VISTA UNIFIED SCHOOL DISTRICT

BID # V19200775PWB

MODULAR OFFICE AT THE LEADERSHIP ACADEMY

Bids Due: Tuesday, 07/13/20 @ 2:00pm

Job Walk: Monday, 06/29/20 Starting at 9:00am

Site: THE Learning Academy (Temple Heights Elementary)

Address: 1550 Temple Heights Dr. Oceanside, CA 92056

Check-in: Outside, Front Parking Lot (South)

**ONE REPRESENTATIVE PER FIRM, & MUST MAINTAIN 6 FT DISTANCE**

**Representative must bring a working cell phone to text a virtual sign-in**
NOTICE CALLING FOR BIDS

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>Vista Unified School District</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROJECT DESCRIPTION</td>
<td>Modular Office at THE Leadership Academy</td>
</tr>
<tr>
<td>LATEST TIME/DATE FOR RFI’S SUBMITTAL</td>
<td>07/01/20 @ 2:00pm</td>
</tr>
<tr>
<td>LATEST TIME/DATE FOR SUBMISSION OF BID PROPOSALS</td>
<td>07/13/20 @ 2:00pm</td>
</tr>
<tr>
<td>LOCATION FOR SUBMISSION OF BID PROPOSALS</td>
<td>Vista Unified School District – Purchasing Department 1234 Arcadia Ave Vista, CA 92084 <strong>OUTSIDE – DISTRICT OFFICE PARKING LOT</strong></td>
</tr>
<tr>
<td>LOCATION FOR OBTAINING BID AND CONTRACT DOCUMENTS</td>
<td>Purchasing Department Website: <a href="https://www.vistausd.org/departments/business_services/purchasing">https://www.vistausd.org/departments/business_services/purchasing</a></td>
</tr>
</tbody>
</table>

NOTICE IS HEREBY GIVEN that the Vista Unified School District (“District”) will receive up to, but not later than the above-stated date and time, sealed Bid Proposals for the Contract for the Work of the Project generally described as: **Bid No. V19200775PWB, Modular Office at THE Leadership Academy.**

1. **Submittal of Bid Proposals.** All Bid Proposals shall be submitted on forms furnished by the District. Bid Proposals must conform with, and be responsive to, the Bid and Contract Documents, copies of which may be obtained from the District’s Purchasing Department Website as set forth above. Only Bid Proposals submitted to the District at or prior to the date and time set forth above for the public opening and reading of Bid Proposals shall be considered.

2. **Bid and Contract Documents.** The Bid and Contract Documents are available at the location stated above on/after June 18, 2020.

3. **Documents Accompanying Bid Proposal.** Each Bid Proposal shall be accompanied by: (a) the required Bid Security; (b) Subcontractors List; (c) Non-Collusion Affidavit; and (d) Statement of Bidder’s Qualifications. All information or responses of a Bidder in its Bid Proposal and other documents accompanying the Bid Proposal shall be complete, accurate and true; incomplete, inaccurate or untrue responses or information provided therein by a Bidder shall be grounds for the District to reject such Bidder’s Bid Proposal for non-responsiveness.
4. Contractor/Subcontractor Registration and Labor Compliance Monitoring and Enforcement. Except as provided in Labor Code § 1771.1(a), no Contractor or Subcontractor may be listed on a bid proposal or perform work on a public works contract unless registered with the Department of Industrial Relations pursuant to California Labor Code § 1725.5. This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

5. Prevailing Wage Rates. This is a public works project, and pursuant to California Labor Code § 1773, the Director of the Department of Industrial Relations of the State of California has determined the generally prevailing rates of wages in the locality in which the Work is to be performed. Copies of these determinations, entitled “PREVAILING WAGE SCALE” are filed at the District's Administrative Offices located at 1234 Arcadia Ave., Vista, CA 92084, and are available to any interested party upon request. Alternatively, prevailing wage rate classifications and determinations may be viewed and obtained by accessing the Division of Labor Standards Enforcement databases at http://www.dir.ca.gov/dirdatabases.html. The Contractor awarded the Contract for the Work shall post a copy of all applicable prevailing wage rates for the Work at conspicuous locations at the Site of the Work. The Contractor and all Subcontractors performing any portion of the Work shall pay not less than the applicable prevailing wage rate for the classification of labor provided by their respective workers in prosecution and execution of the Work.

6. Contractors License Classification. In accordance with the provisions of California Public Contract Code § 3300, the District requires that Bidders possess the following classification(s) of California Contractors License:

<table>
<thead>
<tr>
<th>Bid Package #</th>
<th>Description</th>
<th>License Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>V19200775PWB</td>
<td>Modular Office at THE</td>
<td>B-General Building</td>
</tr>
<tr>
<td></td>
<td>Leadership Academy</td>
<td>Contractor</td>
</tr>
</tbody>
</table>

Any Bidder not so duly and properly licensed shall be subject to all penalties imposed by law. No payment shall be made for work, labor, materials or services provided under the Contract for the Work unless and until the Registrar of Contractors verifies to the District that the Bidder awarded the Contract is properly and duly licensed to perform the Work.

7. Contract Time. The date(s) for completion of portions of the Work, if applicable, and for achieving Substantial Completion of the Work shall be achieved as set forth in the Special Conditions. Failure to complete designated portions of the Work within the time(s) established in the Special Conditions and/or failure to achieve Substantial Completion of the Work within the Contract Time established in the Special Conditions shall subject the Contractor to assessment of Liquidated Damages as set forth in the Special Conditions.

8. Bid Security. Each Bid Proposal shall be accompanied by Bid Security in an amount not less than ten percent (10%) of the maximum amount of the Bid Proposal, inclusive of any additive Alternate Bid Item(s). Failure of any Bid Proposal to be accompanied by Bid Security in the form and in the amount required shall render such Bid Proposal to be non-responsive and rejected by the District.
9. **No Withdrawal of Bid Proposals.** Bid Proposals shall not be withdrawn by any Bidder for a period of **sixty (60) days** after the opening of Bid Proposals. During this time, all Bidders shall guarantee prices quoted in their respective Bid Proposals.

10. **Job Walk.** The District will conduct the **Job Walk on June 29, 2020 beginning at 9:00 A.M.** Bidders are to **meet at THE Learning Academy (Temple Heights Elementary): 1550 Temple Heights Dr. Oceanside, CA 92056** for conduct of the Job Walk. All bidders will sign in at the THE Leadership Academy’s south, front, outside parking lot. The complete Job Walk is mandatory. **Due to COVID-19 recommendations, only one representative per firm will be allowed on site and must maintain a 6 foot distance from all other humans.** Representative must bring a working cell phone to text a virtual sign-in.

