior applications.

PART 3 - EXECUTION

3.1 INSPECTION

- A. The contractor shall inspect all work areas prior to demolition and installation of fencing with the Owner's Representative to review and note all deficiencies, conflicts, construction access, landscape areas, existing trees, and irrigation systems prior to the start of work. Any deficiency or conflict items noted shall be provided to the Owner's Representative in writing.
- B. The contractor shall include all adjustments and corrections to fencing, gates, and paving as required for the full and complete installation of all work included within the Contract Documents.
- C. Review all work for items which require coordination.
- D. Examine all work after demolition and paving operations have been completed. Do not start work until unsatisfactory conditions are corrected.
 - 1. Hand trim grade at fence lines as necessary to lower high spots away from bottom edge of

fabric.

2. Paving or other surfaces receiving posts shall be neatly cut prior to drilling post holes. Upon completion of post setting and concrete work at said locations, earth disturbed shall be backfilled and compacted to 95% relative compaction and the cut paving or other surfacing shall be neatly repaired to the original condition.

3.2 CHAIN LINK FENCE INSTALLATION

A. Posts:

1. Posts shall be set plumb in concrete footings with tops uniformly aligned in accordance with ASTM F567. Neatly excavate post holes to dimensions per the Drawings. Holes shall be clean and free from loose dirt and water before placing posts and concrete.
2. Set posts, post sleeves and strikes in round concrete footings in grade as shown or as required. Concrete shall be thoroughly compacted by rodding as placed; bevel tops away from post and finish smooth. Set and grout posts into sleeves where required; neatly finish smooth and flush with adjacent surfaces.
3. Posts to be surface bolted shall have all base plates set to not conflict with path of travel. All base plates and posts shall be secured with concrete anchors per the Drawings.
4. All top of post footings within hardscape shall be installed below the hardscape.
5. All posts shall be installed at intervals not exceeding 8' on-center.

B. Terminal Post: Locate terminal end, corner, and gate posts per ASTM F567 and terminal pull posts at changes in horizontal or vertical alignment changes of fifteen (15) degrees or more.

C. Line Posts: Install for all intermediate locations between terminal posts. Uniformly space no greater than 8' center to center, measured parallel to grade, or space as shown.

D. Corner Posts: Install at points where a change in alignment is fifteen (15) degrees or greater. Where an alignment change occurs adjacent to a gate opening, use gate post in lieu of corner post.

E. End Posts: Install at each terminal end and corners of individual runs of fencing, except adjacent to gates.

1. Gate Posts: Install each side of each gate opening.

F. Tension Wire: Install according to ASTM F567, maintaining plumb position and alignment of fencing. Pull wire taut, without sags. Fasten fabric to tension wire with 0.120-inch diameter hog rings of same material and finish fabric wire, spaced a maximum of 24 inches O.C. Install tension wire before stretching fabric.

1. Top Tension Wire: Install tension wire through post cap loops.
2. Bottom Tension Wire: Install tension wire within 6 inches of bottom fabric and tie to each post with not less than same gage and type wire.

G. Rails: Install according to ASTM F567, maintain plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended by fencing manufacturer. Rails shall be secured to post by a brace band and rail end. Bottom rail or intermediate rail shall be field cut and secured to line post using boulevard clamps or brace band with rail end.

3.3 CHAIN LINK FABRIC INSTALLATION:

- A. Install fabric to the framework maintaining a ground clearance of no more than 2 inches. Attach fabric to the terminal posts by threading the tension bar through the fabric; secure the tension bar to the terminal post with the tension bands and 5/16 inch carriage bolts spaced no greater than 12 inches on-center. Small mesh fabric less than 1 inch: attach to terminal post by “sandwiching” the mesh between the post and a vertical 2 inch wide by 3/16 inch galvanized steel strap using carriage bolts, bolted thru the bar, mesh and post spaced 15 inches on-center.
- B. Chain link fabric to be stretched taut, free of sag. Fabric to be secured to the line post with tie wires spaced no greater than 12 inches on-center and to horizontal rails spaced no greater than 18 inches on-center. Secure the fabric to the tension wire by crimping hog rings around a fabric wire picket and tension wire.
- C. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at one end to chain link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain link fabric per ASTM F 626. Bend ends of wire to minimize hazard to individuals and clothing.
- D. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

3.4 NUTS AND BOLTS

- A. Bolts: Carriage bolts used for fittings shall be installed with the head on the secure side of the fence. All bolts shall be peened over to prevent removal of the nut.

3.5 GATE INSTALLATION

- A. Install gates according to manufacturer’s written instructions, with all required hardware, level, plumb and secure for full opening without interference. Attach fabric as for fencing unless otherwise indicated. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust gate and hardware to operate smoothly, easily, and quietly, free from binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. The contractor to provide temporary full-size core and permanent blank core. Owner to provide blank keyway.
- C. Adjust and maintain door and gate closures per 11B-404.2.8.1, so that from an open position of 90 degrees, the time required to move the door to a position of 12 degrees from the latch is 5 seconds minimum.

3.6 CUSTOM FABRICATION

- A. Shop fabricate all custom work to the maximum extent possible.
- B. Field welding, where required, shall conform with requirements specified herein for shop welding under "Fabrication." All welds shall be ground and polished smooth to match adjacent finish surfaces.

3.7 FINISHING

- A. All non-manufactured work shall be finished to prevent corrosion. All steel work shall be hot dip galvanized.
- B. All work which requires field welding shall have all field welds touched up with ZRC Cold Zinc galvanize available through Merchant Metals.
 - 1. Application of product shall be applied as required to prevent rusting.
 - 2. Application of product shall be uniformly applied to surfaces. Apply product to all surfaces, beyond weld joints, to establish uniform finish as requested by the Owner's Representative.

3.8 DEFECTIVE WORK

- A. All work deemed non-acceptable by the Owner's Representative shall be repaired or replaced to the satisfaction of the Owner at no additional cost to the contract.
- B. Defective work shall be categorized as:
 - 1. Work which is not straight, plumb, secure, and free of rattles.
 - 2. Gates which do not meet CBC requirements as specified herein.
 - 3. Poor fabrication includes welds which exhibit porosity, uneven cuts, items which do not have full contact and interface with other materials.
 - 4. Poor finishing includes lack of galvanization, runs in paint, orange peel, drips, or other non-uniform finishing.
 - 5. Work not in compliance with the Contract Documents or otherwise unaccepted by the Owner.

3.9 GATE SCHEDULES

- A. Refer to Drawings

3.10 CLEAN-UP

- A. Remove from the site all debris resulting from the work of this section.

END OF SECTION

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IRRIGATION SYSTEM

PART 1 - GENERAL

1.01 SUMMARY

- A. The CONTRACTOR shall provide all labor, materials, supplies, tools, and transportation and perform all operations in connection with and reasonably incidental to complete the installation of the automatic sprinkler irrigation systems as shown on the drawings. Items hereinafter are included as an aid to take off, and are not necessarily a complete list of work items.
1. Keep existing valves operational as required.
 2. Relocate and adjust existing sprinkler heads to achieve and maintain head to head coverage as required.
 3. Trenching, stockpiling, excavation, materials, and refilling trenches.
 4. Furnishing materials and installation for complete system including piping, valves, fittings, sprinkler heads, dripline and fittings, automatic controls, and final adjustment of heads to insure complete coverage.
 5. Line voltage connections to the irrigation controllers and low voltage control wiring from controllers to remote control valves.
 6. Replacement of unsatisfactory materials.
 7. Re-sod or seed all irrigation trenches through existing sod areas.
 8. Clean-up, inspection and approval.
 9. All work of every description mentioned in the specification and/or addenda thereto, all other labor, and materials reasonably incidental to the satisfactory completion of the work, including clean-up of the site, as directed by the Project Representative.
 10. Tests.
 11. As-built record drawings.
- B. Work Specified Elsewhere:
1. 120 volt A.C. electrical stub-out to controller location.
 2. Dedicated ethernet line stub-out to controller location.

1.02 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Irrigation System:
1. Measurement: Irrigation system installation is measured on a lump sum basis.
 2. Payment: The contract lump sum price paid for the Irrigation System shall include full compensation for furnishing all labor, materials, tools, equipment,

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and incidentals, and for doing all the work involved in furnishing and installing the Irrigation System, complete in place.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer catalog information on all material to be used on the project as specified on the legend, notes, details and plans. Redline or highlight exact items on page to be submitted. Complete material list shall be submitted prior to performing any work.
- B. Substitutions: No substitution will be permitted without prior written approval by the Project Representative. If the product is approved and, in the opinion of the Project Representative, the substituted product does not perform as well as the specified product, the Contractor shall replace it with the specified product at no additional cost to the Project Representative.
- C. All equipment or materials installed or furnished without prior approval of the Project Representative may be rejected and the Contractor may be required to remove the equipment or material at their own expense.

1.04 CLOSEOUT SUBMITTALS

- A. Project As-built Record Documents:
 - 1. The Contractor shall maintain in good order in the field office, one complete set of black line prints of all sprinkler drawings which form a part of the contract, showing all water lines, electrical, sprinklers, valves, stub-outs. In the event any work is not installed as indicated on the drawings, such work shall be corrected and documented accurately on the working drawings.
 - 2. Dimension from two permanent points of reference, such as building corners, sidewalks, road intersections or monuments, the following items:
 - a. Connection to water source
 - b. Backflow preventor
 - c. Gate valves
 - d. Routing of pressurized mainlines and lateral lines
 - e. Remote control valves
 - f. Quick coupling valves
 - g. Flow sensor, master valve, and irrigation controller
 - 3. Deliverables shall be one full size colored hard copy of the contract drawings with redlines and dimensions or a full sized colored scanned PDF version.
- B. Controller Chart:
 - 1. Provide one laminated (hermetically sealed between two pieces of 10 mil. plastic) controller chart showing the area covered by controller for each automatic controller supplied at the maximum size controller door will allow. Chart shall be a reduced drawing of the actual "as-built" system. If controller sequence is not legible when the drawing is reduced to door size, the drawing

shall be enlarged to a size that is readable and placed folded, in a sealed plastic container, inside the controller door.

2. Controller chart shall be a blackline print with a different color used to show area of coverage for each station. Charts must be completed and approved by the Project Representative prior to final inspection of the irrigation system.
3. Locate all dripline flush valves and dripline indicators on colored plans if the locations differ from design plans.

C. Controller Cloud Based Communication and Flow Sensor installation confirmation:

1. Provide written confirmation that the cloud-based communications are set up and operational between controller(s) and cloud-based server.
2. Provide written confirmation from the distributor/manufacturer's representative that the controller is communicating with flow sensors and that the correct "k" and "offsets" are setup and utilized properly. The "k" and "offsets" are pre-set numbers you plug into the controller software based on the flow sensor size and type when calibrating the flow sensor. Confirm that flow values have been "learned" and recorded for each valve on the controller, and the correct gpm per valve is shown and verified on a printout and provided to Landscape Architect or Irrigation Consultant. Flow alarms and automatic shut offs should be set up after plant establishment.

D. Maintenance and Operating Instructions and Manuals:

1. Contractor shall prepare an Operation and Maintenance Manual, organized in a 3-ring binder, containing the following information.
 - a. Contractor's name, address, and telephone number. Duration of guarantee, periods as specified herein, list of equipment with names and addresses of local manufacturer's representatives with duration of written warranties. Complete operating and maintenance instructions on all equipment spare parts lists and related manufacturer's information.
2. Submit the Operation and Maintenance Manual to the Project Representative within 10 Calendar Days of completion of work of this Section and as a condition of project acceptance.

E. Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis:

1. All landscape irrigation audits shall be conducted by a local agency landscape irrigation auditor or a third party certified landscape irrigation auditor. Landscape audits shall not be conducted by the person who design the landscape or installed landscape.
2. For new construction and rehabilitated landscape projects installed after December 1, 2015, as described in Section 490.1:
 - a. The project applicant shall submit an irrigation audit report with the Certificate of Completion to the local agency that may include, but is not limited to: inspection, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule, including configuring irrigation controllers with application rate, soil types, plant factor, slope, exposure and any other factors necessary for accurate programming.

1.05 QUALITY ASSURANCE & GENERAL REQUIREMENTS

- A. Qualifications: The Contractor, personally or through an authorized and competent representative, shall supervise the work constantly, and shall as far as possible keep the same foreman and workmen on the job from commencement to completion. The workmanship of the entire job must in every way be first class, and only experienced and competent workmen will be allowed on the job. A minimum of five years' experience of installing irrigation systems of similar scope, size and complexity as the system being installed under this scope of work is required for all on-site job superintendents.
- B. Manufacturer's installation instructions and best practices: Manufacturer's installation instructions shall be followed in all cases when not shown in the Drawings or Specifications.
- C. O.S.H.A. Compliance: All articles and services covered by this specification shall meet or exceed the safety standards established under the Federal Occupational Safety and Health Act of 1970, together with all amendments in effect as of the date of this specification.
- D. All irrigation systems shall be installed to meet or exceed the requirements set forth in the California Department of Water Resources Model Water Efficient Landscape Ordinance.
- E. All materials supplied for this Project shall be new and free from any defects. All defective materials shall be replaced immediately at no additional cost to District.
- F. Codes and Standards: Comply with all applicable codes and standards.
 - 1. All work and materials shall be in full accordance with the latest rules and regulations of the National Electric Code; published by the Western Plumbing Officials Association; California Code of Regulations, Title 23, Division 2. Department of Water Resources, Chapter 2.7. Model Water Efficient Landscape Ordinance; and other State or local laws regulations. Nothing in these drawings or specifications is to be construed as to permit work not conforming to these codes.
 - 2. When the specifications call for materials or construction of a better quality or larger size than required by the above mentioned rules and regulations, the provision of the specifications shall take precedence over the requirements of said rules and regulations.
 - 3. Contractor shall furnish, without extra charge, any additional material and labor when required by the compliance with these rules and regulations, though the work be not mentioned in these particular specifications or shown on the drawings.
 - 4. The Contractor shall erect and maintain barricades, guards, warning signs, and lights as necessary or required by O.S.H.A. regulations for the protection of the public or workmen.
 - 5. Any existing buildings, equipment, piping, pipe covering sewers, etc., damaged by the Contractor during the course of his work shall be replaced or repaired by the Contractor in a manner satisfactory to the Project Representative and at Contractor's own expense, before final payment is made. The Contractor shall be responsible for damage caused by leaks in the piping systems being installed or having been installed under this contract. He/she shall repair, at his/her own

expense, all damage so caused, in a manner satisfactory to the Project Representative.

6. The Contractor shall secure the required licenses and permits including payments of charges and fees, give required notices to public authorities, verify permits secured or arrangements made by others affecting the Work of this section.

1.06 EXISTING CONDITIONS

A. Protection of Existing Structures and Utilities

1. The Drawings show, if applicable, existing above and below grade structures and utilities that are known to the Project Representative. Locate known existing installations before proceeding with construction operations that may cause damage to such installations. Existing installations shall be kept in service where possible and damage to them shall be repaired with no adjustment of Contract Sum. Verify with Project Representative if As Built drawings are available.
2. If other structures or utilities are encountered, request Project Representative to provide direction on how to proceed with the Work. If a structure or utility is damaged, take appropriate action to ensure the safety of persons and property.

B. Trench Interference with Existing Tree Root Systems: Prior to trenching, layout main and lateral line locations within drip Line of trees and review locations with Project Representative. Relocate any lines that may interfere with existing root systems to avoid or reduce damage to root systems as accepted by Project Representative.

C. Provide barricades, coverings, warning signs, lights and other protection required by local code or OSHA to prevent damage to existing improvements to remain and to protect the public.

1.07 DELIVERY, STORAGE AND HANDLING:

A. Protection: Use all means necessary to protect irrigation system materials before, during and after installation and the installed work and materials of all other trades.

B. Replacement: In the event of damage, immediately make all repairs and replacements necessary to the satisfaction of the Project Representative and at no additional cost to the project.

1. Exercise care in handling, loading, unloading and storing plastic pipe and fittings under cover until ready to install; transport plastic pipe only on a vehicle with a bed long enough to allow the pipe to lay flat to avoid undue bending and concentrated external load. Protect pipe from sunlight.
2. Repair all dented and damaged pipe by cutting out the dented or damaged section and rejoining with a coupling.

1.08 LAYOUT OF WORK

- A. The Contractor shall stake out the irrigation system as shown on the drawings. These areas shall be checked by the Contractor and Project Representative before construction is started. Any changes, deletions or additions shall be determined at this check.

- B. Due to the scale of the Drawings, it is not possible to indicate all piping offsets, fittings, sleeves, etc., which may be required. Carefully investigate the conditions affected all of the work and plan accordingly, and furnish all required fittings. Install system in such a manner to avoid conflicts with planting, utilities and architectural features.
- C. Do not install the irrigation system as shown on the Drawings when it is obvious in the field that obstructions, grade differences or discrepancies in arc dimensions exist that might not have been considered. Bring such obstruction or differences to the attention of the Project Representative. Notify and coordinate irrigation Work with applicable contractors for location and installation of piping and sleeves through or under walls, pavement and structures. In the event this notification is not given, the Contractor shall assume full responsibility for any revision necessary.

1.09 SEQUENCING AND SCHEDULING

- A. Acceptance: Do not install main line trenching prior to acceptance by Project Representative of rough grades completed under another Section.
- B. Coordination: Coordinate with the all other trades the sleeving, power requirements of the project, prior to the start of construction.