11. **Substitute Security.** In accordance with the provisions of California Public Contract Code § 22300, substitution of eligible and equivalent securities for any monies withheld by the District to ensure the Contractor's performance under the Contract will be permitted at the request and expense of the Contractor and in conformity with California Public Contract Code § 22300. The foregoing notwithstanding, the Bidder to whom the Contract is awarded shall submit its written request to the District to permit the substitution of securities for retention under California Public Contract Code § 22300 prior to the submission of its first Application for Progress Payment. The failure of such Bidder to make such written request to the District prior to submission of its first Application for Progress Payment shall be deemed a waiver of the Bidder's rights under California Public Contract Code § 22300.

12. **Waiver of Irregularities.** The District reserves the right to reject any or all Bid Proposals or to waive any irregularities or informalities in any Bid Proposal or in the bidding.

13. **Award of Contract.** The Contract for the Work, if awarded, will be by action of the District's Board of Trustees to the responsible and responsive Bidder submitting the lowest priced Bid Proposal. If Alternate Bid Items are included in the bidding, the lowest total priced Bid Proposal will be determined on the basis of the Base Bid Proposal and the combination of all Alternate Bid Items in accordance with the applicable provisions of the Instructions for Bidders.
The Board of Trustees reserves the right to reject any and all bids and any and all items of such bids. This bid shall also be subject to any and all applicable laws, regulations and standards. The bid will be awarded on base bid.

Publication: Daily Journal – 06/18/20; 06/25/20

INSTRUCTIONS FOR BIDDERS

1. Preparation and Submittal of Bid Proposal.

1.1 Bid Proposal Preparation. All information required by the bid forms, including bid package numbers, must be completely and accurately provided on each of the bid forms. Numbers shall be stated in both words and figures where so indicated in the bid forms; conflicts between a number stated in words and in figures are governed by the words. Partially completed Bid Proposals or Bid Proposals submitted on other than the bid forms included herein are non-responsive and will be rejected. Bid Proposals not conforming to these Instructions for Bidders and the Notice to Contractors Calling for Bids (“Call for Bids”) may be deemed non-responsive and rejected.

1.2 Bid Proposal Submittal. Bid Proposals shall be submitted at the place designated in the Call for Bids in sealed envelopes bearing on the outside the Bidder’s name and address along with an identification of the Work for which the Bid Proposal is submitted. Bidders are solely responsible for timely submission of Bid Proposals to the District at the place designated in the Call for Bids.

1.3 Date and Time of Bid Proposal Submittal. The District will place a clock (“the District Clock”) in a conspicuous location at the place designated for submittal of Bid Proposals. For purposes of determining the time that a Bid Proposal is submitted, the District Clock shall be controlling. The foregoing notwithstanding, whether or not Bid Proposals are opened exactly at the time fixed in the Call for Bids, no Bid Proposals shall be received or considered by the District after it has commenced the public opening and reading of Bid Proposals; Bid Proposals submitted after such time are non-responsive and will be returned to the Bidder unopened.

2. Bid Security. Each Bid Proposal shall be accompanied by Bid Security in the form of: (a) cash, (b) a certified or cashier's check made payable to the District or (c) a Bid Bond, in the form and content attached hereto, in favor of the District executed by the Bidder as a principal and a Surety as surety (the “Bid Security”) in an amount not less than the percentage of the maximum amount of the Bid Proposal. Any Bid Proposal submitted without the required Bid Security is non-responsive and will be rejected. If the Bid Security is in the form of a Bid Bond, the Bidder's Bid Proposal shall be deemed responsive only if the Bid Bond is in the form and content included herein and the Surety is an Admitted Surety Insurer under Code of Civil Procedure § 995.120.

4. **Modifications.** Changes to the bid forms which are not specifically called for or permitted may result in the District's rejection of the Bid Proposal as being non-responsive. No oral or telephonic modification of any submitted Bid Proposal will be considered. A written modification may be considered only if actually received by the District prior to the scheduled closing time for receipt of Bid Proposals and the public opening thereof.

5. **Erasures; Inconsistent or Illegible Bid Proposals.** Bid Proposals must not contain any erasures, interlineations or other corrections unless the same are suitably authenticated by affixing in the margin immediately opposite such erasure, interlineation or correction the surname(s) of the person(s) signing the Bid Proposal. Any Bid Proposal not conforming to the foregoing may be deemed by the District to be non-responsive. If any Bid Proposal or portions thereof, is determined by the District to be illegible, ambiguous or inconsistent, whether by virtue of any erasures, interlineations, corrections or otherwise, the District may reject such a Bid Proposal as being non-responsive.

6. **Examination of Site and Contract Documents.** Each Bidder shall, at its sole cost and expense, inspect the Site and to become fully acquainted with the Contract Documents and conditions affecting the Work. The failure of a Bidder to receive or examine any of the Contract Documents or to inspect the Site shall not relieve such Bidder from any obligation with respect to the Bid Proposal, or the Work required under the Contract Documents. The District assumes no responsibility or liability to any Bidder for, nor shall the District be bound by, any understandings, representations or agreements of the District's agents, employees or officers concerning the Contract Documents or the Work made prior to execution of the Contract which are not in the form of Bid Addenda duly issued by the District. The submission of a Bid Proposal shall be deemed prima facie evidence of the Bidder's full compliance with the requirements of this section.

7. **Withdrawal of Bid Proposal.** Any Bidder may withdraw its Bid Proposal by way of written request actually received by the District prior to the scheduled closing time for the receipt of Bid Proposals and the District's public opening and reading of Bid Proposals. A written notice of withdrawal of a submitted Bid Proposal received after the scheduled closing time for receipt of Bid Proposals or the District's public opening and reading of Bid Proposals shall not be considered by the District, nor effective to withdraw such Bid Proposal.

8. **Agreement and Bonds.** The Agreement which the successful Bidder, as Contractor, will be required to execute along with the forms and amounts of the Labor and Material Payment Bond, Performance Bond and other documents and instruments which will be required to be furnished are included in the Contract Documents and shall be carefully examined by the Bidder.

9. **Interpretation of Drawings, Specifications or Contract Documents.** Any Bidder in doubt as to the true meaning of any part of the Contract Documents; finds discrepancies, errors or omissions therein; or finds variances in any of the Contract Documents with applicable rules, regulations, ordinances and/or laws, a written request for an interpretation or correction thereof may be submitted to the District. It is the sole and exclusive responsibility of the Bidder to submit such request not less than three (3) days prior to the
scheduled closing date for the receipt of Bid Proposals. Interpretations or corrections of the Contract Documents will be by written addendum issued by the District or the Architect. A copy of any such addendum will be mailed, faxed, emailed or delivered to each Bidder receiving a set of the Contract Documents. No person is authorized to render an oral interpretation or correction of any portion of the Contract Documents to any Bidder, and no Bidder is authorized to rely on any such oral interpretation or correction. Failure to request interpretation or clarification of any portion of the Contract Documents pursuant to the foregoing is a waiver of any discrepancy, defect or conflict therein.

10. **District's Right to Modify Contract Documents.** Before the public opening and reading of Bid Proposals, the District may modify the Work, the Contract Documents, or any portion(s) thereof by the issuance of written addenda disseminated to all Bidders who have obtained a copy of the Specifications, Drawings and Contract Documents pursuant to the Call for Bids. If the District issues any addenda during the bidding, the failure of any Bidder to acknowledge such addenda in its Bid Proposal will render the Bid Proposal non-responsive and rejected.

11. **Non-Collusion Affidavit.** No person, firm, corporation or other entity shall submit or be interested in more than one Bid Proposal for the same Work; provided, however, that a person, firm or corporation that has submitted a sub-proposal to a Bidder or who has quoted prices for materials to a Bidder is not thereby disqualified from submitting a sub-proposal, quoting prices to other Bidders or submitting a Bid Proposal for the proposed Work to the District. The form of Non-Collusion Affidavit included in the Contract Documents must be completed and duly executed on behalf of the Bidder; failure of a Bidder to submit a completed and executed Non-Collusion Affidavit with its Bid Proposal will render the Bid Proposal non-responsive.

12. **Award of Contract.**

12.1 **Waiver of Irregularities or Informalities.** The District reserves the right to reject any and all Bid Proposals or to waive any irregularities or informalities in any Bid Proposal or in the bidding.

12.2 **Award to Lowest Responsive and Responsible Bidder.** The award of the Contract, if made by the District through action of its Board of Trustees, will be to the responsible Bidder submitting the lowest priced responsive Bid Proposal on the basis of the Base Bid Proposal and all Alternate Bid Items, in accordance with these Instructions for Bidders.

12.3 **Selection of Alternate Bid Items.** The selection of Alternate Bid Items for inclusion in the scope of the Work of the Contract to be awarded at the discretion of the District.

12.4 **Alternate Bid Items Not Included in Award of Contract.** Bidders are referred to the provisions of the Contract Documents permitting the District, during performance of the Work, to add or delete from the scope of the Work any or all of the Alternate Bid Items with the cost or credit of the same being the amount(s) set forth by in the Alternate Bid Items Proposal.
12.5 **Responsive Bid Proposal.** A responsive Bid Proposal shall mean a Bid Proposal which conforms, in all material respects, to the Bid and Contract Documents.

12.6 **Responsible Bidder.** A responsible Bidder is a Bidder who has the capability in all respects, to perform fully the requirements of the Contract Documents and the moral and business integrity and reliability which will assure good faith performance. In determining responsibility, the following criteria will be considered: (i) the ability, capacity and skill of the Bidder to perform the Work of the Contract Documents; (ii) whether the Bidder can perform the Work promptly and within the time specified, without delay or interference; (iii) the character, integrity, reputation, judgment, experience and efficiency of the Bidder; (iv) the quality of performance of the Bidder on previous contracts, by way of example only, the following information will be considered: (a) the administrative, consultant or other cost overruns incurred by the District on previous contracts with the Bidder; (b) the Bidder's compliance record with contract general conditions on other projects; (c) the submittal by the Bidder of excessive and/or unsubstantiated extra cost proposals and claims on other projects; (d) the Bidder's record for completion of work within the contract time and the Bidder's compliance with the scheduling and coordination requirements on other projects; (e) the Bidder's demonstrated cooperation with the District and other contractors on previous contracts; (f) whether the work performed and materials furnished on previous contracts was in accordance with the Contract Documents; (v) the previous and existing compliance by the Bidder with laws and ordinances relating to contracts; (vi) the sufficiency of the financial resources and ability of the Bidder to perform the work of the Contract Documents; (vii) the quality, availability and adaptability of the goods or services to the particular use required; (viii) the ability of the Bidder to provide future maintenance and service for the warranty period of the Contract; (ix) whether the Bidder is in arrears on debt or contract or is a defaulter on any surety bond; (x) such other information as may be secured by the District having a bearing on the decision to award the Contract, to include without limitation the ability, experience and commitment of the Bidder to properly and reasonably plan, schedule, coordinate and execute the Work of the Contract Documents and whether the Bidder has ever been debarred from bidding or found ineligible for bidding on any other projects. The ability of a Bidder to provide the required bonds will not of itself demonstrate responsibility of the Bidder.

13. **Subcontractors.**

13.1 **Designation of Subcontractors; Subcontractors List.** Each Bidder shall submit a list of its proposed Subcontractors for the proposed Work as required by the Subletting and Subcontracting Fair Practices Act (California Public Contract Code §§ 4100 et seq.) on the form furnished. The failure of any Bid Proposal to include all information required by the Subcontractors List will result in rejection of the Bid Proposal for non-responsiveness.

13.2 **Work of Subcontractors.** All Bidders are referred to the Contract Documents and the notation therein that all Contract Documents are intended to be complimentary and that the organization or arrangements of the Specifications and Drawings shall not limit the extent of the Work of the Contract Documents. Accordingly, all Bidders are encouraged to disseminate all of the Specifications, Drawings and other Contract Documents to all persons or entities submitting sub-bids to the Bidder. The
omission of any portion or item of Work from the Bid Proposal or from the sub-
bidders' sub-bids which is/are necessary to produce the intended results and/or
which are reasonably inferable from the Contract Documents is not a basis for
adjustment of the Contract Price or the Contract Time. Dissemination of the
Contract Documents to sub-bidders and dissemination of addenda issued during
the bidding process is solely the responsibility of each Bidder.

13.3 Subcontractor Bonds. In accordance with California Public Contract Code § 4108,
if a Bidder requires a bond or bonds of its Subcontractor(s), whether the expense of
procuring such bond or bonds are to be borne by the Bidder or the Subcontractor(s),
such requirements shall be specified in the Bidder's written or published request for
sub-bids. Failure of the Bidder to comply with these requirements shall preclude the
Bidder from imposing bonding requirements upon its Subcontractor(s) or rejection
of a Subcontractor's bid under California Public Contract Code § 4108(b).