1.10 EXISTING IRRIGATION SYSTEM

- A. This Contract requires that the existing irrigation system be kept intact on all areas of the park not yet worked on to permit normal watering during construction. On areas that have been installed according to these plans and specifications, irrigation shall be programmed to operate via the controller. On areas being worked on, the Contractor shall afford the District every opportunity to hand water during the period of shutdown with particular emphasis on the ballfields
- B. After the new irrigation system is fully functional, all existing sprinklers, valves, valve boxes, and quick coupling valves in the work areas will be removed by the Contractor. Fill all void with backfill material leaving 6" near the surface for topsoil. Compact by mechanical tamping to a minimum compaction of 85% relative compaction. Add a minimum of 6" of topsoil to compacted backfill. The topsoil shall be placed and blended to the satisfaction of the Project Representative. In turf areas, re-seed the topsoil with an approved seed mix.

1.11 INSTRUCTION

- A. After the system has been installed and approved, the Contractor shall instruct the Project Representative and or Maintenance Contractor, in complete operation and maintenance of the irrigation system.

PART 2 - MATERIALS

2.01 PIPE AND FITTINGS

- A. PVC Pressure Mainline pipe and fittings.
 - 1. Pressure mainline piping:

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- a. 2.5" AND LARGER: Shall be PVC 1120-CL315 plastic pipe. Pipe shall be made from NSF approved Type 1, Grade 1 PVC compound conforming to ASTM D1785.
 - b. 2" AND SMALLER: Shall be PVC 1120-Schedule 40 plastic pipe. Pipe shall be made from NSF approved Type 1, Grade 1 PVC compound conforming to ASTM D1785.
 2. Schedule 40 pipe shall be manufactured in strict compliance to ASTM D1785 and D2665 (where applicable), consistently meeting and/or exceeding the Quality Assurance test requirements of these standards with regard to material, workmanship, burst pressure, flattening, and extrusion quality.
 3. All PVC pipe shall bear the following markings:
 - a. Manufacturer's name
 - b. Nominal pipe size
 - c. Class or Schedule
 - d. Pressure rating in PSI
 - e. NSF
 - f. Date of extrusion
 4. Use solvent weld pipe for mainline pipe with a nominal diameter less than 3-inches or where a pipe connection occurs in a sleeve. Use Schedule 80, Type 1, PVC solvent weld fittings conforming to ASTM Standards D2467 and D1784 at changes in direction or branch mains. Use primer approved by the pipe manufacturer. Solvent cement to conform to ASTM Standard D2564.
 5. Connections between main lines and RCV's shall be of Schedule 80 PVC (threaded both ends) nipples and fittings.
 6. All fittings shall bear the manufacturer's name or trademark, material designation, size, applicable I.P.D. schedule and NSF Seal of approval.
 7. Inside diameter of pipe shall be the same size as iron pipe.
 8. PVC Type I shall not be threaded.
 9. PVC fittings shall be PVC Type II, Schedule 40 NSF approved.
 10. Caution shall be utilized in handling Type I pipe due to the possibility of cracking or splitting.
 11. When connection is plastic to metal, male adapters shall be used unless otherwise noted or detailed. The Male adapter shall be hand tightened, plus one turn with a strap wrench. Joint compound shall be non-lead base (Teflon paste or equal).
 12. Threaded Nipples – ASTM D2464, Schedule 80 with molded threads.
- B. PVC Non-pressure lateral line and fittings
1. Lateral lines (non-pressure): 3/4" and larger shall be Schedule 40 PVC plastic pipe.
 2. Manufactured from virgin polyvinyl chloride (PVC) compound in accordance with ASTM D2241 and ASTM D1784; cell classification 12245-B, Type 1, Grade 1.

3. Fittings – All lateral lines shall be connected with Schedule 40, Type I, Grade I, PVC solvent weld fittings.
 4. Threads – Injection molded type (where required).
 5. Tees and ells – Side gated.
 6. Threaded Nipples – ASTM D2464, Schedule 80 with molded threads.
 7. Refer to “trenching and backfilling” elsewhere in these specifications for minimum depths.
- C. Solvent for all PVC pipe shall be #711 Gray, along with #P-70 primer, NSF approved as manufactured by Industrial Polychemical Service, Gardena, California, or approved equal.
 - D. Pipe joint compound shall be non-hardening, non-toxic materials designed specifically for use on threaded connections in water carrying pipe. Performance shall be same as RectorSeal #5.
 - E. PVC Flexible Pipe: Extruded from flexible vinyl chloride compound.
 1. ½ inch pipe: 0.50 inch inside diameter, 0.090 inch wall thickness
 2. Material shall conform to ASTM designation D-2287.
 - F. Swing joints shall be as shown on construction details.

2.02 SLEEVES

- A. Sleeve below all hardscape elements with SCH 40 or Class 200 PVC twice the diameter of the pipe or wire bundle within, or as delineated on the plans.
- B. Under Hardscape Crossings: Sleeves shall extend a minimum of 24 inches beyond all sidewalks, or shall be extend 24” beyond the back edge of the curb, where noted on the plans.

2.03 MASTER CONTROL VALVE

- A. Master control valve shall be a normally open 24 VAC solenoid actuated globe pattern valve.
- B. Valves shall be made of brass with a minimum pressure rating of 150 PSI
- C. Valve shall have external and internal bleed for manual operation.
- D. Valve model and size shall be as shown on drawings.

2.04 FLOW SENSORS

- A. Inline flow sensors shall be installed in accordance with the manufacturer’s installation instructions. Contractor is responsible for the installation, all required materials and connections of the flow sensors for complete operation with the irrigation controller.
- B. Flow sensor size and model shall be listed on the drawings.

2.05 FLOW SENSOR CABLE AND CONDUIT

- A. Flow sensor wire shall be shielded cable Paige model 7171D or approved equal.

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- B. Maximum cable distance from controller to flow sensor shall be 2000 ft.
- C. Install flow sensor cable in a 1" grey SCH 40 PVC conduit with long sweep elbows.
- D. Conduit and flow sensor cable shall be routed with mainline wherever possible. Provide a minimum 6" separation between conduit and pressure main line.
- E. Provide 10" round gray electrical pull boxes a minimum of every 200 ft, at each change in direction and adjacent to each controller. Heat brand lid of pull box "FSB".

2.06 GATE VALVES

- A. Gate valves 3" and smaller shall meet the following requirements:
 - 1. Valves shall be of stainless steel (304 or higher) or bronze/brass construction with non-rising stem, cross handle and threaded connections.
 - 2. Valves shall be Leemco Model #LGT-SS, Nibco T-113-K or approved equal. Size as shown on the drawings
 - 3. Install in 10" diameter plastic valve box as detailed.

2.07 QUICK COUPLING VALVES

- A. Quick coupling valves shall be as shown on the drawings.
- B. Install in 10" diameter plastic valve box as detailed.

2.08 CONTROLLERS

- A. Controller's size and model shall be as listed on the drawings.
- B. Final location(s) of controller shall be approved by the Project Representative.
- C. Controller requires 120v power. Maximum power output of controller is 2.5 amps.
- D. Install Controller and accessories as detailed and per Manufacturer's details.

2.09 CONTROL WIRE

- A. Irrigation Low Voltage Control Wire: All wiring to be used for connecting the automatic controller to the electric solenoid actuated remote control valve shall be Type UF-600V, solid copper, PVC insulation, single conductor, UL approved underground feeder cable, approved for direct burial.
- B. Control wire: Size #14-1 wire with an insulating jacket of color other than white or yellow. Runs over 2,000 lineal feet shall be size #12-1.
- C. Common ground wire: Size #12-1 wire with a white insulating jacket.
- D. Spare wires: Size #14-1 wire with a yellow insulating jacket. Provide a minimum of two spare control wires into each RCV box for future.
- E. Provide different color (not yellow) control wires for each controller and a separate ground wire for each controller.
- F. Splices shall be made with 3M-DBY seal packs.

2.10 ELECTRIC REMOTE CONTROL VALVES

- A. Electric remote control valves sizes shall be shown on drawings.
- B. Electric remote control valve shall be a normally closed 24 VAC solenoid actuated globe pattern valve.
- C. Valves shall be made of durable glass-filled nylon with a minimum pressure rating of 150 PSI
- D. Valve shall have external and internal bleed for manual operation.
- E. All valves that service dripline or drip systems shall include a plastic wye filter and pressure regulator on the valve or a solid set 40 PSI plastic regulator downstream of the valve. Filters shall be rated to 120 psi, includes a 150 mesh disk or stainless steel screen.

2.11 IDENTIFICATION TAG

- A. Identification tags for all electric control valves shall be manufactured by Christy. Tag numbers shall match stationing in controller and as shown on as-built drawings. Provide one yellow station number tag for each electric control valve as follows:
 - 1. Potable water systems: Christy ID.STD.Y1

2.12 VALVES BOXES

- A. ELECTRIC REMOTE CONTROL VALVE BOXES:
 - 1. All electric remote control valve boxes that service non-drip systems shall be installed within a Carson model 1419 (14"x19") or 1220 (13" x 20") plastic valve box with bolt down plastic lid or approved equal. Size of box is dependent on the size of valve. Lid shall be marked: "Irrigation Control Valve."
 - 2. All electric remote control valve boxes that service dripline or drip systems shall be installed within a Carson model 1220 plastic valve box with bolt down plastic lid or approved equal. Lid shall be marked: "Irrigation Control Valve."
 - 3. Use black colored boxes in shrub and groundcover areas and green in turf areas.
 - 4. Heat brand controller letter and numbers into lid. Minimum text height to be 2".
- B. GATE VALVE AND QUICK COUPLING VALVE BOXES:
 - 1. All gate valve and quick coupling valve shall be installed within a Carson Model 910-18" depth plastic valve box with plastic lid or approved equal. Use 8" or 10" sleeve to encase gate valve.
 - 2. Use black colored boxes in shrub and groundcover areas and green in turf areas.
 - 3. Heat brand the letters "GV" into lid. Minimum text height to be 2".
- C. DRIP COMPONENT BOXES:
 - 1. All drip components shall be installed within a 6" round black plastic valve box with plastic lid. Carson Model 708 plastic valve box with plastic lid or approved

2.13 SPRINKLER HEADS

- A. All sprinkler heads shall be as listed on the drawings.
- B. Pop-up spray sprinklers shall include a built in check valve in the body to hold up to 14 feet of head.
- C. Pop-up spray sprinklers shall include built in pressure regulation in the body.
- D. Use 30 psi regulators for all spray nozzles and 45 psi regulators for all rotating nozzles. Use 12" pop-ups in shrub and ground cover areas and 6" pop-ups in turf areas.
- E. Riser units and nipples shall be the same size as the inlet to the sprinkler body.

2.14 BUBBLERS

- A. Bubblers shall be as listed on the drawings.
- B. Bubblers shall be pressure compensating from 20 psi to 60 psi.
- C. The bubbler body shall be manufactured with UV Stabilizers and have ½" FIPT threads for connection to ½" MNPT male adaptor or nipple.
- D. Flow rate molded onto the bubbler for easy identification
- E. Where low head drainage occurs, each bubbler shall have a check valve installed. Hunter HC-50F-50M or approved equal.

2.15 DRIPLINE & DRIPLINE COMPONENTS

- A. Dripline shall be as listed on the drawings.
- B. Tubing shall be low density, UV resistant, polyethylene tubing with internal pressure-compensating, drip emitters impregnated into the tubing spaced at 12 or 18 inches
- C. The built in emitters shall be capable of delivering 0.60 gallons per hour per emitter.
- D. All dripline systems shall have a manual flush valve at each isolated zone within the systems. Multiple flush valves may be required per drip zone.

2.16 CHECK VALVE

- A. Spring check valve shall be Schedule 40 PVC with ½ lb spring and stem rated at 150 PSI.
- B. Check valves shall be NDS. Use KSC series swing check valve for all uphill flow direction valves and KC series spring check for all downhill flow direction valves. Size per line size of lateral line.

2.17 MISCELLANEOUS INSTALLATION MATERIALS

- A. Solvent cement and primer for solvent weld joints shall be of make and type approved by manufacturer(s) of pipe and fittings. Cement shall be maintained at proper consistency throughout use.
- B. Pipe joint compound shall be non-hardening, non-toxic materials designed specifically for use on threaded connections in water carrying pipe. Performance shall be same as RectorSeal #5.

2.18 MISCELLANEOUS EQUIPMENT

- A. Provide all equipment called for by the drawings.
- B. Provide to the Project Representative at completion of the maintenance period, three (3) each of all operating and servicing keys and wrenches required for complete maintenance and operation of all heads and valve. Include all wrenches necessary for complete disassembly of all heads and valves.

PART 3 - INSTALLATION

3.01 PREPARATION

- A. Schedule and coordinate placement of materials and equipment in a manner to effect the earliest completion of work in conformance with construction and progress schedule.

3.02 HANDLING AND STORAGE

- A. Protect work and materials from damage during construction and storage as directed by the Project Representative.
- B. Handle plastic pipe carefully; especially protect it from prolonged exposure to sunlight. Any section of pipe that has been damaged will be discarded and removed and replaced if installed.

3.03 LAYOUT

- A. Lay out work as accurately as possible in accordance with diagrammatic drawings.
- B. Where site conditions do not permit location of piping, valves and heads where shown, notify Project Representative immediately and determine relocation in joint conference.
- C. Prior to installation, the Contractor shall stake out the routing of all pressurized main lines and sprinkler heads for approval by Project Representative.
- D. Run pipelines and automatic control wiring in common trenches wherever practical.

3.04 EXCAVATING AND TRENCHING

- A. Work shall be performed when soils are reasonably dry and not saturated.
- B. Trenching
 - 1. Excavations shall be open vertical construction sufficiently wide to provide free working space around the work installed and to provide ample space for backfilling and compacting.
 - 2. In existing turf areas remove sod with sod cutter. Roll and set aside. Replace immediately after installing conduit (three days maximum), backfilling and compacting.
 - 3. Depth of trenches shall be pipelines deep enough to provide minimum cover from finish grade as follows.

- a. 24" minimum cover over main lines to control valves and quick coupling valves. Refer to legend for depth requirements.
- b. 24" minimum cover over control wires from controller to valves. Refer to legend for depth requirements.
- c. 12" minimum cover over RCV controlled lateral lines to sprinkler heads. 18" depth will be required at all 12" pop-up sprinklers. Refer to legend for depth requirements.
4. Trenches shall be excavated to such depths as will permit the pipe to be laid at the elevations, slopes, or depths of cover indicated on the drawings, and at uniform slopes between indicated elevations.
5. Whenever cobbles larger than 2 inches in size are present in earthen subgrade, the trench section shall be excavated to the lines required. Every effort shall be made to keep the sides of the trenches firm and undisturbed until backfilling has been completed and consolidated. Trenches shall be excavated with approximately vertical sides between the elevation of the bottom of the pipe and an elevation one foot above the top of the pipe.
6. When two pipes are to be placed in the same trench, maintain a 4" space between pipes as minimum.
7. Where other utilities interfere with irrigation trenching and pipe work, adjust the trench depth as instructed by the Project Representative.
8. Restore surfaces, existing underground installations, etc., damaged or cut as a result of excavations, to original conditions in a manner approved by the Project Representative.

C. Backfilling:

1. Backfill materials shall be approved native soil in all landscaped areas. Unsuitable material, including clods and rocks over 2 inches in size shall be removed from the premises by Contractor and disposed of legally at no cost to the Project Representative.
2. Backfill only after piping has been tested, inspected and approved.
3. Place backfill materials in 6" layers and compact by jetting or tamping to a minimum compaction of 90 percent of original soil density.
4. Dress off areas to finish grades and remove excess soil, rocks or debris remaining after backfill is completed.
5. All backfilling shall be properly compacted so as to avoid future settlement.
6. If settlement occurs along trenches, and adjustments in pipes, valves and sprinkler heads, soil, sod or paving are necessary to bring the system, soil, sod or paving to the proper level or the permanent grade, the Contractor, as part of the work under this contract, shall make all adjustments without extra cost to the project.

D. Re-sod Turf Areas

1. The contractor shall sod cut all existing turf areas that require trenching. Keep existing sod cuts moist and relay rolls as quickly as possible to prevent loss and stress.

2. If sod cut turf does not survive, Contractor shall re-sod any turf areas damaged due to trenching, excavation, or equipment damage such as tire tracks, to the satisfaction of the Project Representative. If approved by Project Representative re-seeding of damaged areas may be allowed.
3. Contractor shall furnish topsoil approved by the Project Representative in sufficient quantities needed to perform the work and feather in all edges to eliminate any lips.
4. Sod shall be placed over the top of all excavations through grass areas. Backfill of trenches should be held short of adjacent finished grade by 1/2 inch, minimum, to accommodate sod. Roll sod with a roller to eliminate any lips where existing and new sod transition.
5. If necessary, the edge of new sod and existing turf shall be blended by using a topsoil on the turf surface to eliminate the lip. The topsoil shall be placed and blended until the lip has been blended to the satisfaction of the Project Representative.
6. Roll sod after installation, a minimum of 3 passes, to remove air pockets and promote establishment of sod.

3.05 INSTALLATION OF SLEEVING UNDER ASPHALT OR CONCRETE

- A. General: Layout of the piping system shall be per the drawings and to the depth specified above.
- B. Under Existing Pavement:
 1. Piping under existing pavement may be installed by jacking, boring or hydraulic driving, except that no hydraulic driving will be permitted under asphaltic concrete pavement.
 2. Where cutting of existing pavement is necessary, provide alternate routes for vehicular traffic. After placement of pipes, backfill trench and compact to 95%. Replace entire section of base rock and hardscape to match existing conditions.
- C. Inspection of Pipe and Fittings: Carefully inspect all pipe fittings before installation, removing all dirt, scale and burrs; ream as required. Install all pipe with all markings up for visual inspection and verification.
- D. Installation of Sleeving:
 1. Sleeving shall be installed a minimum of 24 inches below grade.
 2. Sleeving shall extend 24 inches beyond the edge of finished concrete surface.
 3. Trenches containing sleeves shall be backfilled with material that consists of unwashed creek or bank gravel, crushed gravel, crushed rock, sand or a mixture of these materials. It must be free from roots, vegetable matter or other deleterious substance and shall be of such nature and so graded that it will bind readily when watered and compacted. Backfill with such material to the bottom of the concrete or hardscape section and compacted to a minimum of 90%. Where the sleeve extends beyond the edge of the hardscape or concrete, the sleeve shall be backfilled with native soil or imported topsoil, whichever is specified. If nothing is specified, use previously excavated native soil.