14. Workers' Compensation Insurance. Pursuant to California Labor Code § 3700, the
successful Bidder shall secure Workers' Compensation Insurance for its employees
engaged in the Work of the Contract. The successful bidder shall sign and deliver to the
District the following certificate prior to performing any of the Work under the Contract:

"I am aware of the provisions of § 3700 of the California Labor Code which
require every employer to be insured against liability for worker's
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 the Contract."

The form of such Certificate is included as part of the Contract Documents.

15. Bid Security Return. The Bid Security of the three or more low Bidders, the number being
solely at the discretion of the District, will be held by the District for ten (10) days after the
period for which Bid Proposals must be held open (which is set forth in the Call for Bids) or
until posting by the successful Bidder(s) of the bonds, certificates of insurance required
and return of executed copies of the Agreement, whichever first occurs, at which time the
Bid Security of such other Bidders will be returned to them.

16. Forfeiture of Bid Security. If the Bidder awarded the Contract fails or refuses to execute
the Agreement within ten (10) calendar days from the date of receiving notification that it
is the Bidder to whom the Contract has been awarded, the District may declare the Bidder's
Bid Security forfeited as damages caused by the failure of the Bidder to enter into the
Contract and may thereupon award the Contract for the Work to the responsible Bidder
submitting the next lowest Bid Proposal or may call for new bids, in its sole and exclusive
discretion.

17. Contractor's License. No Bid Proposal will be considered from a Bidder who, at the time
Bid Proposals are opened, is not licensed to perform the Work, in accordance with the
Contractor's License Law, California Business & Professions Code § 7000 et seq. This
requirement is not a mere formality and will not be waived by the District or its Board of
Trustees. The required California Contractor's License classification(s) for the Work is/are
set forth in the Call for Bids.
18. **Anti-Discrimination.** It is the policy of the District that there be no discrimination against any prospective or active employee engaged in the Work because of race, color, ancestry, national origin, religious creed, sex, age or marital status. All Bidders agree to comply with the District's anti-discrimination policy and all applicable Federal and California anti-discrimination laws including but not limited to the California Fair Employment & Housing Act beginning with California Government Code §§ 12940 et seq. and California Labor Code § 1735. In addition, all Bidders agree to require like compliance by any Subcontractor employed by them on the Work of the Contract.

19. **Bidder's Qualifications.** Each Bidder shall submit with its Bid Proposal the form of Statement of Bidder’s Qualifications, which is included within the Contract Documents. However, Bidder is not required to submit the Statement of Bidder’s Qualifications if it is already on the District qualified bidder list for the current year, pursuant to the California Uniform Public Construction Cost Accounting Act. All information required by Statement of Bidder's Qualifications shall be completely and fully provided. Any Bid Proposal not accompanied by the Statement of Bidder's Qualifications completed with all information required and bearing the signature of the Bidder's duly authorized representative under penalty of perjury will render the Bid Proposal non-responsive and rejected. If the District determines that any information provided by a Bidder in the Statement of Bidder’s Qualifications is false or misleading, or is incomplete so as to be false or misleading, the District may reject the Bid Proposal submitted by such Bidder as being non-responsive.

20. **Job Walk.** The District will conduct a Job Walk at the time(s) and place(s) designated in the Call for Bids. The District may, in its sole and exclusive discretion, elect to conduct one or more Job Walk(s) in addition to that set forth in the Call for Bids, in which event the District shall notify all Bidders who have theretofore obtained the Contract Documents pursuant to the Call for Bids of any such additional Job Walk. If the District elects to conduct any Job Walk in addition to that set forth in the Call for Bids, the District shall, in its notice of any such additional Job Walk(s), indicate whether Bidders’ attendance at such additional Job Walk(s) is/are not mandatory. The District may, in its sole and exclusive discretion, conduct such requested Job Walk taking into consideration factors such as the time remaining prior to the scheduled opening of Bid Proposals. Any such requested Job Walk will be conducted only upon the requesting Bidder’s agreement to reimburse the District for the actual and/or reasonable costs for the District's staff and its agents and representatives in arranging for and conducting such additional Job Walk.

21. **Public Records.** Bid Proposals and other documents responding to the Call for Bids become the exclusive property of the District upon submittal to the District. At such time as the District issues the Notice of Intent to Award the Contract pursuant to these Instructions for Bidders, all Bid Proposals and other documents submitted in response to the Call for Bids become a matter of public record and shall be thereupon be considered public records, except for information contained in such Bid Proposals deemed to be Trade Secrets (as defined in California Civil Code § 3426.1) and information provided in response to the Statement of Qualifications. A Bidder that indiscriminately marks all or most of its Bid Proposal as exempt from disclosure as a public record, whether by the notations of “Trade Secret,” “Confidential,” “Proprietary,” or otherwise, may result render the Bid Proposal non-responsive and rejected. The District is not liable or responsible for the disclosure of such records, including those exempt from disclosure if disclosure is deemed
required by law, by an order of Court, or which occurs through inadvertence, mistake or negligence on the part of the District or its officers, employees or agents. At such time as Bid Proposals are deemed a matter of public record, pursuant to the above, any Bidder or other party shall be afforded access for inspection and/or copying of such Bid Proposals, by request made to the District in conformity with the California Public Records Act, California Government Code § 6250, et. seq. If the District is required to defend or otherwise respond to any action or proceeding wherein request is made for the disclosure of the contents of any portion of a Bid Proposal deemed exempt from disclosure hereunder, the Bidder submitting the materials sought by such action or proceeding agrees to defend, indemnify and hold harmless the District in any action or proceeding from and against any liability, including without limitation attorneys' fees arising therefrom. The party submitting materials sought by any other party shall be solely responsible for the cost and defense in any action or proceeding seeking to compel disclosure of such materials; the District's sole involvement in any such action shall be that of a stakeholder, retaining the requested materials until otherwise ordered by a court of competent jurisdiction.

22. **Drug Free Workplace Certificate.** In accordance with California Government Code § 8350 et seq., the Drug Free Workplace Act of 1990, the successful Bidder will be required to execute a Drug Free Workplace Certificate concurrently with execution of the Agreement. The successful Bidder will be required to implement and take the affirmative measures outlined in the Drug Free Workplace Certificate and in California Government Code § 8350 et seq. Failure of the successful Bidder to comply with the measures outlined in the Drug Free Workplace Certificate and in California Government Code § 8350 et seq. may result in penalties, including without limitation, the termination of the Agreement, the suspension of any payment of the Contract Price otherwise due under the Contract Documents and/or debarment of the successful Bidder.

23. **Compliance with Immigration Reform and Control Act of 1986.** The Bidder is solely and exclusively responsible for employment of individuals for the Work of the Contract in conformity with the Immigration Reform and Control Act of 1986, 8 USC § 1101 et seq. (the "IRCA"); the successful Bidder shall also require that any person or entity employing labor in connection with any of the Work of the Contract shall so similarly comply with the IRCA.

24. **Contractor/Subcontractor Registration and Labor Compliance Monitoring and Enforcement.** Except as provided in Labor Code § 1771.1(a), no Contractor or Subcontractor may be listed on a bid proposal or perform work on a public works contract, unless registered with the Department of Industrial Relations pursuant to California Labor Code § 1725.5. This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

Contractor and any Subcontractors engaging in Work on the Project are required to review and comply with the provisions of the California Labor Code, Division 2, Part 7, Chapter 1, beginning with Section 1720, and the regulations of the Department of Industrial Relations implementing those provisions. These statutory and regulatory provisions contain specific requirements concerning, for example, the determination and payment of prevailing wages, retention, inspection and auditing of payroll records, use of apprentices, payment of overtime compensation, and various penalties or fines which may be imposed for violations of the requirements of the chapter. Submission of a Bid Proposal constitutes the Bidder's
representation that it has thoroughly reviewed these statutory and regulatory requirements and agrees to bind every Subcontractor performing Work on the Project to these requirements to the extent such requirements are applicable to the Subcontractor's Work.

25. **Notice of Intent to Award Contract.** Following the public opening and reading of Bid Proposals, the District will issue a Notice of Intent to Award the Contract, identifying the Bidder to whom the District intends to award the Contract and the date/time/place of the District's Board of Trustees meeting at which award of the Contract will be considered.

26. **Bid Protest.** Any Bidder submitting a Bid Proposal to the District may file a protest of the District's intent to award the Contract provided that each and all of the following are complied with:

   (i) The bid protest is in writing;

   (ii) The bid protest is filed and received by the District’s Assistant Superintendent of Business Services not more than five (5) calendar days following the date of issuance of the District's Notice of Intent to Award the Contract; and

   (iii) The written bid protest sets forth, in detail, all grounds for the bid protest, including without limitation all facts, supporting documentation, legal authorities and argument in support of the grounds for the bid protest; any matters not set forth in the written bid protest shall be deemed waived. All factual contentions must be supported by competent, admissible and creditable evidence.

Any bid protest not conforming to the foregoing shall be rejected by the District as invalid. Provided that a bid protest is filed in strict conformity with the foregoing, the District’s Assistant Superintendent of Business Services or such individual(s) as may be designated by him/her, shall review and evaluate the basis of the bid protest. Either, the District’s Assistant Superintendent of Business Services or other individual designated by him/her shall provide the bidder submitting the bid protest with a written statement concurring with or denying the bid protest. The District’s Board of Trustees will render a final determination and disposition of a bid protest by taking action to adopt, modify or reject the disposition of a bid protest as reflected in the written statement of the District’s Assistant Superintendent of Business Services or his/her designee. Action by the District’s Board of Trustees relative to a bid protest shall be final and not subject to appeal or reconsideration by the District’s Assistant Superintendent of Business Services any other employee or officer of the District or the District’s Board of Trustees. The rendition of a written statement by the District’s Assistant Superintendent of Business Services (or his/her designee) and action by the District’s Board of Trustees to adopt, modify or reject the disposition of the bid protest reflected in such written statement shall be express conditions precedent to the institution of any legal or equitable proceedings relative to the bidding process, the District’s intent to award the Contract, the District’s disposition of any bid protest or the District’s decision to reject all Bid Proposals. In the event that any such legal or equitable proceedings are instituted and the District is named as a party thereto, the prevailing party(ies) shall recover from the other party(ies), as costs, all attorneys' fees and costs incurred in connection with any such proceeding, including any appeal arising therefrom.
27. **Owner's Unspecified Allowance.** Bidder shall include the allotted dollar amount in the Bid Proposal as specified in the individual bid package for the Owner's unspecified allowance.

[End of Section]
SUBCONTRACTORS LIST
Bid Package

Bidder: ____________________________________________
Address: ____________________________________________
Phone: ____________________________________________
Fax: ____________________________________________
Bidder's Authorized Representative(s): _______________________

PROJECT:  Bid No. V19200775PWB, Modular Office at THE Leadership Academy

<table>
<thead>
<tr>
<th>NAME OF SUBCONTRACTOR, DIR &amp; LICENSE NUMBER</th>
<th>BUSINESS LOCATION/ADDRESS OF SUBCONTRACTOR</th>
<th>TRADE OR PORTION OF THE WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PHOTOCOPY THIS PAGE AS NECESSARY TO LIST ADDITIONAL SUBCONTRACTORS
NON-COLLUSION AFFIDAVIT
Bid Package #V19200775PWB

STATE OF CALIFORNIA  )
COUNTY OF ________________ )

PROJECT: Bid No. __________, ____________

I, _______________________________, being first duly sworn, deposes and says that I
am the ____________________ of _______________________________, the party submitting
the foregoing Bid Proposal ("the Bidder"). In connection with the foregoing Bid Proposal, the
undersigned declares, states and certifies that:

1. The Bid Proposal is not made in the interest of, or on behalf of, any undisclosed person,
   partnership, company, association, organization or corporation.
2. The Bid Proposal is genuine and not collusive or sham.
3. The bidder has not directly or indirectly induced or solicited any other bidder to put in a
   false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with
   any other bidder or anyone else to put in sham bid, or to refrain from bidding.
4. The bidder has not in any manner, directly or indirectly, sought by agreement,
   communication, or conference with anyone to fix the bid price, or that of any other bidder, or to fix
   any overhead, profit or cost element of the bid price or that of any other bidder, or to secure any
   advantage against the public body awarding the contract or of anyone interested in the proposed
   contract.
5. All statements contained in the Bid Proposal and related documents are true.
6. The bidder has not, directly or indirectly, submitted the bid price or any breakdown
   thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will
   not pay, any fee to any person, corporation, partnership, company, association, organization, bid
   depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Executed this ____ day of ___________, 20__ at _____________________.