4. Prior to placement of concrete, the ends of the sleeves shall be marked with a stake that shall be exposed approximately 2"-3" above rough, or finished grade to identify sleeve locations. On all street crossing, the location shall be marked at the edge of concrete or hardscape with a chiseled line or "x", and the stake removed.

3.06 ASSEMBLING PIPELINES

- A. PVC pipe shall be installed in a manner which will provide for expansion and contraction as recommended by the pipe manufacturer. Pipe routing is diagrammatic and shall be installed in such a manner as to conform with the details.
- B. In joining, use only the specified solvent and make all joints in strict accordance with the manufacturer's recommended methods. Give solvent welds at least 16 minutes set-up time before moving or handling and 24 hours curing time before filling with water.
- C. All pipe shall be assembled free from dirt and pipe scale. Field cut ends shall be reamed only to full pipe diameter with rough edges and burrs removed.
- D. Install 3" wide detectable warning tape above all pressurized main lines as shown in the details. Use Christy model #TA-DT-3-BIRR for potable irrigation systems
- E. Solvent Weld Joint:
 1. Prepare joint by first making sure the pipe end is square. Then, de-burring the pipe end, and clean pipe and fitting of dirt, dust and moisture.
 2. Dry insert pipe into fitting to check for proper sizing. Pipe should enter fitting 1/3 to 2/3 depth of socket.
 3. Coat the inside socket surface of the fitting and the male end of the pipe with P-70 primer (manufactured by Weld-On). Then without delay, apply Weld-On 711 cement liberally to the male end of the pipe and also apply 711 cement lightly to the inside of the socket. At this time, apply a second coat of cement to the pipe end.
 4. Insert pipe immediately into fitting and turn 1/4 turn to distribute cement and remove air bubbles. The pipe must seat to the bottom of the socket and fitting. Check alignment of the fitting. Pipe and fitting shall be aligned properly without strain to either.
 5. Hold joint still for approximately thirty (30) seconds and then wipe the excess cement from the pipe and fitting.
 6. Cure joint a minimum of thirty (30) minutes before handling, at least six (6) hours before allowing water in the pipe.
- F. Threaded Joint:
 1. Field threading of plastic pipe or fittings is not permitted. Only factory formed threads will be permitted.
 2. Factory made nipples shall be used wherever possible. Field cut threads in metallic pipe will be permitted only where absolutely necessary. When field threading, cut threads accurately on axis with sharp dies.
 3. All threaded joints shall be made up with pipe joint compound. Apply compound to male threads only.

4. Where assembling metallic pipe to metallic fitting or valve, not more than three (3) full threads shall show when joint is made up.
5. Where assembling to threaded plastic fitting, take up joint no more than one full turn beyond hand tight.
6. Where assembling plastic pipe, use strap type friction wrench only; do not use metal-jawed wrench.
- G. Cap or plug openings as pipeline is assembled to prevent entrance of dirt or obstructions. Remove caps or plugs only when necessary to continue assembly.
- H. Where pipes or control wires pass through sleeves, provide removable non-decaying plug at ends of sleeve to prevent entrance of earth.
- I. For plastic-to-steel connections, work the steel connections first; use a non-hardening non-lead base pipe dope on all threaded plastic-to-steel connections and use only light wrench pressure. All plastic-to-steel connections shall be made with SCH 80 PVC nipple or plastic male adapters.

3.07 REMOTE CONTROL VALVES

- A. Install where shown on drawings and group together where practical. Limit one remote control valve per box.
- B. Locate valve boxes 12" from and perpendicular to walk edges, buildings and walls. Provide 12" between valve boxes where valves are grouped together.
- C. Thoroughly flush main line before installing valves.
- D. Install in shrub or groundcover areas where possible.
- E. Label control line wire at each valve with an I.D. tag, indicating identification number of valve (controller and station number). Attach label to control wire.
- F. Flow control stems shall be adjusted or tuned per manufacturer recommendations.
- G. Install 18GA ½" x ½" square hot dipped galvanized wire mesh under all valve boxes and wrap up the sides of the valves. Adhere wire mesh to sides of box with stainless-steel screws and washers as required. Refer to details for more information.

3.08 AUTOMATIC CONTROL WIRE

- A. Run lines along mains wherever practical. Tie wires in bundles with pipe wrapping tape at 10' intervals and allow slack for contraction between strappings.
- B. Loop a minimum of three (3) feet of extra wire in each valve box; both control wire and ground wire.
- C. Connections shall be made by crimping bare wires with brass connectors and sealing with watertight resin sealer packs.
- D. Splicing will be permitted only on runs exceeding 2500'. Locate all splices at valve locations within valve boxes.
- E. Where control lines pass under paving, they shall pass through Schedule 40 electrical PVC conduit. Do not tape wire in bundles inside conduit.

3.09 AUTOMATIC CONTROLLER

- A. Provide and install automatic irrigation controller in approximate locations shown on drawings. The exact location will be determined on the site by the Project Representative. Provide conduit and wire and connect to 120 volt switch accessible to controller for ease of maintenance.
- B. Connect control lines to controller in sequential arrangement according to assigned identification number on valve. Each control line wire shall be labeled at controller with a permanent non-fading label indicating station number of valve controlled. Attach label to control wire.
- C. Provide each irrigation controller with its own independent low voltage common ground wire.

3.10 SPRINKLER HEADS AND BUBBLERS

- A. All sprinkler heads shall be set perpendicular to finish grade of the area to be irrigated unless otherwise designated on the plans.
- B. In lawn areas, all sprinkler heads shall be offset a minimum of 3 inches and a maximum of 6 inches from the edge of adjacent hardscape.
- C. Flush and adjust irrigation outlets, bubblers and nozzles for optimum performance and to prevent overspray onto field, walks, roadways, and/or buildings as much as possible. This shall include selecting the best degree of arc and radius to fit the existing site conditions and throttle the flow control at each valve to obtain the optimum operating pressure for each control zone.

3.11 QUICK COUPLING VALVES

- A. Thoroughly flush lines before installing quick coupling valves.
- B. Locate quick coupling valves as shown in the drawings and details.
- C. Locate valve boxes 12" from and perpendicular to walk edges, buildings and walls. Provide 12" between other valve boxes where valves are grouped together.

3.12 DRIPLINE AND DRIPLINE COMPONENTS

- A. Thoroughly flush all driplines.
- B. Install dripline a minimum of 12" away from all buildings and 6" off hardscapes for shrubs and groundcover. 2" of paving for all no-mow or sod type grasses.
- C. Space driplines equally throughout the planting area as detailed. Refer to legend for emitter and row spacing of dripline. Adjust alternate rows so emitters are spaced in a triangular pattern.
- D. All dripline tubing shall be buried 4" below finish grade and stapled down every 4' and at each change in direction with a 6" tubing stake.
- E. For slopes greater than 10:1, modify dripline row spacing on the bottom 1/3 of the slope to be 25% greater at the bottom of the slope.

- F. Install flush valves at the low end of each drip zone minimum of 2 valves are required for each valve. Refer to manufacturer details for installation instructions.
- G. Install air vacuum relief valve(s) at high point(s) of each planting area. Refer to drawings for approximate locations. Revise locations in field based on actual grades of the site. Locate 1 valve per every 500' of dripline. Refer to manufacturer details for installation instructions.
- H. Thoroughly saturate soil prior to planting. Provide additional surface watering as required to keep plant root systems moist during planting establishment period.

3.13 FIELD QUALITY CONTROL

- A. Coverage Tests:
 - 1. Perform coverage tests in the presence of Project Representative, after sprinkler or drip system is completed. Test system to assure that all areas are irrigated completely and uniformly.
 - 2. Do not spray onto pavement or structures. Adjust arc nozzles as needed to provide full coverage without over spray.
- B. Adjusting and Cleaning:
 - 1. System adjustment:
 - a. Valves: Adjust flow for proper operation.
 - b. Heads: Adjust for alignment and coverage.
 - c. If it is determined that coverage could be improved by adding additional driplines or a nozzle change, make such changes as required to provide adequate coverage to all plant material.
 - d. Perform final cleaning of all risers, dripline, heads, and equipment for proper operation. Demonstrate operation and uniform coverage in the presence of the Project Representative prior before final acceptance.

3.14 TESTING

- A. General
 - 1. Notify the Project Representative at least three (3) days in advance of testing.
 - 2. Furnish all necessary testing equipment and personnel.
 - 3. Perform testing at his/hers own expense.
 - 4. Correct all leaks and retest until acceptance by the Project Representative.
 - 5. Center load piping with small amount of backfill to prevent arching or slipping under pressure. No fitting shall be covered
- B. Closing uninspected work: Do not allow or cause any of the work of this section to be covered up or enclosed until it has been inspected, tested and approved by the Project Representative and other authorized agencies.
- C. Flushing: Before backfilling the main line, and with all control valves in place but before lateral pipes are connected, completely flush and test the main line and repair all leaks. Flush out each section of lateral pipe before sprinkler heads are attached.

- D. Perform test as specified below. Remake any faulty joints with all new materials. Use of cement or caulking to seal leaks is absolutely prohibited.
- E. Pressure Testing Procedure:
 - 1. Apply the following tests after welded plastic pipe joints have cured at least twenty-four (24) hours.
 - a. Solvent Weld Mainline: Remove all the air from the piping system then test live (constant pressure) and QCV lines hydrostatically at 125 PSI minimum. Lines will be approved if test pressure is maintained for six (6) hours. The lines shall be restored to the original test pressure. The Contractor shall make tests and repairs as necessary until test conditions are met.
 - b. Test RCV controlled lateral lines with water at line pressure and visually inspect for leaks. Retest after correcting defects.
- F. Final Inspection
 - 1. Thoroughly clean, adjust and balance all systems.
 - 2. Demonstrate the entire system to the Irrigation Consultant and/or, if required, authorized agent and other governing agencies providing that all remote control valves are properly balanced, that all heads are properly adjusted for radius and arc of coverage, and that the installed system is workable, clean and sufficient.

3.15 GUARANTEE

- A. It shall be the responsibility of the Contractor to fill and repair all depressions and replace all necessary lawn and planting due to the settlement of irrigation trenches for one year following completion and acceptance of the job.
- B. The Contractor shall also guarantee all materials, equipment and workmanship furnished by him to be free of all defects of workmanship and materials, and shall agree to replace at his expense, at any time within one year after installation is accepted, any and all defective parts that may be found.

3.16 MAINTENANCE

- A. Continuously maintain irrigation system in areas indicated in the Contract during the progress of work and for a period of 90 days after substantial completion.
- B. It is Contractor's responsibility to turn over the irrigation in a first-class condition at the end of the maintenance period.
- C. Maintenance Schedule: Contractor shall submit schedule of maintenance tasks to be performed for Project Representative review and approval. At a minimum, maintenance staff shall be on-site two times per month. It is not the intention of these Specifications to allow a "quick cleanup" at the end of the maintenance period, but rather that the work be continuous and ongoing.
- D. Proper irrigation system maintenance includes the overall supervision of the system, controller scheduling, routine adjustments and necessary repairs.

- E. Maintain irrigation system for optimum performance, as per manufacturer's specifications, by inspecting the entire system on an on-going basis. This includes cleaning and adjusting all bubbler heads, dripline and valves for proper coverage.

3.17 CLEAN-UP

- A. Preservation and Cleaning: The Contractor shall clean up the work as it progresses. At frequent intervals, and at all times when directed by the Project Representative, the Contractor shall remove and dispose of accumulations of rubbish and debris of all kinds. At the time of completion, the entire site shall be cleared of tools, equipment, rubbish, etc., all of which shall be removed from the site; and the entire project, including surrounding premises, shall be left in proper, clean condition ready for acceptance.

END OF SECTION 32 84 00

SECTION 32 90 00

LANDSCAPE PLANTING

PART 1 - GENERAL

1.1 SCOPE

- A. The scope of work outlined in this Section includes the following items of work, as detailed in these Contract Specifications, as shown on the Contract Drawings or reasonably implied therefrom and is not limited to the following items:
 - 1. 1-gallon Shrubs
 - 2. 24" Box Trees
 - 3. Cobble Mulch
 - 4. All related materials and accessories including but not limited to tree ties, tree staking, root barriers, inspection tube, and drain rock will not be measured separately for payment. All costs in connection therein will be incidental to and included with the applicable items of work.
 - 5. Soil Preparation for planting areas shall be included within Section 32 91 13, Landscape Soil Preparation.
 - 6. Landscape Maintenance for planting areas shall be included within Section 32 93 05, Landscape Maintenance.

1.2 RELATED REQUIREMENTS

- A. These Contract Specifications are part of the Contract Drawings and shall include all labor, materials, equipment, reasonable incidentals, and services necessary for the execution of the Work installed complete in place.
- B. Perform work in accordance with all applicable laws, codes, and regulations required by governing agencies and jurisdictions over such work.
- C. Refer to all other sections, determine the extent and character of related work, and coordinate all work to produce a complete, properly constructed product.

1.3 RELATED SECTIONS

- A. Division 1 General Requirements
- B. Section 013300 Contractor Submittals
- C. Division 31 Earthwork
- D. Section 32 84 00 Irrigation System
- E. Section 32 91 13 Landscape Soil Preparation

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1.4 REFERENCES

A. Federal Specifications and Standards:

1. AASHTO- American Association of State Highway and Transportation Officials

B. State of California Standards:

1. CALTrans Standard Specifications- Section 20-4 Highway Planting
2. Regulation for Nursery Stock Grades and Standards NIPM
3. State Water Efficient Landscape Ordinance AB 1881

C. Commercial Standards:

1. ANSI Z60.2- American Standard for Nursery Stock

1.5 DEFINITIONS

1. Backfill: the soil used to replace soil in an excavation.
2. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with the ball size not less than sizes indicated, diameter and depth recommended by ANSI Z60.2 for type and size of plant required; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball.
3. Bare-Root Stock: Plants with well-branched, fibrous root system developed by transplanting or root pruning, with soil or growing media removed, and with not less than minimum root spread per ANSI Z60.2 for type and size of plant required.
4. Caliper: Per ANSI Z60.2, Tree trunk diameter measured six inches above the root flare or container soil line up to four-inch caliper size interval. If the caliper measured at six inches is greater than four inches, the caliper shall be measured 12 inches above the root flare or container soil line.
5. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container with a well-established root system reaching sides of container and maintaining a firm ball when removed from container per ANSI Z60.2 for type and size of plant required.
6. Plant Height: Measurement of main body height, not measurement of top branch tip.
7. Plant Spread: Measurement of main body diameter, not measurement from branch tip to tip.
8. Weed: Any plant growing on the Project Site that is not specified in the Contract Drawings.

1.6 SUBMITTALS

- A. Submittals shall be furnished by the Contractor as required by this Section, and in accordance with Section 01 33 00 Contractor Submittals.
- B. All Submittal Data shall be furnished within 60 days of award of Contract. Contractor shall select and tag all planting material with 10 days of award of Contract. Contractor shall notify Landscape Architect within 14 days of award of Contract for plant material that is not available. Refer to Substitution requirements herein.

- C. The CONTRACTOR shall furnish the manufacturer's literature and product data:
 - 1. Tree Ties
 - 2. Tree Stakes
 - 3. Cobble Mulch
 - 4. Root Barrier
 - 5. Herbicide
- D. The CONTRACTOR shall furnish product samples:
 - 1. Cobble Mulch: 5-pound bag
- E. The CONTRACTOR shall furnish List of Plant Material for each species indicated in the Contract Drawings. The list shall be alphabetized and submitted with the following information:
 - 1. Project Name
 - 2. Botanical Name
 - 3. Common Name
 - 4. Form (Standard, Multi, etc.)
 - 5. Container Size
 - 6. Caliper Size
 - 7. Quantity Required (per Contract Drawings)
 - a. If the Plant List quantities conflict with the quantity of plant material symbols shown on the Plans, the Plan symbol quantities shall govern.
 - 8. Supplying Nursery Name
 - 9. Digital Color Photograph of plant material
 - a. Digital Photograph shall clearly indicate caliper size
 - b. Digital Photograph shall clearly indicate plant height and spread.
 - c. Digital Photograph shall include a person, tape measure, or other scaled reference.
 - d. Date of nursery photo
 - 10. The List of Plant Material shall not be construed as to acceptance of the Plant Material. All Plant Material shall be subject to review and approval upon delivery to the Project Site and/or Inspection.
- F. Submit to the OWNER'S REPRESENTATIVE certificates of inspection required by law for transportation of plant materials to the site. Clearance from the County Agricultural Commissioner, as required by law, shall be obtained before trees or other plant materials are delivered from outside the County.
- G. The Contractor shall, upon request of the OWNER'S REPRESENTATIVE, produce records, receipts, and/or delivery tickets to verify the ordering and delivery of specified quantities and types of plant material.
- H. Warranty Letter: Submit signed letter of warranty confirmation conditions as stated per this Section.

1.7 MATERIAL DELIVERY, STORAGE, AND HANDLING

- A. Plant Material Handling

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1. Handle container-grown Plant Material only by their containers.
2. Do not lift or handle container plants by tops, stems, or trunks.
3. Do not bind or handle plants with wire or rope.