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

_________________________________  ______________________________________
Signature                        (Address)

_________________________________  (City, County and State)
Name, Printed or Typed

_________________________________  (City, County and State)
(Phone)
STATEMENT OF BIDDER’S QUALIFICATIONS

Bid Package V19200775PWB

1. Bidder’s Organization
   1.1 Form of entity of Bidder, i.e., corporation, partnership, etc.
   1.1.1 If a corporation, state the following:
       State of incorporation: ____________________________
       Date of incorporation: ____________________________
       President/Chief Executive Officer: __________________
       Secretary: ____________________________
       Treasurer/Chief Financial Officer: __________________
   1.1.2 If a partnership, state the following:
       Type of partnership, i.e., general partnership, limited partnership: ______
       ____________________________
       Names of all general partners, if any of the general partners are not natural persons, provide the information for each such general partner requested by Paragraphs 1.1.1, 1.1.2 and 1.1.4 as appropriate:
       ____________________________
       ____________________________
   1.1.3 If a proprietorship, state the names of all proprietors:
       ____________________________
       ____________________________
       ____________________________
   1.1.4 If a joint venture, state the following:
       Date of organization: ____________________________
       ____________________________
       Names of all joint venture members. For each member of the joint venture, provide the information requested by Paragraphs 1.1.1, 1.1.2 and 1.1.3 for each joint venture member, as applicable: ____________________________
       ____________________________
       ____________________________
   1.2 Number of years your organization has been in business as a contractor: _____
1.3 Number of years your organization has conducted business under its present name: ______

1.4 If your organization has conducted business under a name or name style different than your organization’s present name, identify all prior name(s) or name style(s): ____________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

1.5 Your organization’s Federal Tax Identification Number: ______________________

2. Licensing

2.1 California Contractors License: Number: ________________________________

Expiration Date: ________________________________

Responsible Managing Employee/Officer: ________________________________

License Classification(s): ________________________________________________

2.2 Has a claim or other demand ever been made against your organization’s California Contractors License Bond? ______ Yes _____ No

If yes, on a separate attachment, state the following: (i) the name, address and telephone number of each person or entity making claim or demand; (ii) the date of each claim or demand; (iii) the circumstances giving rise to each such claim or demand; and (iv) the disposition of each such claim or demand.

2.3 Has a complaint ever been filed against your organization’s California Contractors License with the California Contractors State License Board? _____ Yes _____ No

If yes, on a separate attachment, state the following for each complaint: (i) the name, address and telephone number of each person or entity making the complaint; (ii) the date of each complaint; (iii) the circumstances giving rise to each such complaint; and (iv) the disposition of each such complaint, including without limitation, any disciplinary or other action imposed or taken by the California Contractors State License Board as a result of any such complaint.

3. Experience

Categories of work (other than management/supervision) your organization typically performs with your own forces_____________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________
4. Performance History

4.1 Claims and lawsuits (if you answer yes to any of the following, you must attach details).

4.1.1 Have any lawsuits or other administrative, legal, arbitration or other proceedings, ever been brought or commenced against your organization or any of its principals, officers or equity owners in connection with any construction contract or construction project?

____ Yes  ____ No

If so, describe the circumstances, the amount demanded or other relief demand and the disposition of each such lawsuit or other proceeding.

4.1.2 Has your organization ever filed a lawsuit or commenced other administrative, legal or other proceedings in connection with any construction contract or construction project?  ____ Yes  ____ No

If so, describe the circumstances, the amount demanded or other relief demand and the disposition of each such lawsuit or other proceeding.

4.1.3 Are there any judgments, orders, decrees or arbitration awards pending, outstanding against your organization or any of the officers, directors, employees or principals of your organization?

____ Yes  ____ No

If so, on a separate attachment describe each such judgment, order, decree or arbitration award and the present status of the satisfaction or discharge thereof.

4.2 Has your organization ever refused to sign a construction contract awarded to it?

__ Yes __ No

If so, on a separate attachment, state the following: (i) describe each such contract; (ii) the owner’s name, address, telephone number and contact person; and (iii) the circumstances of your refusal to sign such contract.

4.3 Has your organization ever failed to complete a construction contract?

____ Yes  ____ No

If so, on a separate attachment, state the following: (i) describe each such contract; (ii) the owner’s name, address, telephone number and contact person; and (iii) the circumstances of your failure to complete such contract.

4.4 Has your organization ever been declared in default of a construction contract?

____ Yes  ____ No

If so, on a separate attachment, state the following: (i) describe each such contract; (ii) the owner’s name, address, telephone number and contact person; and (iii) the circumstances of each such declaration of default.
4.5 Has any construction contract to which your organization is a party been terminated for the convenience of the project owner? ___Yes ___No
   If so, identify the project and project owner along with a description of the circumstances under which the convenience termination occurred.

4.6 Has a claim or other demand ever been asserted against any Bid Bond, Performance Bond, or Payment Bond posted by your organization in connection with any construction contract or your submittal of a bid proposal for a construction contract?
   ___Yes   ___No
   If so, on a separate attachment, state the following: (i) the name, address, telephone number and contact person for each claimant; (ii) the date upon which each such demand or claim was made; and (iii) the disposition of each such demand or claim.

4.7 Has your organization or any predecessor to your organization been charged with a violation of the California False Claims Act or similar federal statute within the past ten (10) years?
   ___Yes   ___No
   If yes, on a separate attachment, provide the following: (i) a detailed description of the circumstances upon which charges were based; (ii) the public agency involved, including name, address, telephone and email address of contact person(s) at such public agency; and (iii) disposition of such charges.

4.8 Has any individual or entity who owns ten percent (10%) or more of the equity interest of your organization been an equity owner of ten percent (10%) or more of the equity interest of any other entity or organization, within the past ten (10) years, which has been charged with a violation of the California False Claims Act or similar federal statute within the past ten (10) years?
   ___Yes   ___No
   If yes, on a separate attachment, provide the following: (i) the name(s) of each such other entity or organization; (ii) a detailed description of the circumstances upon which charges were based; (iii) the public agency involved, including name, address, telephone and email address of contact person(s) at such public agency; and (iv) disposition of such charges.

4.9 Has any individual or entity who owns ten percent (10%) or more of the equity interest of your organization been charged with a violation of the California False Claims Act or similar federal statute within the past ten (10) years?
   ___Yes   ___No
   If yes, on a separate attachment, provide the following: (i) the name of such individual(s) or entity(ies); (ii) a detailed description of the circumstances upon which charges were based; (iii) the public agency involved, including name, address, telephone and email address of
contact person(s) at such public agency; and (iv) disposition of such charges.

5. References (Include name, contact person, telephone and address for each reference provided):

5.1 Trade References (three (3) minimum)

5.2 Bank References

5.3 Public Works Inspectors of Record (K-12 or community college project)

5.4 Owner references (three (3) minimum, preferably California K-12 school districts and/or California community college districts)

6. Accuracy and Authority

The undersigned is duly authorized to execute this Statement of Bidders Qualifications under penalty of perjury on behalf of the Bidder. The undersigned warrants and
represents that he/she has personal knowledge of each of the responses to this Statement of Bidder’s Qualifications and/or that he/she has conducted all necessary and appropriate inquiries to determine the truth, completeness and accuracy of responses to this Statement of Bidder’s Qualifications.

The undersigned declares and certifies that the responses to this Statement of Bidder’s Qualifications are complete and accurate; there are no omissions of material fact or information that render any response to be false or misleading and there are no misstatements of fact in any of the responses.

Executed this __ day of ________________ 20__ at ________________

(City and State)

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

__________________________________________
(Signature)

__________________________________________
(Typed or written name)
BID BOND

We, ______________________________, as Surety and ______________________________, as Principal, are jointly and severally, along with their respective heirs, executors, administrators, successors and assigns, held and firmly bound unto ________________, hereinafter “the Obligee,” for payment of the penal sum hereof in lawful money of the United States, as more particularly set forth herein.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, the Principal has submitted the accompanying Bid Proposal to the Obligee for the Work commonly described as the Bid No. V19200775PWB, Modular Office at THE Leadership Academy.

WHEREAS, subject to the terms of this Bond, the Surety is firmly bound unto the Obligee in the penal sum of ten percent (10%) of the maximum amount of the Bid Proposal submitted by the Principal to the Obligee, as set forth above.

NOW THEREFORE, if the Principal shall not withdraw said Bid Proposal within the period specified therein after the opening of the same, or, if no period be specified, for sixty (60) days after opening of said Bid Proposal; and if the Principal is awarded the Contract, and shall within the period specified therefore, or if no period be specified, within five (5) days after the prescribed forms are presented to him for signature, enter into a written contract with the Obligee, in accordance with the Bid Proposal as accepted and give such bond(s) with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such Contract and for the payment for labor and materials used for the performance of the Contract, or in the event of the withdrawal of said Bid Proposal within the period specified for the holding open of the Bid Proposal or the failure of the Principal to enter into such Contract and give such bonds within the time specified, if the Principal shall pay the Obligee the difference between the amount specified in said Bid Proposal and the amount for which the Obligee may procure the required Work and/or supplies, if the latter amount be in excess of the former, together with all costs incurred by the Obligee in again calling for Bids, then the above obligation shall be void and of no effect, otherwise to remain in full force and effect.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or the Call for Bids, the Work to be performed thereunder, the Drawings or the Specifications accompanying the same, or any other portion of the Contract Documents shall in no way affect its obligations under this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of said Contract, the Call for Bids, the Work, the Drawings or the Specifications, or any other portion of the Contract Documents.
In the event suit or other proceeding is brought upon this Bond by the Obligee, the Surety shall pay to the Obligee all costs, expenses and fees incurred by the Obligee in connection therewith, including without limitation, attorney’s fees.

IN WITNESS WHEREOF, the Principal and Surety have executed this instrument this ______ day of __________, 20__ by their duly authorized agents or representatives.

(Principal’s Corporate Seal)  (Principal Name)

By: _____________________________
    (Signature)

    ______________________________
    (Typed or Printed name)

Title: ______________________________

(Surety’s Corporate Seal)  (Surety Name)

By: _____________________________
    (Surety Signature)

    ______________________________
    (Typed or Printed name)

Title: ______________________________

(Attach Attorney-in-Fact Certificate)  (Area Code and Telephone Number of Attorney-in-Fact for Surety)

Contact name, address, telephone number and email address for notices to the Surety

    _____________________________
    (Contact Name)

    _____________________________
    (Address)

    _____________________________
    (Telephone)

    _____________________________
    (Email Address)
VISTA UNIFIED SCHOOL DISTRICT

BID PROPOSAL

TO: Vista Unified School District, a California Public School District, acting by and through its Board of Trustees (“the District”).

FROM: 
(Name of Bidder)  
(Address) 
(City, State, Zip Code) 
(DIR Registration Number)  
(Telephone / Facsimile) 
(Email Address of Bidder’s Authorized Representative(s))  
(Name of Bidder’s Authorized Representative(s))

1. Bid Proposal: Bid No. V19200775PWB, Modular Office at THE Leadership Academy

<table>
<thead>
<tr>
<th></th>
<th>Base Bid</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Base Bid</td>
<td>$</td>
</tr>
</tbody>
</table>

1.1 Bid Proposal Amount. The undersigned Bidder proposes and agrees to perform the Contract including, without limitation, providing and furnishing any and all of the labor, materials, tools, equipment and services necessary to complete in a workmanlike manner all of the Work and other obligations required by the Contract Documents for the sum of ______________________ Dollars ($____________________). (Line 1 of table above.) The Bidder confirms that it has checked all of the above figures and understands that neither the District nor any of its agents, employees or representatives shall be responsible for any errors or omissions on the part of the undersigned Bidder in preparing and submitting this Bid Proposal. The Bidder confirms that the bid proposal includes the Owner’s Unspecified Allowance in the amount of Ten Thousand and 00/00 Dollars ($10,000.00).

1.2 Owner’s Unspecified Allowance. Bidder shall include in Bid Proposal the stipulated sum of Ten Thousand and 00/00 Dollars ($10,000.00) for unspecified work to be performed ONLY at the determination and direction of the District.
Work performed at the determination and direction of the District under this Allowance shall be documented by Contractor and submitted to Construction Manager per the requirements specified in Article 9 of the General Conditions. Contractor shall include a separate line item in Contractor’s Schedule of Values as “Allowance” with the value of **Ten Thousand and 00/00 Dollars ($10,000.00)**. At closeout of Contract, any funds remaining in the Allowance shall be credited to Owner through a Change Order.

1.3 **Acknowledgment of Bid Addenda.** The Bidder confirms that this Bid Proposal incorporates and is inclusive of, all items or other matters contained in Bid Addenda issued by or on behalf of the District.

_____ Addenda Nos. __________________ received, acknowledged

(initial) and incorporated into this Bid Proposal.

1.4 **Alternate Bid Items.** The Bidder’s price proposal(s) for Alternate Bid Items is/are set forth in the form of Alternate Bid Item Proposal included herewith. Price proposal(s) for Alternate Bid Item(s) will not form the basis for the District’s award of the Contract for the above-identified Bid Package. Specific Alternate Bid Item will be incorporated into the scope of Work of the Contract at the District’s discretion.