B. Plant Material Delivery

1. Provide protective covering during delivery. Deliver plant material only after preparations for planting have been completed and install immediately. If planting is delayed more than 6 hours after delivery, set plant material in shade or as required to sustain healthy plant material.
2. Do not remove container-grown plant material stock from containers before time of planting installation.
3. At least one plant of each Plant Material species delivered to the Project Site shall have an identification tag from the supplying nursery showing botanical and common name of the plants as identified in the Contract Drawings.

C. Plant Material Storage Prior to Installation

1. Protect root balls from sun and drying winds.
2. Keep root balls moist and keep sun-sensitive plants shaded.
3. Protect from excessive heat, detrimental weather and anchor plants as required to prevent wind damage.
4. Protect from animals, vandalism, debris, construction operations, and conditions adversely affecting plant material.

- D. If damage occurs as a result of careless handling, delivery and storage, the OWNER'S REPRESENTATIVE shall have the authority to reject said material and require the Contractor to provide a replacement at the Contractor's expense.

1.8 SITE CONDITIONS

A. Prior to planting, the site shall be completed and in conformance with:

1. Landscape Soil Preparation 31 91 13.
2. Landscape Grading 32 91 19
3. Irrigation Systems 32 80 00

B. Installation of plant material shall be performed only during the time of day and during seasons when satisfactory results can be expected. Weather conditions shall not adversely affect the plant material

C. No work shall be performed in temperatures exceeding 90F degrees and below 40F degrees.

D. Prior to planting, review and clearly mark in the field horizontal and vertical locations of all utilities and structures.

1.9 INSPECTIONS

- A. The Contractor shall schedule all reviews by the OWNER'S REPRESENTATIVE of at least five (5) working days prior to the anticipated review.
- B. The Contractor shall request a review by the OWNER'S REPRESENTATIVE at the following points in the progress of the landscape planting work upon completion of the Submittals:
 - 1. Upon delivery of plant materials, the OWNER'S REPRESENTATIVE will review all plant material for conformance to the criteria listed herein. The plant material to be reviewed shall be set out in their containers or arranged in such a way as to allow access to all sides of each plant for inspection, and shall not be planted until the OWNER'S REPRESENTATIVE has approved their quality, health, and vigor.
 - 2. Notwithstanding routine inspections during the course of the work, the OWNER'S REPRESENTATIVE will, upon completion, review all plant material to confirm whether the plant material and accessories were installed in accordance with the Contract Drawings. If the plant materials are found to be acceptable, the plant establishment period will commence, as described in Section 329305, "Landscape and Maintenance." If unacceptable plant materials are identified, they shall be promptly removed, disposed of, and replaced by the Contractor at no additional cost to the Owner.
 - 3. A substantial review site visit shall be made to begin the maintenance period. At this time the Contractor shall have completed all phases of the Contract Drawings. Any discrepancies shall be noted at that time and the Contractor shall make appropriate corrections before the acceptance of the work.
 - 4. Should it be determined at the Final Inspection or Final Acceptance visit that any punchlist item is incomplete, any further review of the site will be terminated until all items are guaranteed, in writing, to be complete by the Contractor. The cost of additional site visits by the Landscape Architect to verify completion of work shall be paid for by the Contractor.
- C. The OWNER'S REPRESENTATIVE reserves the right to inspect plant material for size and condition of root systems, injuries and latent defects, disease or infestation, and any other unsatisfactory or defective condition. This inspection may occur at any time during the progress of the work, or during the plant establishment period.

1.10 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. All plant material shall comply with applicable laws, codes, and regulations required by authorities having governing jurisdiction over Work.
 - 2. Provide for inspections and permits required by federal, state, and local authorities in furnishing, transporting, and installation materials.
- B. Installer Qualifications:
 - 1. The Contractor shall have a valid C-27 (Landscaping Contractor) License and planting shall be performed by personnel familiar with planting procedures.

2. Installer shall maintain an experienced full-time supervisor on the Project site during the times the landscape installations under this Section are performed.
3. The Contractor Project Manager, Lead Foreman or Supervising personnel shall be fluent in English.

C. Plant Material Standards

1. All plant material quality and sizes shall conform to the Section 1.4 References stated herein. Use only nursery-grown stock that is free from fungi, insect pests and diseases.
2. All plant material shall be healthy, vigorous, and well-rooted plants grown in a container with well-established root system. The root ball shall be firm and rigid enough to hold its container shape.
3. Container stock shall be grown for 9 months minimum in containers in which it is delivered. Plant material that has just been upgraded in container size will be rejected.
4. All plant material shall be free of dead branches, dead branch tips, and root bound root ball.
5. Replace, at no cost to the Owner, Plant Material that is revealed during the course of the Contract as being untrue to the species indicated in the Contract Drawings and reviewed accordingly under this Section. Provide replacements equal to the size and quality to match the planted materials at the time of the untrue species is discovered.

1.11 WARRANTY

- A. Warranty Period: Warrant the plant material will be healthy and vigorous, flourishing condition of active growth one year from date of beginning of Maintenance Period.
- B. Replacements:
 - a. As soon as weather and seasonal conditions permit, replace at no additional costs to the Owner, untrue species, dead plants and plants not in a vigorous, thriving condition as determined by the Owner's Representative.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL SUBSTITUTIONS

- A. If the Contractor wishes to substitute plants for those indicated in the Contract Drawings, a list of the proposed substitutions shall be submitted to the OWNER'S REPRESENTATIVE at least 14 days before beginning work covered by this Section.
 1. Submit lists of nurseries contacted for specified plant material that are not attainable or meet the criteria stated herein. Furnish written, signed, and dated evidence from six nurseries of unavailable plant material.
 2. Accepted substitutes shall be similar in site suitability, container size, form, size, quality, and appearance to the specified plant material unless otherwise directed by the OWNER'S REPRESENTATIVE at no additional cost to the Owner.

2.2 TREES

- A. Tree Form

1. Trees shall be healthy and vigorous as indicated by foliar crown density, length of shoot growth, size and appearance of leaves, uniform distribution and appearance of roots
2. Trees shall have a symmetrical form with evenly distributed branches as typical for the species and cultivar.
3. All Trees shall be Standard Form unless otherwise specified in the Contract Drawings. Trees shall have a single, relatively straight central leader and tapered trunk, free of codominant stems and vigorous, upright branches that compete with the central leader. Standard Form trees shall not have multiple central leaders.
4. Unacceptable conditions: Damaged or crooked leaders, bark abrasions, sunscald, disfiguring knots, wounds, conks, cracking, bleeding, and cuts.
5. Branches shall be not larger than 2/3 (two-thirds) the diameter of the trunk, measured 1" above the branch.

B. Tree Trunk and Caliper

1. Trunk diameter and taper shall be sufficient so that the tree will remain vertical without the support of a nursery stake.
2. Trunk diameter at 6" (six inches) above the soil surface shall be within the caliper range shown for each container size below:

Container Class	Container Box Size Equivalent	Caliper (in.)
	5-Gallon	0.5 – 0.75
	15-Gallon	0.75 – 1.5
#25	24-inch box	1.5 – 2.5
#45	36-inch box	2.5 – 3.5
#95/100	48-inch box	3.5 – 4
	60-inch box	4 – 5

C. Tree Roots

1. The trunk, root collar (root crown) and large roots shall be free of circling and/or kinked roots. Soil removal near the root collar may be necessary in order to verify that circling and/or kinked roots are not present.
2. The tree shall be well rooted in the container. When the trunk is carefully lifted the trunk and root system shall move as one.
3. The top-most roots or root collar shall be within 1" (one inch) above or below the soil surface. The soil level should be within 2" (two inches) of the top of the container.
4. When the container is removed, the rootball shall remain firm and intact.
5. The rootball periphery should be free of large circling and bottom-matted roots. The acceptable diameter of circling peripheral roots depends on species and size of rootball. The maximum acceptable size should be indicated for the species (if necessary)
6. On grafted or budded trees, there shall be no suckers from the root stock.

D. Tree Rootball Moisture Status

1. At time of inspection and delivery, the rootball shall be moist throughout, and the tree crown shall show no signs of moisture stress, as indicated by wilt. Roots shall show no signs of being subjected to excess soil moisture conditions, as indicated by root discoloration, distortion, death, or foul odor.

2.3 SHRUBS, GROUNDCOVER, AND VINES

1. The minimum container size for shrubs shall be per Drawings as approved by OWNER'S REPRESENTATIVE.
2. Physical criteria:
 - a. Each shrub must stand upright without support.
 - b. All container shrubs shall be free of girdling roots, defined as those roots greater than 1/8-inch diameter circling the periphery of the root ball. The top of the root ball shall be free of "knees" (roots) protruding above the soil, and the bottom shall be free of matted roots.

2.4 COBBLE MULCH

- A. Unless otherwise specified on the Plans, all landscaped areas, excluding turf areas and plant pit areas, shall receive a layer of mulch placed atop the finish grade per plans and details. The type of cobble mulch specified on the Plans shall be used, and shall be placed per the details.

2.5 ROOT BARRIERS

1. Root barriers shall be fabricated from a high density and high impact plastic such as polyvinyl chloride (PVC), acrylonitrile-butadiene-styrene (ABS), polypropylene, or polyethylene. The system shall be consisting of a series of integrally-molded, self-interlocking panels.
2. Size: Each panel shall be a minimum of 24" in depth with a minimum of 0.08 inches thickness. Raised, 1/2"x3/4" vertical ribs at 6"-8" on-center shall be integrated running perpendicular to the panel installation orientation.
3. Manufacturers:
 - a. DeepRoot by Deep Root Partners or approved equal.

2.6 TREE STAKES

1. Stakes: lodgepole pine with a 6-inch-long conical point on the buried end, and a chamfered end on top to reduce splitting during installation. Stakes shall be pressure-treated in conformance with the American Wood Preserver Association's (APW) standards using copper naphthenate or similar material. Stakes shall be free of splits and knots.
 - a. Stakes shall be 2" dia. x10-feet long for 24-inch box and smaller
2. Rubber ties: flat rubber/ vinyl ties with UV inhibitors, meeting ASTM D412, width 1-inch and length as required per container size.
 - a. Ties shall be fastened to the stakes using galvanized roofing nails or galvanized wood screws.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. The following work must be complete prior to any landscape planting described in this Section:
 - 1. Underground utility work.
 - 2. Irrigation Systems per Section 32 80 00.
 - 3. Landscape Soil Preparation per Section 32 91 13.
 - 4. Hardsurfacing improvements including sidewalks, decorative paving, drainage swales and curb & gutter, lighting, fencing, etc.
- B. Examine site and verify that conditions are suitable to receive Work and that no defects or errors are present which would cause defective installation of products or cause latent defects in workmanship and function.
- C. Verification of Conditions:
 - 1. Grades: Verify grades are within 1" of the required finish grades
 - 2. Stones, weeds, debris: Verify all areas to receive plant material and sod are clear of stones, rock, and gravel larger than 1/2" diameter, weeds, debris and other deleterious material.

3.2 GENERAL PREPARATION

- A. Protection of Existing Conditions:
 - 1. Use adequate precautions to prevent damage to existing conditions to remain such as structures, utilities, plant material, and walks on or adjacent to the areas of Work.
 - 2. Use every possible precaution to prevent excessive compaction of planting area soil within or adjacent to the areas of Work.
 - 3. Submit written notification of damaged plants and structures to the Owner's Representative within 8 hours of said damage.
- B. Soil Moisture: Bring soil to optimum moisture content to sustain healthy plant material and avoid excessive compaction, clods, or dust.

3.3 SUBSURFACE OBSTRUCTIONS

- A. Utilities and Structures:
 - 1. Prior to excavating plant pits, confirm the location of all utilities and structures. Proper precautions shall be performed so as to not damage or disturb such structures during the course of the work.
 - 2. Refer to Landscape Preservation and Tree Pruning 02 56 39 for encountering existing trees to remain.
 - 3. Submit written notification to Owner's Representative of encountered obstructions within 8 hours of encounter. Plant adjustments or alternate locations shall be specified by the Owner's Representative prior to any adjustments.
 - 4. The Contractor shall remain responsible for the repair of any damaged utilities, structures or existing trees caused by negligence during planting operations.

- B. Irrigation: Flag all irrigation heads, enclosures, sleeves, conduit and other irrigation structures prior to planting.

3.4 PLANT MATERIAL LAYOUT

- A. Trees and Shrubs:
 - 1. Stake location of trees and shrubs where indicated on the Drawings. Scale locations where no dimensions are given.
 - 2. Identify and mark each tree location as required prior to installation.
 - 3. All locations shall be reviewed by the Owner's Representative prior to excavating plant pits.

3.5 INSTALLATION OF ROOT BARRIERS AND WATER BARRIERS

- 1. Excavate subgrade to the required depth of the panel and install per Drawings and manufacturer's recommendations.
- 2. Length of barriers shall extend horizontally per Drawings
- 3. Set top of barrier 1" below finish grade.

3.6 PLANTING OF TREES, SHRUBS, AND GROUND COVER

- A. The OWNER'S REPRESENTATIVE may make adjustments in the location of plants in order to maintain the minimum clearances shown on the Drawings, or to mitigate an unforeseen conflict. In no case shall the Contractor locate trees rootballs closer than 3-feet to hard surfacing or structures.
- B. At street intersections, driveways, and roadway curves, trees and shrubs shall not be planted in areas where the mature height of the plant will obstruct a driver's line-of-sight as defined by AASHTO Sight Distance criteria.
- C. Plant holes shall be dimensioned as shown on the Drawings, and shall be roughly cylindrical. The walls and bottoms of plant holes, including those drilled with a power auger shall be scarified.
- D. Plants shall be carefully removed from containers. All tin containers, other than knockout cans, shall be cut on two sides to facilitate removal of plants with as little disturbance as possible to the root ball. Cans shall be cut with can cutters or similar equipment. In no case shall cans be broken open with an axe, mattock, or other inappropriate tool.
- E. If plants do not have young feeder roots which are creamy in color and visible at the edge of the container, the Contractor shall loosen the roots by cutting in a few places to encourage new feeder root development around the perimeter of the rootball.
- F. Shrubs and trees shall have their dominant trunks set true and plumb in a vertical position. The top of the root ball shall be set approximately 3-inches above the finish grade of the planting area. The Contractor will be held responsible for any settling which occurs, and shall raise and replant any plant whose crown settles below the finish grade.
- G. Soil excavated from the plant pits, if suitable as topsoil as defined in Section 329113 "Landscape Soil Preparation," may be re-used for planting backfill. If unsuitable soil is encountered while

excavating the plant pits, such soil shall be removed from the site, and a sufficient amount of approved topsoil for installing the plant material shall be provided. If soil amendments and/or fertilizer is required per the landscape compatibility/horticultural report, then these materials shall be incorporated before backfill is placed.

- H. The Contractor shall place backfill in the plant hole after setting the plant in place and assuring that the root ball is plumb. After bringing the backfill level with the surrounding grade, the Contractor shall tamp the backfill around the root ball and water thoroughly. If the soil within the plant pit settles, then additional backfill shall be placed.
- I. Immediately after planting, remove the nursery stake (if any) and securely stake and tie all trees in accordance with the Drawings. Tree stake cardinal direction orientation shall be installed per Drawings. Install each tie in per plan with a loop large enough to allow for two years' growth.
 - 1. If the tree cannot support itself without a nursery stake, the Owner's Representative shall direct the Contractor to maintain the nursery stake in place. The nursery stake shall be removed prior to the end of Maintenance Period.
 - 2. The Owner's representative shall direct the Contractor, at the Owner's Representatives' discretion, to install additional bamboo splints to be secured at trees at no additional cost to the Owner.
- J. Water each tree or shrub thoroughly during planting and immediately after backfilling, and water again after basin has been constructed.
- K. Groundcover plants shall be planted in a triangular pattern or grid pattern at a spacing not to exceed that shown on the Drawings.
- L. Hand rake and remove all rocks over ¾" diameter from all finish planting surfaces.

3.7 POST PLANTING PROCEDURES

- A. After planting, the Contractor shall install any accessories shown on the Drawings, including but not limited to tree stakes, perforated pipe aerators, and/or tree grates. The following conditions apply to the installation of these accessories:
 - 1. **Tree stakes** shall be installed with their top ends set below the lowest scaffold branch of the tree.
- B. After the pre-emergent herbicide is applied, a 3-inch-thick layer of mulch shall be placed in all landscape areas. The mulch shall not be placed in the plant pits, or in contact with the parent trunk of any tree, shrub, or groundcover plant, unless otherwise specified. Following planting and initial watering, the CONTRACTOR shall water all plants and planted areas as necessary to keep the ground moist from the surface to well below the root systems. The foliage of trees, shrubs, or groundcover shall not be wetted when exposed to the hot sun.
- C. The Contractor shall protect all plants and planted areas against trespassing, theft, and damage during the plant establishment period. If any plants are injured, removed, or destroyed, they shall be treated or replaced as required by the OWNER'S REPRESENTATIVE at no cost to the District.

3.8 PRUNING

- A. Tree and Shrub: Pruning shall be performed as required to maintain a natural appearance, promote healthy and vigorous growth, and eliminate diseased or damaged growth.
- B. Trees shall be pruned to thin crown and avoid wind damage, eliminate narrow V-shaped branch forks that lack strength, eliminate sucker growth, and maintain a radial branching pattern to avoid crossing branches.
- C. Under no circumstances will stripping of lower branches ("raising-up") of young trees be permitted. Lower branches shall be retained in a "tipped back" or pinched condition with as much foliage as possible to promote caliper trunk growth (tapered trunk).
- D. Major pruning of trees to compensate for root loss or for aesthetic reasons shall be done only with approval of the Landscape Architect.
- E. Shrubs shall not be clipped into balled or boxed forms, unless such is required by the design and directed by the Landscape Architect.
- F. All pruning shall be made flush to lateral branches, buds, or trunk. "Stubbing" will not be permitted.
 - 1. Damage: All cuts over 1" resulting from pruning or wind breakage shall be inspected periodically for insect infestation or disease. Preferably, the central leader should not have been headed. However, in cases where the original leader has been removed, an upright branch at least $\frac{1}{2}$ (one-half) the diameter of the original leader just below the pruning point shall be present. Note: This section applies to single trunk trees grown with normal straightness, as typically used for street or landscape planting. This specification does not apply to plants that have been specifically cultured in the nursery or selected for unusual or unique shape, such as contorted forms, topiary forms, espalier forms, multi-stem, or clump forms.

3.9 CLEAN UP

- A. Keep all areas of work clean and neat at all times. Upon completion of planting, all cans, boxes, and other debris that is a part of the planting operation shall be removed from the site.
- B. All pavements shall be washed off, and site shall be left in an absolutely clean condition. All planting areas shall be cultivated and weed free before final inspection. Clean-up operations shall take place throughout the course of work so that walks and drives are clean at all time.

3.10 MAINTENANCE

- A. Maintenance of all plant material during the plant establishment period shall be performed by the Contractor in accordance with Section 32 93 05 Landscape Maintenance.

3.11 WARRANTY AND GUARANTEE

- A. Guarantee period shall be extended for a period of one year from the date of written acceptance and once a warranty walk has been completed with the Owner. The Contractor shall schedule

a one year walk with the Owner for review of all plant material. Failure to schedule a one year maintenance walk will not relieve the Contractor of the guarantee.

- B. All plants shall be guaranteed to be alive and healthy as determined by the Landscape Architect at the end of the guarantee period.
- C. Plant materials supplied by Owner shall be under similar warranty against defective workmanship during the planting operations. Plant material exhibiting conditions which are determined by the Landscape Architect as being unacceptable, due to workmanship by the Contractor, shall be replaced at no additional cost to the Owner.
- D. The Contractor shall replace, in accordance with the Drawings and Specifications throughout the guarantee period, any plants that die, or in opinion of the Landscape Architect, are in an unhealthy or unsightly condition, and or have lost their natural shape due to dead branches, excessive pruning, inadequate or improper maintenance, or any other causes due to the Contractor's negligence. The Contractor shall not be held responsible for acts of vandalism occurring after the beginning of the guarantee period.

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SECTION 32 9110

IMPORT SOIL

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. The scope of work outlined in this Section includes the following items of work, as detailed in these Contract Specifications, as shown on the Contract Drawings or reasonably implied therefrom and is not limited to the following items:
 - 1. Import Topsoil

1.2 RELATED REQUIREMENTS

- A. These Contract Specifications are part of the Contract Drawings and shall include all labor, materials, equipment, reasonable incidentals, and services necessary for the execution of the Work installed complete in place.
- B. Refer to all other sections, determine the extent and character of related work, and coordinate all work to produce a complete, properly constructed product.

1.3 RELATED SECTIONS

- A. Section 31 20 00 – Earthwork
- B. Section 32 84 00 – Irrigation System
- C. Section 32 90 00– Landscape Planting
- D. Geotechnical Report

1.4 ENVIRONMENTAL REQUIREMENT AND SOILS

- A. Friable refers to the structure and moisture content of soil. Friable soil shall be understood to mean soil that crumbles easily in the hand, does not stick to the hand, and does not form a ball when squeezed. Friable soil is not wet or muddy but is moist and damp. Obtain Owner's Representative's determination of soil condition acceptability prior to installation and working of soils.
- B. Soils in landscape areas that are worked when not friable shall be removed at the Contractor's expense and replaced with friable imported topsoil complying with the specifications for topsoil herein.

1.5 SUBMITTALS

- A. General: Refer to Section 01 33 00 – Submittal Procedures for submittal requirements and procedures.

- B. Materials data: Submit complete materials list of soils, amendments and non-proprietary items to be provided under this Section, including source, type, and quantity.
- C. Product data: Submit manufacturer's specifications, installation instructions, data sheets, and catalog cuts for all materials different from those specified. Submit (3) three manufacturer's catalog cuts for all specified materials listed herein. Requests for substitutions shall comply with Section 01 33 00 – Submittal Procedures.
- D. Submit the following items, and other items as may be required by the District's Representative and obtain written approval prior to delivery of materials to the site. Finished work shall match approved samples.
 - 1. Soil Testing Report(s) for import soil soil mix.
 - 2. Import Topsoil: 1/2 pound sample with soil analysis certificate.
- E. Certification
 - 1. Furnish the District's Representative with:
 - a. Duplicate, legible copies of certificates and/or invoices for all soil, and other materials, stating the grade, weight or quantity, source, and date of delivery.
 - b. Certification from soil supplier and an accredited laboratory that the import topsoil meets the requirements of these specifications.
- F. Import Topsoil: Provide material samples directly to testing laboratory. Recommended Testing Lab: Soil and Plant Laboratory, 352 Matthew Street, Santa Clara, CA 95052-0153 (408) 727-0330. Test results, including analysis and comment with any soil amendment recommendations to be specified using organic compost amendments, are to be sent directly to the District's Representative and Contractor by testing agency. Tests to be performed:
 - 1. Provide Project Specifications for import topsoil, soil amendments and fertilizer to Testing Laboratory along with samples of import topsoil. Include manufacturer's analysis of proposed amendment, dated within 6 months before delivery, or sample of organic amendment for Testing Laboratory's analysis if manufacturer's analysis is not available.
 - 2. Testing Laboratory shall certify that proposed import topsoil complies with Specifications and that it is compatible with site soil.
 - 3. Testing Laboratory shall propose changes in amendment program specified, if required, and shall certify that amendments proposed are suitable for use with site soil and import topsoil.
 - 4. Existing Topsoil: Provide Test AO5, for agricultural suitability, fertility, particle size analysis; including recommendations for soil amendment and backfilling, and fertilization during Maintenance Period. Number of samples to be as recommended by Testing Laboratory, minimum 8 samples. Samples to be collected as directed by the Testing Laboratory. As a minimum requirement samples are to be taken from soils 30 & 12 below finish grade at four (4) locations and delivered in separate sealed containers uniquely labeled identifying their location on the site. Samples must be collected in clean containers and must not be mixed.
 - a. Certify that soil is free of herbicides and lime, or other harmful substances. Perform monocot and dicot growth trials, Test M05. Number of samples as recommended by Testing Laboratory, minimum 4 trials.
 - 5. Import Topsoil: Submit test reports of representative sample prior to delivery and for every 100 cubic yards (or 75 cubic meters) delivered to the site. Test AO5, for agricultural suitability, fertility, particle size analysis; including recommendations for soil

amendments specified as organic amendments, and organic fertilization during Maintenance Period. Test results must be approved by the District's Representative prior to delivery of soil to the site. As a minimum requirement samples are to be taken 12 below finish grade and delivered in separated sealed containers uniquely labeled identifying their locations on the site. Samples must be collected in clean containers and must not be mixed.

6. All Other Fertilizers and Amendments: For standard products, submit manufacturer's analysis. For all other products, submit analysis by testing Laboratory. Specify amendments using organic amendments in accordance with Section 32 91 13 – Soil Preparation and amendment.
7. Submit test results for existing site soil, import soil and organic amendment together, as a package.
8. Compost: in accordance with Section 32 91 13 – Soil Preparation and amendment.

1.6 INSPECTIONS

- A. Right of inspection by the District's Representative for acceptance or rejection is reserved at the nurseries or on the Worksite at any time upon delivery or during the work.
- B. Contractor shall notify Owner's Representative in writing a minimum of seven days in advance of inspections.

1.7 PROJECT CONDITIONS

- A. Existing Conditions:
 1. General: Exercise caution against injury to, or defacement of, existing conditions. At Contractor's expense, repair or replace items damaged from installation operations.

1.8 SCHEDULING

- A. General: Prior to starting work, coordinate work with other trades to insure proper sequencing of construction.

1.9 QUALITY CONTROL AND ASSURANCE

- A. Perform all work to the highest standard of quality. All work is subject to the acceptance of the District's Representative. Work that is deemed unacceptable or defective by the District's Representative shall be removed by the Contractor immediately and replaced with work that is acceptable to the District's Representative.
- B. Contractor Quality Control:
 1. The Contractor's Quality Control Testing laboratory shall perform quality control through inspection, sampling and testing in accordance with the requirements of this Section 32 91 10, Import Soil.
 2. Testing shall be done by a reputable laboratory with experience in soil and plant disease diagnosis and analysis.
 3. Testing laboratory: Recognized laboratory for soil and plant disease analysis for ornamental horticulture, approved by the District's Representative. Acceptable laboratory: Lucchesi Consulting, 408-337-2575
- C. Reference standards: Comply with applicable provisions of the following:

1. California Department of Transportation (CalTrans), Standard Specifications, 2015 Edition.
- D. Installer Qualifications: Products shall be installed by a qualified installer whose work has resulted in successful installation of planting soils, planter drainage systems, underground piping, and other related materials.
1. Submit list of completed projects of similar scope and scale to the District's Representative, demonstrating capabilities and experience.
 2. The installer and field supervisor shall have successful experience with construction of similar scope in dense urban areas.
 3. Installer's Field Supervision: Installer is required to maintain an experienced full-time supervisor on Project site when work is in progress. This person shall be identified during the Pre-installation Conference, with appropriate contact information provided, as necessary. The same supervisor shall be utilized throughout the Project, unless a substitution is submitted to and approved in writing by the District's Representative.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All products shall be in conformance with the specifications listed below. Any changes to products to be used shall be approved, in writing, by the District's Representative prior to job site delivery.

2.2 IMPORT SOIL

- A. Acceptable import topsoil products:
1. Landscape blend topsoil mix by TMT
 2. Pleasanton trucking 70/30 blend, topsoil / organic compost
 3. Reeves topsoil 70/30 blend
- B. Import topsoils shall consist of fertile, friable soil of sandy, loamy character, and shall contain organic matter in amounts normal to the region. Imported topsoils shall be obtained from well-drained arable and fertile agricultural land and shall be free of rocks over one inch in diameter, free from refuse, plants or roots, clods, heavy or stiff clay, stones larger than one inch in size, coarse sand, noxious seeds, sticks, brush, litter, grasses, weeds, viable weed seeds, solvents, petroleum products, concrete, base rock, or other harmful substances, toxic waste, and other deleterious substances detrimental to the health of plants, animals, and humans. Imported topsoil shall be capable of sustaining healthy plant life.
- C. Do not obtain import topsoils from areas on which noxious and/or invasive weeds such as Common Fennel, Morning Glory, Sorrel, Bermuda Grass, Oxalis, Yellow Nutsedge, and the like are growing. Imported topsoil installed on the Worksite under this Contract that contains noxious and/or invasive weeds shall be removed from the Worksite and replaced with approved imported topsoil free of the weeds at the Contractor's expense and to the satisfaction of the District's Representative. The maintenance period will be extended at the Contractor's expense to ensure the weeds are removed.

- D. Import Topsoils shall have no inherent tendency towards compaction due to texture or soil structure or both as indicated in the soils analysis. Import Topsoils for planting areas shall have a percolation rate of 1 inch minimum to 3 inches maximum per hour.
- E. Remove all plant material, trash, debris, rock, gravel, contaminated soils, including, but not limited to, soil contaminated by concrete wash water, paint and cleaning chemicals, found in planting areas during the planting operations in accordance with these Construction Specifications. Install approved imported topsoil in planting beds as required to meet finish grades. All costs related to this work shall be at the Contractor's expense and to the satisfaction of the District's Representative. Pay for and be responsible for removal of contaminated soils to a site legally entitled to receive the materials.
- F. Import Topsoil will All import topsoil will be tested by the Contractor, and then approved by the District's Representative prior to placement or delivery to the site.
1. Agricultural Suitability:
 2. Salinity (ECe, mmhos/cm at 25°C): 0-4.0
 3. Sodium (SAR): 0-4.0
 4. Boron (PPM in Saturated Extract): 0-0.7
 5. pH of saturated paste: 5.5 -7.5
 6. Particle Size:

	<u>Minimum</u>	<u>Maximum</u>
Clay and Silt	20 percent	50 percent
Fine Sand	30 percent	40 percent
Coarse Sand	0 percent	15 percent
Gravel (Maximum Aggregate size 3/4)	0 percent	8 percent
Decomposed Organic Matter	0 percent	15 percent
 7. Should the samples not meet all of the standards given above, the Testing Laboratory will submit in the report what additives (in addition to the material already called for in these specifications) are to be incorporated to correct these problems. All topsoil will be brought into conformance with these specifications and the recommendations of the Testing Laboratory at no additional cost to the Contract.
- G. Subgrade: Subgrade has been established under Section 31 2000 – Earthwork.

PART 3 - EXECUTION

3.1 INSPECTIONS

- A. Prior to the work of this section, verify grades and inspect the work of other trades. Verify that all such work is complete to the point where the installation may properly commence.
- B. In the event of discrepancy, immediately notify the District's Representative in writing. Do not proceed with this installation until all discrepancies have been resolved or take responsibility of condition of site at no additional expense to the Contract.
- C. Excavate aggregate bases, deleterious materials, and all lime treated soils located within all planting areas.

- D. Plant pits to receive Import Topsoil shall be free of all gravels, debris and deleterious materials.

3.2 SOIL TESTING

- A. General: Prior to planting, provide a soil test and recommendations as stated elsewhere in these specifications.
- B. See Article 1.06, "Submittals," and Article 1.10, "Quality Control and Assurance" herein for testing experience.
- C. Soil analysis at a minimum should be done for soil chemistry including pH, fertility, agricultural suitability, particle size analysis, infiltration rate, and presence of calcareous conditions, unless otherwise noted in these specifications.
- D. Soil test results shall be presented in a report form, and should include recommendations for organic soil amendment, fertilization, drainage mitigation, and other necessary measures, for both planting and during the initial 90-day maintenance period.

3.3 SUBGRADE SOIL PREPARATION

- A. See Section 31 20 00 - Earthwork and Section 32 90 00 – Landscape Planting for Soil Preparation and Amendment

3.4 PLACEMENT AND ROUGH GRADING OF SOILS

- A. Prior to topsoil placement, thoroughly cross-rip all subgrade soil to a depth of six (6) inches, in both directions, prior to placing the import topsoil into all applicable planting areas to the contours as delineated on the plans.
- B. Plant pits or excavation areas which are contaminated with aggregates base, deleterious materials, or rocks over 2" in size shall be fully excavated to a depth free and clear of contaminated soils with a maximum depth of 24" in areas to receive planting and a depth of 48" in areas to receive trees. Limits of excavation for planting areas to receive shrub material shall not be limited. Limits of excavation for planting areas to receive trees shall be limited to 64 square feet.
- C. Secure review and acceptance of ripping depth and amendment prior to placement of topsoil or BSM by the District's Representative.
- D. Subgrade areas shall be water tested to ensure some degree of percolation prior to integrating the first lift of topsoil.
- E. Refer to Section 32 91 13 Landscape Soil Preparation for additional information regarding the incorporation of compost and amendments prior to placement of topsoil above prepared subgrade.
- F. Topsoil placement and rough grading requirements for planting areas shall be as follows:
 - 1. All planting areas: Shall contain or receive acceptable sandy loam import topsoil and be installed in 6 inch lifts and shall match the contours as delineated on the plans. Refer to Section 32 91 13 Landscape Soil Preparation for quantities of soil placement.
 - 2. Topsoil shall not be placed until all earthwork and utility operations are complete.

3. Topsoil shall be installed at one time for entire project area. No partial placements shall occur.
 4. Do not mechanically compact with heavy machinery or compactors during placement. Do not saturate soils with water. Soil in plantings areas shall be at approximately 84 percent minimum to 88 percent maximum relative compaction, sufficient to prevent soil settlement with changing friable soil conditions. Provide additional topsoil as needed to achieve the required finished grades and to fill settled areas.
 5. Maintain all slopes and gradients established during subgrade operations and shape landforms to satisfaction of the District's Representative.
- G. Moisture content of topsoil shall be such that the soil may be easily worked. Soil shall not be placed or worked if it is excessively wet resulting in high compaction, or dry resulting in excessive dust.
 - H. Extraneous material such as weeds, wood, and rocks over 2 in diameter shall be removed from the topsoil and disposed of off-site.
 - I. Tested and approved imported topsoil shall be installed continuously in all planting areas with no gaps.
 - J. Greater or shallower depths of topsoil shall be provided in accordance with the Contract Drawings, existing conditions, and constructed site conditions.
 - K. Provide adequate equipment to achieve consistent and uniform compaction of the planting soils. Use the smallest equipment that can reasonably perform the task of spreading and compaction.
 - L. Suspend installation operations if the planting soil becomes wet. Do not place planting soils on wet or frozen sub grade.
 - M. The Contractor shall protect the stability and integrity of the compacted aggregate base and subgrade material underneath and next to all paving, curbs and footings adjacent to the planting areas receiving topsoil.
 - N. The minimum final depths of Import Topsoil shall be 12" in lawn areas, 24" in shrub / groundcover areas, and 48" (10'x10' area) for all tree locations.
 - O. Final direction on the preparation, placement, methods of Import Soil shall be per the recommendations of the soils report.

3.5 INSTALLATION OF BIORETENTION SOIL

- A. After verification of positive drainage, ensure that the liner is installed adequately and fastened to the adjacent side walls and area drains, to the height of the Bioretention soil mix finished grade, and keyed properly into slopes, as described in the details, proceed to backfill Bioretention planter to finished grade with Bioretention soil mix and fine grade to achieve the flat bottom slope as defined in the plans and specifications.
- B. Side slopes shall be graded at the line and grade delineated on the plans in order to conform to the adjacent slopes, finished surfaces and finished grades.

- C. Install treatment soil in 8 inch lifts and compact as needed to prevent settling. Compaction may be done by “Boot Packing”.
- D. Install treatment material to the full depths as indicated on the plans and details.
- E. Test all soil per the protocols herein to ensure infiltration meets the minimum requirements per the most recent version of Santa Clara Countywide Clean Water Program’s C.3 Stormwater Technical Guidance Manual.
- F. Test must be done, and the infiltration rate confirmed and accepted by the District’s Representative, before planting can commence.
- G. Prior to planting, if recommended in the soils report, thoroughly irrigate the topsoil prior in order to readily flush excess potassium and sodium from the root zone to safely lower salinity.

3.6 WATER SETTLEMENT

- A. Water settlement intent is 2 fold – to settle material and areas that have been imported, soil conditioned and amended; and, to germinate any weeds, and eradicate those weed prior to shrub and tree planting and sod placement.
- B. All amended soils and imported topsoil shall be water settled for 30 days prior to planting.
- C. Weed control shall follow the requirements noted elsewhere in Section 32 9000 under Plant Establishment Period.
- D. At completion of soil conditioning and amendment, fertilizer installation, and topsoil placement on ripped and amended subgrade, smooth the soil surface, and water the topsoil in all landscaped areas, for a full 30 days to induce weed seed germination, but do not saturate the soil. Soil shall be moist without being saturated to a minimum depth of 24 inches and shall not be allowed to dry out at any time within the 30 day watering period. Finished grade of soil shall be checked after 15 days. Imported topsoil soil shall be added in the areas that settle below finished grades as required by the plans and specifications.
- E. Irrigation system shall be complete prior to the 30-day watering period and shall be used to water soils. In areas where irrigation is by bubbler or drip, the contractor may, at their expense and option, install a temporary irrigation system to keep the soils moist. The contractor shall be responsible for ensuring that the temporary irrigation system does not create a safety hazard. In lieu of the temporary system in bubbler zone areas, the contractor may roll amended soil to not less than 80 percent and not more than 85 percent relative compaction.
- F. After water settling, finish grade to a smooth, even surface conforming to established grades after settlement. Rake immediately prior to planting. See Fine Grading herein.
- G. The placement of shrubs or trees shall not begin until the water settlement period is complete and accepted by the District’s Representative.

3.7 FINE GRADING

- A. The District’s Representative shall view all rough grading of topsoil prior to the installation of compost, fine grading, planting, and mulching.

- B. Grade the finish surface of all planted areas to meet the grades shown on the Contract Drawings. Allow the finished grades to remain higher than the grades on the grading plan to anticipate settlement. Set grades at time of installation high enough relative to the type of planting soil and settlement anticipated so that the planting soil will be at the correct grades after settlement.
- C. Refer to Repair of Settled Planting Soil for checking and repairing settled soil.
- D. Adjust the finish grades to meet field conditions as directed.
- E. Provide for positive drainage from all areas toward the edges of planting beds. Adjust grades as directed to reflect actual constructed field condition elevations. Flow lines shall be not less than 2 percent. Notify the District's Representative in the event that conditions make it impossible to achieve positive drainage.
- F. Provide smooth transitions between slopes of different gradients and direction. Modify the grade so that the finish grade is 1 1/2 " below all paving surfaces, curbs, walls, headers or as directed by the Contract Drawings.
- G. Grade differential between the finished grade at the edge of paving and finished grade at the soil level shall not exceed 3".
- H. Fill all dips and remove any bumps in the overall plane of the slope. The tolerance for dips and bumps in shrub and ground cover planting areas shall be a 1 deviation from the plane in 10'.
- I. Finish grading shall be consistent and free from undulations, irregularities or depressions. Areas filled by floating loose soil into depressions shall be thoroughly water settled.
- J. Tops and toes of all slopes shall be rounded to produce a gradual and natural-appearing transition between relatively level areas and slopes.
- K. Contractor shall eliminate all erosion scars.
- L. Restore all grades after the installation of plants.
- M. Finish Preparation in Lawn Areas:
 - 1. Roll to compact amended soil to not more than 85% compaction. Finish grade shall be 1" below adjacent paving, curbs, or walls unless otherwise shown on drawings. Finish out to smooth, even surface conforming to established grades after settlement. Rake immediately prior to planting.
 - 2. If rain is likely between completion of soil preparation and planting, precautions shall be taken to prevent erosion of the soil.

3.8 FIELD QUALITY CONTROL

- A. Supervision: Qualified foreman must be continuously on site during work operations.
- B. The District reserves the right to sample and test all Import Soils during and after work to confirm placement of material is installed in accordance with the approved submittal.

3.9 PROTECTION DURING CONSTRUCTION

- A. The Contractor shall protect landscape work and materials from damage due to landscape operations, operations by other Contractors or trespassers. Maintain protection during installation until acceptance. Treat, repair or replace damaged planting soil installation work immediately.
- B. Till compacted planting soil and replace planting soil that has become contaminated as determined by the District's Representative. Planting soil shall be tilled or replaced by the Contractor at no expense to the Landscape Architect.

3.10 REPAIR OF SETTLED PLANTING SOIL

- A. One month prior to the expiration of the one year warranty period, inspect the site to determine if any grades have settled greater than 5 percent of the soil depth below the grades shown the Contract Drawings.
- B. Reset and restore any areas where the grades have settled beyond the elevations shown on the Contract Drawings.
- C. In shrub planting areas where the settlement is 3" or less, remove the mulch, top dress the area with the specified planting soil and re-mulch to a depth of 3". Adjust, repair or replace all irrigation boxes, lines, heads, valves and accessories as required.
- D. In all ground cover and sod areas and shrub planting areas where the settlement is greater than 3" remove the mulch and plants, add the specified planting soil, re plant and re mulch. Adjust all irrigation boxes, lines, heads, valves and accessories as required.

3.11 CLEAN-UP

- A. Perform cleanup during the installation of work and upon completion of the work. Maintain the site free of soil and sediment, free of trash and debris.
- B. During installation, keep pavements clean and work area in an orderly condition. All pavement shall be washed off, and site shall be left in clean condition. Clean up operations shall take place throughout the course of work so that walks and drives are clean at all times.
- C. Once installation is complete, remove from site all excess soil materials, debris, and equipment. Repair any damage to adjacent materials and surfaces resulting from installation of this work.
- D. Overspray: Installing contractor is responsible for washing or otherwise cleaning excess material off all area not intended to receive treatment.

END OF SECTION

SECTION 32 91 13

LANDSCAPE SOIL PREPARATION

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. The scope of work outlined in this Section includes the following items of work, as detailed in these Contract Specifications, as shown on the Contract Drawings or reasonably implied therefrom and is not limited to the following items:
 - 1. Soil Preparation
 - a. Soil Testing and Analysis, Soil Preparation, Soil Placement, Soil Protection

1.2 RELATED REQUIREMENTS

- A. These Contract Specifications are part of the Contract Drawings and shall include all labor, materials, equipment, reasonable incidentals, and services necessary for the execution of the Work installed complete in place.
- B. Refer to all other sections, determine the extent and character of related work, and coordinate all work to produce a complete, properly constructed product.

1.3 RELATED SECTIONS

- A. Division 1 General Requirements
- B. Section 01 57 00 Site Preparation
- C. Section 31 00 00 Earthwork
- D. Section 32 84 00 Irrigation
- E. Section 32 93 00 Landscape Planting
- F. Section 32 93 05 Landscape Maintenance

1.4 REFERENCES

- A. USDA – United States Department of Agriculture
 - 1. Soil Texture Triangle Classification
 - 2. Handbook No.60
- B. State of California Standards
 - 1. State Water Efficient Landscape Ordinance AB1881

1.5 DEFINITIONS

- A. Amendment: Organic material incorporated to imported or native soil to produce planting soil mix suitable for plant growth.
- B. Existing Soil or Native Soil: Mineral topsoil existing at the locations of proposed planting after the majority of construction within and around the planting site is completed and just prior to the start of work to prepare the planting area for soil modification to receive planting.
- C. Import Soil: Soil that is transported to the project site for use.
- D. Organic Fertilizer: A natural substance added to soil to increase its fertility.

- E. OMRI: Organic Materials Research Institute
- F. Scarify or rip. Till to a prescribed depth to loosen densely compacted soil.
- G. Stockpile Soil: Stripped, existing topsoil verified for suitability to be retained for planting.
- H. Topsoil: The uppermost layer of the soil profile

1.6 SUBMITTALS

- A. Submit complete materials list of soils, amendments, and non-proprietary items to be provided herein including source, type, and quantities.
- B. Test Reports:
 - 1. Soil Sample Location Map
 - 2. Laboratory Soil Test Report of Topsoil.
 - 3. Laboratory Test Report of Compost.
 - 4. Soil Amendment Verification
- C. Product Data- Furnish manufacturer's literature and specifications:
 - 1. Organic Amendments and Compost
 - 2. Organic and Mineral Fertilizers
 - 3. Organic Products Recommended by the Soil Report.
- D. Samples:
 - 1. Organic Compost 1-quart
- E. Purchase Documentation:
 - 1. Products, Amendment and Fertilizer Purchase and Delivery Invoices
- F. Qualifications:
 - 1. Installer Qualifications

1.7 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies:
 - 1. Meet applicable laws, codes, and regulations required by governing jurisdictions.
 - 2. Provide for inspections and permits required by federal, state, and local authorities in furnishing, transporting, and installing materials.
- B. Pre-Approved Soil Laboratory Testing Agency:
 - 1. Luchessi Plant & Soil Consulting
 - 2. Soil Control Lab
 - 3. Wallace Laboratory, Inc.
 - 4. Waypoint Analytical
 - 5. Soil Testing Laboratory with a minimum of three years of experience performing analyses for ornamental planting as described herein.
- C. Pre-Approved Compost Laboratory Testing Agency:
 - 1. Soil Control Lab
 - 2. US Composting Council
- D. Installer Qualifications
 - 1. Products shall be installed by a qualified installer whose work has resulted in successful installation of planting soils and other related materials.
 - 2. Submit list of successful projects completed in scope and scale.
 - 3. Installer shall maintain an experienced, full-time Supervisor on the project site when work is in progress. The supervisor shall be fluent in English.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Product Delivery: deliver products to the Site in the original, unopened containers bearing the supplier's guarantee analysis.
- B. Storage: Comply with all governing jurisdictions requirements. Fertilizer and lime shall not be stored with other landscape material. Herbicides and pesticides shall not be stored with other landscape material.
- C. Handling: Comply with all governing jurisdiction requirements.
- D. Weather: Do not mix, deliver, or place soils and amendments in frozen, wet, or muddy conditions.

1.9 SEQUENCING

- A. Soil Placement: When possible, avoid placing topsoil in areas subject to frequent construction vehicle and equipment traffic until traffic ceases to avoid excessive compaction.
- B. Areas receiving landscaping shall not have stockpiled materials placed on them for long periods of time to avoid compaction of landscaped areas
- C. Prior to commencement of Work, coordinate Work with other trades to ensure proper sequencing of construction.

PART 2 – PRODUCTS

2.1 TOPSOIL FOR PLANTING AREAS

- A. General: Topsoil shall be friable and have sufficient structure to give good tilth and aeration to the soil. When amended, fertilized, and conditioned, the soil shall be friable, be well drained, and be supportive of vigorous plant growth and contain low concentrations of inhibitory constituents. The soil must have sufficient moisture retention and nutrient retention to avoid excessive frequency of irrigation and frequency of fertilizer application.
- B. Deleterious Material: The soil shall be clean and free of excessive gravel, rock greater than 1-1/2", and physical impurities. It shall be free of any refuse, heavy or stiff clay, hard dirt clods, cut roots larger than 3/4-inch in diameter, litter, and other deleterious materials.
- C. Stripped Existing Topsoil: Soil from on-site topsoil stockpile may be appropriate for application as topsoil upon testing results and amendment recommendations.
 - 1. The following shall be achieved for allowable use of on-site topsoil:
 - a. Verify suitability of native surface soil stockpiled on site to produce topsoil meeting requirements and amend as necessary.
 - b. Provide erosion control measures to prevent erosion or displacement of stockpiled soil materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, structures, or paving.

D. Acceptable Fertility Range of Topsoil After Amendment

1. List of fertility range shall not be construed as to acceptance of final topsoil. Final acceptance of topsoil shall be provided by the Owner's Representative based on Soil Report Recommendations.

Parameter	Units	Minimum	Maximum
pH	pH Units	6.5	7.5
SAR	Ratio of nutrients		< 8 or <4
Soluble Salts/ Salinity	dS/m (mmhos/cm)		< 4
Organic Matter	% dry weight basis	3%	5%
Carbon/Nitrogen Ratio	Ratio dry weight basis		< 10:1
Salinity	% dry weight basis		< 4

2.2 SOIL SAMPLE LOCATION MAP AND SOIL SAMPLING

- A. The location of Soil Sample extractions performed shall be submitted on a PDF Plan to the Owner's Representative. The Owner's Representative shall determine Soil Sample Locations. Contractor shall receive written notification to proceed prior to commencement of work.
- B. Quantity of Soil Samples: A minimum of two Soil Samples shall be performed for areas of 50,000 square feet of topsoil or less. Additional Soil Samples required:
 1. Areas greater than 50,000 square feet shall have a minimum of one additional Soil Sample for every 25,000 square feet.
 2. As indicated on the Drawings or as determined by the Owner's Representative.
- C. Each Soil Sample shall be a composite of 4 or more sub-samples taken from the rooting depths of the proposed planting. Sample depths shall be taken per the Soil Lab's recommendations or at a minimum:
 1. Sod: 6"
 2. Shrubs, Groundcovers, and Vines: 18"
 3. Trees: 24" or to depth of rootball
 4. Additional samples shall be analyzed if different soil profiles are exposed during mass grading operations, at the discretion of the Owner's Representative.
 5. Samples shall not contain any debris, plants or deleterious material that do not represent the soil profile. Equipment to perform the work shall be clean.
 6. Homogeneously mix the sub-samples to establish the Soil Sample.

2.3 LABORATORY SOIL TEST REPORT OF TOPSOIL

- A. Report Analysis shall identify at a minimum the following topsoil characteristics:
 1. Soil Fertility
 2. pH
 3. USDA Soil Classification and Gradation/Particle Size.
 4. Percolation or Infiltration rate.
 5. Organic Matter % dry weight
 6. Nutrients: N, P, K, Ca, Mg, SO₄, Cu, Co, Zn, Mn, Fe, B, N, Na
 7. Salinity (ECe) and Sodium Absorption Ratio (SAR).
 8. Horticultural Suitability. Report shall consider and provide recommendations for plant material as indicated on the Drawings including but not limited to trees, shrubs, groundcovers, vines, and sod.
- B. Report Shall Recommend the following:

1. Organic compost and organic amendments with recommended characteristics
 2. Organic and OMRI Certified Fertilizer and Products recommended by the Report
 3. Application Rates
 4. Soil Maintenance Program
- C. Date: The Report shall be no more than three months old from installation date.
- D. Upon request by the Owner's Representative, Soil Lab shall review and provide acceptance of organic compost.

2.4 ORGANIC COMPOST

- A. Laboratory Test Report of Compost:
1. The Contractor shall submit Report Analysis identifying at minimum the following stated herein.
 2. The product and Report shall be certified through OMRI and US Composting Council Seal of Testing Assurance Program (STA).
 3. Date: The Report shall be no more than six months old from installation date.
- B. Organic Compost Sample:
1. Submit compost sample to Owner's Representative. Purchase and Placement of compost shall not commence until written approval from Owner's Representative is received by the Contractor.
- C. Organic Compost:
1. Compost shall have dark brown color, shall not exhibit a sour or putrid smell, shall not contain recognizable feedstock, grasses or leaves.
 2. Compost shall not be hot in temperature upon delivery or rewetting.
 3. The product shall contain no substances or material that is toxic or detrimental to plants and shall not resemble the feedstock from which it was derived.
 4. Compost composition shall conform to the table below. The composition table shall not be construed as to acceptance of product. Final acceptance of compost shall be provided by the Owner's Representative based on Soil Report Recommendations.

Parameter	Units	Acceptable Range
Stability	mg CO ₂ -C per g OM per day	<4
Maturity	% seed emergence and vigor	90%-100%
Moisture Content	% wet weight basis	40%-50%
Organic Matter Content	% dry weight basis	35%-65%
Particle Size	Screen Size to pass through	See Table Below
pH	pH units	6.0-8.0
Total Nitrogen	% dry weight basis	> 0.9%
Carbon-Nitrogen Ratio	Ratio dry weight basis	< 20:1
Soluble Salts (Ece)	dS/m (mmhos/cm) dry weight basis	< 5
Select Pathogens, Fecal Coliform, Salmonella	Pass/Fail	Pass. Meets or exceeds US EPA Class A standard, 40 CFR 503.32(a)
Physical Contaminants	% dry weight basis	< 0.1%
Trace and Heavy Metals	Pass/Fail	Pass. Meets or exceeds

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		US EPA Class A standard, 40 CFR 503.13

Compost Particle Size Gradation Table	
Sieve Size	Percent Passing
3/8"	100%
1/4"	At Least 95%
#8	At Least 60%
#16	20%-70%
#32	0%-30%

2.5 ORGANIC FERTILIZER

- A. All fertilizers shall be OMRI Certified, commercially processed, and shall conform to the requirements of the agricultural laws and regulations applicable in the State and governing jurisdictions.
- B. The Contractor shall adhere to the recommendations of the Soil Report and of the manufacturer when selecting the appropriate fertilizer.
- C. Unless otherwise specified, the fertilizer shall be a long-term, slow-release, water-insoluble, nitrogen-based organic product. Fertilizers prohibited by OMRI are prohibited in the project. Apply organic fertilizers as recommended by the Soil Report.

2.6 PREPARED TOPSOIL (BID PURPOSE ONLY)

- A. Preliminary topsoil mix to Establish Bid (actual quantities contingent on amendment program determined by Owner's Representative based on Soil Report)
 1. 6 cubic yards of organic amendment per 1,000 square feet
 2. 6 pounds of Blood Meal per 1,000 square feet
 3. 14 pounds of Feather Meal per 1,000 square feet
 4. 5 pounds of Steamed Bone Meal per 1,000 square feet
 5. 20 pounds of Gypsum per 1,000 square feet

PART 3 - EXECUTION

3.1 EXAMINATION

- A. General: Examine Site and verify that conditions are suitable to receive Work and that no defects or errors are present which would cause defective installation of products or cause latent defects in workmanship and function.
- B. Subgrade: Verify subgrade is at the correct elevation and slope.
- C. Underground Utilities and Structures: Verify that the locations of utilities, structures and other underground items have been clearly marked.
- D. Notification of Unsuitable Conditions: Before proceeding with Work, notify the Owner's Representative in writing of all unsuitable conditions. Do not proceed with installation until all discrepancies have been resolved or take responsibility for the condition of site at no additional expense to the Owner.

- E. Prior to placement of any amendment, all lime-treated areas shall be removed.

3.2 SOIL TESTING

- A. Soil Test to determine prepared topsoil:
 - 1. Furnish soil samples as described in Part 2.
 - 2. Send samples to approved soil testing laboratory and employ the laboratory to test and analyze the soil samples; and provide recommendations as described in Part 2.
- B. Prior to commencement of soil preparation work, submit to the Owner's Representative the laboratory's written soil test Report as described in Part 2.
- C. The Owner's Representative will determine the final amendment and maintenance programs based on the Soil Report recommendations.

3.3 PREPARATION

- A. Protection of existing conditions:
 - 1. Prevent damage to existing conditions to remain and avoid excessive compaction to planting area soil within or adjacent to areas of Work.
 - 2. Do not work when soil is wet. Soil is considered too wet when use of equipment results in formation of large clods or a smooth, polished surface.
 - 3. Provide barricades, fences or other barriers to protect existing conditions to remain from damage during construction.
 - 4. Do not store materials or equipment under the branches of existing plants or trees to remain.
 - 5. When tree roots encountered, all excavation must be by hand.
 - 6. Submit written notification of damaged plants and structures to the Owner's Representative immediately.
- B. Surface Preparation:
 - 1. Inspect soil surface for deleterious debris, as described in Part2, and legally dispose of materials off the Owner's property unless otherwise indicated.

3.4 TOPSOIL INSTALLATION

- A. Location and Depths: As indicated on the Drawings and Grading Plans
- B. Topsoil Placement:
 - 1. General: Furnish, apply and mix unamended soil with amendments and fertilizer on-site to produce required planting soil. Do not apply materials if existing soil or subgrade is frozen, muddy, or excessively wet.
 - 2. Place topsoil with equipment of appropriate size for area in a manner that avoids excessive compaction of the topsoil.
 - 3. Avoid repeatedly driving equipment in same tracks so that topsoil does not become excessively compacted.
 - 4. Allowances: Place topsoil to elevations that allow for settlement, addition of soil amendment, and finish grading tolerances.
 - 5. Soil shall be a minimum of 84 percent to a maximum of 88 percent relative compacted, sufficient to prevent soil settlement.

3.5 TOLERANCES

- A. Subgrades and finish grades shall be within a tolerance of one-tenth of a foot from the finish grade elevations shown on the Drawings, provided no drainage pockets or depressions result unless otherwise indicated.

- B. Finish grades shall be maximum 1-1/2 inches below adjacent top of paving unless otherwise indicated.

3.6 QUALITY CONTROL

- A. Soil Amendment Verification: Prior to Inspection, submit in writing all products have been installed and submit Purchase Documentation.

3.7 CLEAN UP AND PROTECTION

- B. Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:
 - 1. Storage of construction materials, debris, or excavated material
 - 2. Parking vehicles or equipment
 - 3. Vehicle traffic and foot traffic
 - 4. Erection of structures and excavation unless otherwise indicated.
- C. Protect areas adjacent to planting soil preparation and placement areas from contamination. Keep adjacent paving and construction clean and work area in an orderly condition.
- D. Remove surplus soil and waste including excess subsoil, unsuitable materials, trash and debris and legally dispose of them off the Owner's property unless otherwise indicated.

END OF SECTION

SECTION 32 93 05

LANDSCAPE AND IRRIGATION MAINTENANCE

PART 1 - GENERAL

1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment, and labor necessary during the plant establishment and maintenance period to complete all maintenance and related work on the installed landscaping and irrigation system as shown on the Drawings and as specified herein.
- B. Work Covered in the Section:
 - 1. Maintaining trees, shrubs, groundcover, and/or turf in a healthful, vigorous condition through proper and routine watering, pruning and care.
 - 2. Promoting proper establishment of trees, shrubs, groundcover, and turf through regular maintenance which may include correcting drainage or settlement problems, protecting root systems, weeding, straightening trees, pruning for safe traffic sight distance, and adjusting planting stakes and ties.
 - 3. Analyzing plant problems and applying correct types and rates of fertilizers, insecticides, fungicides, and herbicides in accordance with the regulations of the Alameda County Agricultural Commissioner.
 - 4. Providing professional pest control as outlined herein, including vector and rodent control.
 - 5. Maintaining, reporting, and correcting any non-functioning feature or inefficient operation of the automatic irrigation system or associated backflow prevention assemblies.
 - 6. Performing routine general maintenance and clean-up of the landscaped, open space, and/or park areas, including litter and trash removal, and repair of any damage resulting from vandalism, graffiti, or natural cause.
 - 7. Replacing and re-establishing any tree, shrub, groundcover plant, and/or turf area which is found to be in an unhealthful or dying condition, or which has been stolen or vandalized.
 - 8. Performing weed abatement or other required maintenance in open space or riparian areas.
 - 9. 120-day Maintenance Period

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 328000 Irrigation Systems
- B. Section 329113 Landscape Soil Preparation
- C. Section 329300 Landscape Planting
- D. Division 1 General Requirements

LANDSCAPE MAINTENANCE 32 93 05 - 1

1.3 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. Federal Specifications and Standards:

AASHTO

American Association of State
Highway and Transportation Officials

ANSI A300-1995

Tree, Shrub and other woody plant maintenance,
standard practice

B. State of California (Caltrans) Standards:

1. Standard Specifications Section 20-4 Highway Planting

C. Reference:

State of California Department of Pesticide Regulations

State of California Department of Industrial Relations Director's List of Hazardous

Substances Construction Safety Orders of the State of California

San Joaquin County Agricultural Commission Regulations

International Society of Arboriculture (ISA)

1.4 CONTRACTOR SUBMITTALS

A. At the time of landscape planting, the CONTRACTOR shall submit to the Owner's Representative the following:

1. Submit a schedule of proposed routine maintenance activities, including irrigation, fertilization, and plant maintenance during the plant establishment and maintenance periods.
2. Submit a weekly mowing and maintenance schedule to the Owner's Representative for each landscaped area. The Owner's Representative shall be notified prior to any changes in the weekly schedule.
3. Submit the names, phone numbers, and addresses of contact persons and alternates who shall be responsible for the care of the landscaping and irrigation system during the maintenance period, and who are capable of responding to the Owner's Representative concerns on short notice.
4. If the CONTRACTOR wishes to substitute different replacement plants for those indicated on the Drawings, a list of the proposed substitutions shall be submitted to the Owner's Representative at least thirty days prior to the proposed date of replacement. Substitutions are subject to the approval of the Owner's Representative.

B.

- C. The CONTRACTOR shall submit to the Owner's Representative a certificate of inspection, as required by law, for transportation of any replacement plant materials to the site. Clearance from the County Agricultural Commissioner, as required by law, shall be obtained before trees or plant materials are delivered from outside Alameda County.
- D. If the Owner's Representative determines that additional soil samples need to be analyzed to investigate a potential soil-related plant problem, the CONTRACTOR shall instruct a qualified soil testing laboratory to analyze additional samples in accordance with Section 329113 "Landscape Soil Preparation." The results and recommendations of the analysis, including the formulation and rate of application for agricultural chemicals, shall be submitted to the Owner's Representative for approval prior to application.

1.5 QUALITY ASSURANCE

- A. All of the landscaped areas will be reviewed on a regular basis by the Owner's Representative. A report may be prepared by the Owner's Representative after each inspection detailing the condition of the trees, shrubs, turf, groundcovers, and the general appearance of the site. If the Owner's Representative, during routine inspection, determines that the landscaped area has not been maintained according to these specifications, the Plant Establishment Period will stop, and a notice describing the deficiencies will be forwarded to the CONTRACTOR. The CONTRACTOR shall promptly correct all noted deficiencies. The Plant Establishment Period will not commence again until the Owner's Representative is satisfied that all deficiencies have been corrected. It is the CONTRACTOR'S responsibility to notify the Owner's Representative as soon as the CONTRACTOR encounters problems with plant materials and the general appearance of the site.

1.6 QUALITY CONTROL

- A. All maintenance work performed per this Section shall be performed by a CONTRACTOR licensed to perform landscape maintenance work who employs personnel familiar with irrigation and plant material maintenance. All work shall be performed under the supervision of a person who is knowledgeable about the maintenance requirements and standards, who can effectively communicate with the Owner's Representative.
- B. It shall be the CONTRACTOR'S responsibility to maintain all of the landscaped areas in a condition that is acceptable to the Owner's Representative, and in a manner which is consistent with accepted horticultural practice.
- C. All plants which die, which become damaged or diseased, or which are stolen shall be replaced by the CONTRACTOR at the CONTRACTOR'S expense. Replacements shall be new container plants of equivalent size and species as compared to the dead, damaged, or missing plants. The replacements shall be installed within fourteen calendar days from the date when the problem is discovered.
- D. The CONTRACTOR'S foreman and employees shall have sufficient knowledge of the project, of the Drawings, and of these specifications so that the work can be performed in a manner consistent with these specifications.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All materials shall be provided by the CONTRACTOR, including any necessary replacement plants or irrigation parts.

2.2 EQUIPMENT

- A. Any piece of maintenance equipment which utilizes an internal combustion engine shall be equipped with a muffler. The CONTRACTOR shall refrain from using noise-producing equipment between per the local governing jurisdiction.

2.3 FERTILIZER

- A. Agricultural chemicals shall bear the manufacturer's label and guaranteed analysis, and shall be subject to the Owner's Representative review before application.
- B. The CONTRACTOR shall furnish a complete fertilizer conforming to the landscape compatibility/horticultural report submitted for the project, as described in Section 329113 "Landscape Soil Preparation." Said fertilizer shall furnish the required percentages of macro- and micro-nutrients to keep turf, trees, shrubs, and other plant materials in a healthful and vigorous condition.

2.4 INSECTICIDES, FUNGICIDES, HERBICIDES AND RODENTICIDES

- A. Insecticides, fungicides, herbicides, and rodenticides shall be consistent with the recommendations included in the horticultural/landscape compatibility report prepared in accordance with Section 329113 "Landscape Soil Preparation" and shall follow the pesticide control advisor's written recommendations as well as meeting the requirements on the label, and shall be supplied in the original manufacturer's containers with complete application and emergency care instructions.
- B. A Material Safety Data Sheet (MSDS) shall accompany any substance which is listed on the State of California Department of Industrial Relations Director's List of Hazardous Substances. The MSDS for each substance shall be available at all times to any worker who uses the substance during the course of the work.

2.5 TREE STAKES, TREE TIES, AND OTHER ACCESSORIES

- A. Tree stakes, tree ties, and other accessories shall be consistent with Section 329000 "Landscape Planting," and shall be consistent with the materials existing at the site.

2.6 IRRIGATION COMPONENTS

- A. All irrigation components shall be consistent with Section 328000 "Irrigation Systems," and shall be consistent with the materials existing at the site.

PART 3 - EXECUTION

- A. PLANT ESTABLISHMENT AND MAINTENANCE PERIOD
- B. The CONTRACTOR shall provide maintenance of all landscaping areas and irrigation systems for a period not less than 120 calendar days. Said period will begin upon notification from the Owner's Representative that the plant establishment and maintenance period has formally commenced.
- C. In order for the plant establishment and maintenance period to commence, the Owner's Representative must be satisfied that all landscape and irrigation work has been performed in accordance with these Specifications, with the Drawings, and with the project plans. The Owner's Representative will confirm compliance during a walk-through arranged by the CONTRACTOR at the completion of the installation. All deficiencies noted by the Owner's Representative during the walk-through must be corrected before the plant establishment period can commence.
- D. After the plant establishment period begins, the CONTRACTOR shall perform all maintenance work described in this section or required by the Owner's Representative. If the Contractor fails to perform the maintenance work to the satisfaction of the Owner's Representative, the plant establishment and maintenance period may be suspended by the Owner's Representative until strict compliance is demonstrated.
- E. Approximately 30 calendar days before the plant establishment and maintenance period is scheduled to end, the CONTRACTOR shall request a courtesy walk-through with the Owner's Representative upon request. The Owner's Representative will again review the health of the plant materials, the operation of the irrigation system, and the condition of the site. During this walk-through, the CONTRACTOR shall prepare written notes of any deficiencies discovered by the Owner's Representative. A copy of these notes shall be provided to the Owner's Representative upon request. The CONTRACTOR shall then promptly correct all noted deficiencies.
- F. On or about the date when the plant establishment and maintenance period is scheduled to end, the CONTRACTOR shall request a final walk-through with the Owner's Representative upon request. All deficiencies noted during the courtesy walk-through must be resolved to the satisfaction of the Owner's Representative before the final walk-through will be scheduled. If, during the final walk-through, new deficiencies are discovered, the Owner's Representative will prepare a final *Punch List*. Said list will then be forwarded to the CONTRACTOR, and will serve as the final list of deficiencies which must be resolved prior to acceptance.
- G. Since ornamental landscapes require an intensive program of regular maintenance, the CONTRACTOR'S failure to promptly correct one deficiency may result in other more significant and costly deficiencies (e.g. failure to repair a broken irrigation head may result in the loss of plant material). As such, the CONTRACTOR will remain responsible for the condition of the entire landscaped area until final acceptance is granted by the Owner's Representative. The Owner's Representative reserves the right to amend the *Punch List* and to extend the plant

establishment and maintenance period if the CONTRACTOR fails to promptly correct noted deficiencies.

- H. Upon written acceptance of the landscaped area for permanent maintenance by the Owner's Representative, the CONTRACTOR shall notify all utility companies supplying services to the site that the maintenance obligation has been assumed by the Owner.. It shall be the CONTRACTOR'S responsibility to initiate the transfer of billing accounts to the Owner's name after acceptance has been granted.

3.2 GENERAL MAINTENANCE PROCEDURES

- A. **General:** The CONTRACTOR shall provide, until final acceptance of the project, regular maintenance of all plants and planted areas in a healthful, thriving condition in accordance with accepted horticultural practices and ISA Pruning standards. Maintenance operations shall include watering, weeding, replanting, fertilizing, clearing debris, and any other operations necessary to maintain plant health and vigor, including treatment for fungus, diseases, insect pests, weeds, or rodents.
- B. **Protection:** The CONTRACTOR shall protect all plants and other landscaping improvements including existing landscaping against trespass, vandalism, and theft. Said protection shall be provided from the time the improvements are installed until the conclusion of the plant establishment and maintenance period. If any plants or other improvements are damaged, vandalized, or stolen, they shall be repaired or replaced as required by the Owner's Representative. Any necessary temporary safeguards or barriers shall be provided by the CONTRACTOR, and removed when no longer needed.
- C. **Pest Control:**
 - 1. The CONTRACTOR shall act as or coordinate with a licensed specialist to identify any pest management problems which may arise in the landscaped area. The specialist shall be familiar with various integrated pest management (IPM) programs. The CONTRACTOR may be required to develop an IPM plan to effectively eradicate any diseases or pest problems which develop during the plant establishment and maintenance period. The development and execution of the IPM program shall be the responsibility of the CONTRACTOR.
 - 2. The noxious weed, disease, and pest control methods may include any combination of the following:
 - a. Pre-emergent herbicide application
 - b. Post-emergent herbicide application
 - c. Mechanical cultivation and disposal
 - d. Weeding or mowing
 - e. Chemical growth regulators
 - f. Tree injection
 - g. Aquatic herbicide application
 - h. Trap and release techniques
 - i. Poison baiting
 - j. Debris or food source removal
 - k. Water jetting.
 - l. Insecticide, fungicide, rodenticide or other

- m. Pesticide application
 - n. Verdant and/or dormant spraying
 - o. Repeated control methods as necessary
 - p. The use of insect predators
 - q. Any other procedure recommended by the arborist, pest control advisor, or required by the Owner's Representative
 - 3. If requested by the Owner's Representative, the CONTRACTOR shall provide a copy of any spray report showing details of areas, times, chemicals and rates of application.
 - 4. Under no circumstances shall agricultural chemicals be allowed to contaminate any open waterways or storm drain networks. The application rates shall not exceed the manufacturer's recommendations or be applied in a manner inconsistent with the label or pest control advisor's written recommendations, and any spilled material shall be cleaned-up immediately and completely.
- D. Manual weeding shall be performed in conjunction with chemical weed control methods. The CONTRACTOR shall remove both the root system of the weed, and the exposed growth. A trowel or small hand shovel shall be used to loosen the soil prior to removal of each weed. The CONTRACTOR shall exercise caution when working in areas with buried drip irrigation systems to prevent the drip tubing from becoming damaged or severed. The presence of weeds that have gone into flower and seed will be grounds for suspension of the plant establishment and maintenance period until Owner's Representative is assured that the weed problem has been brought under control.
- E. Pruning shall be performed in strict accordance with ISA standards.

3.3 TREE MAINTENANCE

- A. A complete and balanced pruning program shall be provided for all trees. Trees shall be pruned to accentuate their natural form by properly selecting and developing permanent scaffold branches that are smaller in diameter than the trunk or branch on which they are growing. All dead, damaged, diseased, crossing, rubbing, or otherwise unhealthy plant parts shall be removed. Tree crowns shall be thinned if they become too heavy to be self-supporting, or if they are susceptible to wind or storm damage. The CONTRACTOR shall maintain a 12-inch minimum radius clearance measured from the face of the tree trunk.
- B. All trees shall be inspected by the CONTRACTOR after every wind or rain storm to determine if any damage has occurred. Broken branches shall be pruned, and stakes shall be straightened and adjusted as necessary so that the tree trunk is in a plumb, vertical position.
- C. Except for Birches, Alders and Maple trees, broad-leaf evergreen trees may be pruned and thinned throughout the year, whereas deciduous trees shall be pruned only if required to correct vandalism damage, wind damage, or disease. Prune and shape all trees to avoid future problems of height, spread or wind damage and so that the natural appearance will be enhanced.
- D. If a conifer tree loses its terminal leader, a new leader shall be pruned and trained. Under no circumstances shall any conifer tree be topped or pruned into an unnatural shape.
- E. Recognized horticultural practices shall be followed when pruning trees, including the use of appropriate tools. Plant parts shall be cut flush to the branch collar. Birches, alders, maples and

pinus shall not be pruned until after June 1st. Any debris generated during pruning operations shall be collected and disposed of by the CONTRACTOR.

- F. All cuts shall be made with a clean, even cut at the branch collar ring adjacent to the nearest bud or other branch. On large limbs, initial cuts shall be made using the three-cut system outwards from final cut to avoid excessive weight and bark tearing. No wound sealers shall be used unless approved by the Owner's Representative.
- G. The CONTRACTOR shall trim any "suckers" and water shoots which appear around the base of the parent trunk, and shall treat the cuts with a growth regulator/sealer as specified in PART 2 - PRODUCTS of Section 311300.
- H. Trees planted in the median island which are within 300-feet of a street intersection shall be pruned to prevent line-of-sight obstructions for vehicle traffic. The CONTRACTOR shall provide a minimum of 8-feet of vertical clear space measured from the top of curb to the lowest scaffold branch. In addition, the CONTRACTOR shall prune trees to maintain the sight clearance for all traffic and guide directional signs.
- I. Trees planted adjacent to walking surfaces shall be pruned to raise the lower branches above head height wherever the branches overhang the walking surface.
- J. Trees planted beneath overhead utility wires shall be pruned as necessary to prevent the branches from interfering with the suspended wires.
- K. The CONTRACTOR shall spray trees for diseases and insects if these problems become apparent, or if directed by the Owner's Representative.
- L. Tree stakes shall be maintained in a vertical position, and in good repair. Ties shall be checked periodically, and all worn or broken ties shall be replaced. If ties become tight or begin to interfere with proper tree growth, they shall be adjusted.
- M. The CONTRACTOR may remove staking which is no longer needed by trees with sufficient trunk caliper, upon approval of the Owner's Representative.

3.4 SHRUB MAINTENANCE

- A. The CONTRACTOR shall provide a complete and horticulturally correct shrub pruning program. A combination of shearing and selective hand pruning shall be performed. When shrubs are sheared, the CONTRACTOR shall also perform selective hand pruning to regenerate new branches, eliminate dense plant crowns, and to encourage the development of balanced foliage. When planted in masses, shrubs shall be allowed to grow together to fill the bed. Shearing shall only be done to maintain a neat, uniform appearance and to keep shrubs growing within their intended space.
- B. Shrubs within median islands or at intersection corners shall be pruned to prevent driver sight obstructions within the safe sight distance zone defined by AASHTO Sight Distance criteria. In general, shrubs shall be allowed to grow no higher than 30-inches above the top of curb within the area designated as the sight distance zone, although a lesser height may be required at certain locations.

- C. The foliage of shrubs planted along sidewalks, curbs, or other hardsurfaced areas shall be pruned back to maintain a 6-inch minimum clearance measured from the edge of the hardsurfacing. In median islands, it is especially important to keep the maintenance band area clear of overgrown foliage to provide safe refuge for maintenance workers from approaching vehicles.
- D. The foliage of shrubs planted adjacent to fences, buildings, walls, pedestal-type utility enclosures, or other vertical elements shall be periodically pruned-back such that the branches do not rub on or become entangled in the feature, except that a clear path to the feature shall be provided if access is necessary (e.g. a path to the door of a pedestal-type utility enclosure shall be maintained at all times).
- E. Shearing of hedge shrubs shall be performed in an even, uniform manner. Care shall be exercised so that gaps or holes do not develop as a result of poor shearing practices. Large heavy stems shall be selectively removed to encourage foliar growth inside the branch network.
- F. All trimmings generated during pruning operations shall be disposed of by the CONTRACTOR on the day of pruning.

3.5 GROUNDCOVER AND PERENNIAL MAINTENANCE

- A. All groundcover plantings shall be trimmed back from hardsurfacing materials, header boards, shrubs, trees and utility enclosures. All groundcover areas shall be edged using a power edger or other appropriate tool. Upon completion of the edging operation, the groundcover edge shall be set back approximately 1/2 inch from the edge of the hardsurfacing. All clippings or displaced soil shall be removed and/or swept into the groundcover area when edging is complete.
- B. The CONTRACTOR shall provide regular maintenance of all seasonal and perennial flower beds. This includes the removal of all spent blooms and dead plant material. Beds shall also be regularly weeded. At the end of each season, perennials shall be cut back to ground level after the foliage has died back. All annual flowers shall be removed once damaged by frost. The flower beds shall then be raked level, and all debris removed and disposed of by the CONTRACTOR. All annual flower beds shall be replanted in the Spring, if required by the Owner's Representative.

3.6 GENERAL MAINTENANCE AND CLEAN UP

- A. Cleanup shall be performed by the CONTRACTOR, and shall include the pick-up of scattered trash, the emptying of all refuse containers, and the removal of all leaves, branches, excess soil, empty plant containers, grass cuttings, weeds, or any other debris that may accumulate at the site.
- B. The CONTRACTOR shall promptly remove graffiti from any surface within the landscaped area. Said surfaces may include sound walls, controller cabinets, monument signs, benches, play equipment, light fixtures, etc. The CONTRACTOR shall notify the Livermore Police Department if a graffiti problem persists.
- C. Any playground or park site which has play equipment, benches, or other recreational features shall be inspected on a weekly basis by the CONTRACTOR. If damage or wear is discovered, the CONTRACTOR shall immediately repair said feature in accordance with the manufacturer's

recommendations and Federal guidelines, using parts supplied by or approved by the manufacturer.

- D. All planted areas, including lawns, groundcover areas, areas around shrubs and trees, adjacent paved areas, areas next to buildings, next to buildings, fences, benches, sidewalks, curbs, and gutters shall be kept free from weeds, litter, rocks, glass, and debris.
- E. All cracks or joints in sidewalks, curbs, street gutters, and other hardsurfaced areas shall be treated with a herbicide if weeds begin to propagate in the cracks.
- F. Bark, sand, and gravel areas shall be raked as required to keep them level and free of foreign material. The sand within a play equipment area shall be raked level not less than once a week.
- G. Sidewalks and other hardsurfaced areas shall be kept swept free of any sediment, sand, gravel, or mulch that might be washed onto such areas from adjacent landscape slopes.

3.7 GRADING MAINTENANCE

- A. If the root ball of any plant settles below the level indicated on the drawings, said plant shall be raised and replanted to the proper elevation.
- B. Depressions shall be filled with top soil as necessary to achieve a uniform surface.
- C. Swales shall be repaired, regraded, replanted, or otherwise improved as necessary to provide adequate drainage of all areas.
- D. Gully or rill erosion scars shall be regraded or repaired as required by the Owner's Representative. Any displaced mulch or soil shall be replaced as necessary. The Owner's Representative may require that the area be regraded to eliminate a concentrated flow condition resulting in storm run-off scour.
- E. The watering basin surrounding each plant pit shall be repaired as necessary to assure proper irrigation of each plant. Water basins in the turf area will not be permitted.

3.8 WEED ABATEMENT

- A. The CONTRACTOR shall be responsible for abating weeds and other naturally occurring vegetation in open space or riparian areas within the project site. The work shall be performed as required by the Fire Marshal of the Livermore-Pleasanton Fire Department or the Owner's Representative, and in accordance with this section. The weed abatement operation shall be performed in a manner which eliminates the fire hazard associated with dry weeds, and which reduces any visual blight.
- B. The weed abatement operation may be performed with any of the following equipment according to the following criteria. The CONTRACTOR shall use care when performing work adjacent to existing trees to avoid damaging any surface roots.
 - 1. A rotary mower can be used provided the blade removes the vegetation to within 2 inches of the finish grade. The mower must capture all clippings so they can be removed from the site.

2. A discing attachment towed behind a tractor may be used provided the resulting surface area has at least 50% exposed soil when the discing is complete. No weeds shall remain in a vertical position after the discing wheels pass.
 3. A rototiller may be used provided the resulting surface area has at least 50% exposed soil when the operation is complete. No weeds shall remain in a vertical position after the rototiller passes.
 4. Pesticide application with a dissicant is allowable with the approval of the Owner's Representative.
- C. The CONTRACTOR shall carry a 4A:40BC or larger fire extinguisher on the tractor, or within convenient reach, at all times during the weed abatement operation. The CONTRACTOR shall recognize that dry grasses pose a significant fire hazard from late Spring to early Winter, and should therefore use all necessary precautions to assure that no fires are ignited during the weed abatement operation.
- D. The CONTRACTOR shall remove from the site all miscellaneous debris or rubbish discovered during the weed abatement operation.

END OF SECTION

PRECAST CONCRETE UTILITY BOXES AND INLETS

1.1 RELATED DOCUMENTS

- ## 1.2 THE REQUIREMENT

- ### 1.3 RELATED WORK SPECIFIED ELSEWHERE

- ## 1.4 CONTRACTOR SUBMITTALS

- ## PART 2 – PRODUCTS

2.1 MANUFACTURED ITEMS

- ## PRECAST CONCRETE UTILITY BOXES AND INLETS 33 05 16-1

3. Utility boxes shall have covers that are designed by the manufacturer for HS-20 traffic loading in streets and driveways subject to vehicular traffic or as otherwise specified. The covers shall be embossed "Water" or "Sanitary Sewer" as appropriate.
4. Utility boxes shall be manufactured by Christy or approved equal. The following table lists standard model numbers for Christy:

Service	Christy Box/lid	
a. Valve Boxes, Water Line, Angle Marker Boxes		G08T/G05CT
b. Sanitary Sewer Clean Out Boxes		G05T/G05CT
5. Utility boxes shall have bolt or screw down lids or covers.

B. Storm Drain Inlets:

1. Inlet frames and grates for storm drain inlets shall be bolt-able to frame, ADA and bicycle approved. Frame and grate shall be of the same manufacturer as the pre-cast inlet and shall be hot-dip galvanized after fabrication.
2. Precast storm drain inlets shall be constructed using Type II or Type V cement.
3. Precast storm drain inlets frame and grate shall be in conformance with:
 - A. Frames and grates for storm water inlets shall be heavy duty (HS-20 Traffic Loading) in vehicle traffic areas and light duty for non-traffic areas. Grate shall be bolt-able to frame, ADA-approved, designed for bicycle use and hot-dip galvanized after fabrication. Frame and grate or cover plate shall be of the same manufacturer as the pre-cast inlet and shall be hot-dip galvanized after fabrication.
4. All inlets shall have a "Drains to Creek" metal marker applied to the top of the inlet.

2.2 PREFORMED JOINT SEALANT

- A. On vaults the joint sealing compound shall be a preformed, cold-applied, ready to use plastic joint sealing compound.

2.3 NON-SHRINK GROUT

- A. Non-shrink grout shall be as specified in the Section 31 01 30, "Grout."

PART 3 – EXECUTION

3.1 MANUFACTURED ITEMS

- A. Utility Boxes, Manholes and Storm Drain Inlets shall be installed in accordance with the manufacturer's printed recommendations, and as shown on the Drawings.
- B. Connections to Utility boxes and field storm water inlets shall be made by installing pipe sections into the structure wall using non-shrink grout as specified in Section 31 01 30, "Grout." A water stop shall also be installed on all plastic pipes.

PRECAST CONCRETE UTILITY BOXES AND INLETS 33 05 16- 2

SECTION 33 41 00

STORM DRAINAGE

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawing and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment and labor to perform and complete pipeline flushing and testing, complete, for storm drain system piping, as specified herein.
- B. The CONTRACTOR shall be responsible for conveying test water from the source to the point of usage and also for proper disposal, as required, of water used in the testing operations. All costs associated with supply and disposal of test water shall be at the CONTRACTOR'S expense.
- C. Structural (Deflection) testing requirements for storm drains are as specified in the various appropriate piping sections.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 23 33 Trench Excavation and Backfill
- B. Division 1 General Requirements.

1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. State of California (Caltrans) Standards:
 - 1. Standard Specifications 2025:
Section 64 Plastic Pipe.
- B. Commercial Standards:

ASTM D3034 - Standard Test Method – PVC SDR26 pipe and fittings for sizes 4-inch through 12-inch.

1.5 CONTRACTOR SUBMITTALS

- A. A testing schedule, including proposed plans for conveyance, control and disposal of test water shall be submitted in writing to the DISTRICT for review a minimum of 72 hours before testing is to start.
- B. The CONTRACTOR shall submit laboratory calibration certificates for all gages to the DISTRICT for review along with the testing schedule.

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PART 2 – PRODUCTS

2.1 MATERIAL REQUIREMENTS

- A. Solid wall PVC pipe and fittings for sizes 4-inch through 12-inch shall meet the requirements of ASTM D3034, SDR 26, cell classification 12454-B or 12454-C.
- B. Bell and spigot joints shall meet the requirements of ASTM D3212 with integral bell push-on type elastomeric gasket joints.
- C. Perforated PVC subdrain pipe shall be SDR 35.
- D. Inlets shall be per Section 33 05 16 “Precast Concrete Utility Boxes and Inlets” of these specifications.
- E. Tracer wire shall be A.W.G. No. 12 solid copper wire with U.S.E. rated insulation, color Green.

PART 3 – EXECUTION

3.1 GENERAL

- A. Trench excavation and backfill shall be per Section 31 23 33 “Trench Excavation and Backfill” of these specifications. Trench excavation shall consist of all excavation involved in the grading and construction of the storm drain line as shown on the plans. The Contractor shall perform all excavation of every description and of whatever substances encountered, to depths indicated on the Improvement Plans or as otherwise specified or required. Excavated materials shall be removed from the site. The Contractor shall not dump excavated material on any private or public property without the permission of the owner thereof.
- B. The trench bottom shall be of even grade such that it will provide uniform bearing and support for each section of pipe and shall be free of clods, rocks, and excess spoil material.
- C. Each length of pipe shall be laid on compacted, approved bedding material as shown on the detail on the plans and shall have full bearing for its entire length between bell holes excavated in said bedding material to allow for unobstructed assembly of all joints. Adjustments of pipe to line and grade shall be made by scraping away or filling in and tamping approved material under the body of the pipe.
- D. Installation of PVC pipe shall meet the requirements of ASTM D2321. All field cut PVC pipe shall be beveled and lubricated before joining. Pipe joints shall be made only with the couplings and rubber rings furnished with the pipe and aligned and constructed in the trench in accordance with the manufacturer’s instruction manual.
- E. Storm drain pipe laying shall proceed upgrade with the spigot ends of bell and spigot pipe pointing in the direction of flow. Tracer wire shall be taped to the top of the pipe prior to backfilling and extended to the surface at all structures.
- F. Storm drain inlets shall be installed to depths as otherwise specified or required. Connections to storm water inlets shall be made by installing pipe sections into the structure wall using non-shrink grout. A water stop shall also be installed on all plastic pipes.
- G. The trench drain shall be installed per the manufacturer’s recommendations.

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3.2 TESTING OF PIPING SYSTEMS

- A. All lines shall be cleaned and flushed prior to testing using a "Wayne Ball," high pressure sewer "jets," or other methods acceptable to the DISTRICT.
- B. CONTRACTOR will be solely responsible for the proper disposal of all water used in the flushing and testing process. Disposal of all water shall be in accordance with appropriate regulatory agency requirements.
- C. All flushing and testing operations shall be performed in the presence of the DISTRICT.
- D. Deflection: All PVC non-pressure pipe shall be tested for deflection obstructions and protruding laterals by passing a "mandrel" from the nearest downstream structure to the nearest upstream structure. The "deflection test" procedure shall be acceptable to the DISTRICT. The 'mandrel' diameter shall be 95 percent of the pipe inside diameter.

3.3 VIDEO INSPECTION OF NEW STORM DRAINS

- A. Video Inspection: All storm drain systems 6" and larger shall be video inspected. The CONTRACTOR shall hire an approved video testing company to perform the video inspections. The CONTRACTOR shall repair all problems revealed by the video inspection. The CONTRACTOR shall coordinate with the DISTRICT to arrange for a compatible time to conduct the inspection.
- B. The Contractor shall submit the storm drainage compact disc (CD), or DVD to the DISTRICT for review. Video shall become the property of the DISTRICT.

END OF SECTION