2. **Documents Accompanying Bid.** The Bidder has submitted with this Bid Proposal the following: (a) Bid Security; (b) Subcontractors List; (c) Statement of Qualifications; and (d) Non-Collusion Affidavit. The Bidder acknowledges that if this Bid Proposal and the foregoing documents are not fully in compliance with applicable requirements set forth in the Call for Bids, the Instructions for Bidders and in each of the foregoing documents, the Bid Proposal may be rejected as non-responsive.

3. **Award of Contract.** If the Bidder submitting this Bid Proposal is awarded the Contract, the undersigned will execute and deliver to the District the Contract in the form attached hereto within ten (10) days after notification of award of the Contract. Concurrently with delivery of the executed Agreement to the District, the Bidder awarded the Contract shall deliver to the District: (a) Certificates of Insurance evidencing all insurance coverages required under the Contract Documents; (b) the Performance Bond; (c) the Labor and Material Payment Bond; (d) the Certificate of Workers’ Compensation Insurance; and (e) the Drug-Free Workplace Certificate and (f) W-9. Failure of the Bidder awarded the Contract to strictly comply with the preceding may result in the District’s rescission of the award of the Contract and/or forfeiture of the Bidder’s Bid Security. In such event, the District may, in its sole and exclusive discretion elect to award the Contract to the responsible Bidder submitting the next lowest Bid Proposal, or to reject all Bid Proposals.

4. **Contractor’s License.** The undersigned Bidder is currently and duly licensed in accordance with the California Contractors License Law, California Business & Professions Code § 7000 et seq., under the following classification(s) _________ bearing License Number(s)________________ , with expiration date(s) of __________. The Bidder certifies that: (a) it is duly licensed, in the necessary class(es), for performing the Work
of the Contract Documents; (b) that such license shall be in full force and effect throughout the duration of the performance of the Work under the Contract Documents; and (c) that all Subcontractors providing or performing any portion of the Work shall be so properly licensed to perform or provide such portion of the Work.

5. **Acknowledgment and Confirmation.** The undersigned Bidder acknowledges its receipt, review and understanding of the Drawings, the Specifications and other Contract Documents pertaining to the proposed Work. The undersigned Bidder certifies that the Contract Documents are, in its opinion, adequate, feasible and complete for providing, performing and constructing the Work in a sound and suitable manner for the use specified and intended by the Contract Documents. The undersigned Bidder certifies that it has, or has available, all necessary equipment, personnel, materials, facilities and technical and financial ability to complete the Work for the amount bid herein within the Contract Time and in accordance with the Contract Documents.

By: ________________________________

(Bidder Signature)

(Corporate Seal)

______________________________

(Typed or Printed name)

Title: ________________________________
AGREEMENT

THIS AGREEMENT is made this ____ day of _______________, 20__, in the City of Vista, County of San Diego, State of California, by and between Vista Unified School District, a California Public School District hereinafter “District” and ________________ (“Contractor”).

The District and the Contractor in consideration of the mutual covenants contained herein agree as follows:

1. **The Work.** Within the Contract Time and for the Contract Price, subject to adjustments thereto pursuant to the Contract Documents, the Contractor shall perform and provide all necessary labor, materials, tools, equipment, utilities, services and transportation to complete in a workmanlike manner all of the Work required in connection with the work of improvement commonly referred to as Bid No. V19200775PWB, Modular Office at THE Leadership Academy. Contractor shall complete all Work covered by the Contract Documents, including without limitation, the Drawings and Specifications prepared by the Architect, and other Contract Documents enumerated in Article 5 below, along with all modifications and addenda thereto issued in accordance with the Contract Documents.

2. **Contract Time.** The Work shall be commenced on the date stated in the District’s Notice to Proceed; the Contractor shall achieve Substantial Completion of the Work within the Contract Time set forth in the Contract Documents.

3. **Contract Price.** The District shall pay the Contractor as full consideration for the Contractor's full, complete and faithful performance of the Contractor's obligations under the Contract Documents, subject to adjustments of the Contract Price in accordance with the Contract Documents, the Contract Price of ________________ Dollars ($______________) which includes the Owner's Unspecified Allowance $10,000.00. The Contract Price is based upon the Contractor's Base Bid Proposal and the following Alternate Bid Items, if any:

The District's payment of the Contract Price shall be in accordance with the Contract Documents.

4. **Liquidated Damages.** If the Contractor fails to achieve Substantial Completion of the Work within the Contract Time, including adjustments thereto authorized by the Contract Documents, the Contractor shall be subject to assessment of Liquidated Damages in accordance with the Contract Documents. Failure of the Contractor to complete Punchlist items noted upon Substantial Completion within the time established to complete the Punchlist items will result in the District’s assessment of Liquidated Damages in accordance with the Contract Documents.
5. **The Contract Documents.** The documents forming a part of the Contract Documents consist of the following, all of which are component parts of the Contract Documents.

- Notice Calling For Bids
- Instructions for Bidders
- Bid Proposal
- Subcontractors List
- Non-Collusion Affidavit
- Statement of Bidder’s Qualifications
- Bid Bond
- Bid Addenda Nos. __________
- Agreement
- Performance Bond
- Payment Bond
- Drug-Free Workplace Certification
- Workers’ Compensation Certificate
- General Conditions
- Special Conditions
- Change Order Form
- Asbestos and Other Hazardous Materials Certification
- Debris Recycling Statement
- Materials Certification
- Guarantee
- Specifications
- Drawings

6. **Authority to Execute.** The individual(s) executing this Agreement on behalf of the Contractor is/are duly and fully authorized to execute this Agreement on behalf of Contractor and to bind the Contractor to each and every term, condition and covenant of the Contract Documents.

CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS’ STATE LICENSE BOARD. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS’ STATE LICENSE BOARD, P.O. BOX 2600, SACRAMENTO, CALIFORNIA 95826

IN WITNESS WHEREOF, this Agreement has been duly executed by the District and the Contractor as of the date set forth above.

“DISTRICT”
VISTA UNIFIED SCHOOL DISTRICT

By: ____________________________  _____  By: ____________________________  _____
Ami Shackelford  Date  Title: ____________________________
Assistant Superintendent  (CORPORATE SEAL)
Business Services
WHEREAS, the VISTA UNIFIED SCHOOL DISTRICT (the “Obligee”) has awarded to ________________________________________ (the “Principal”) a contract for the Work commonly described as:

Bid #V19200775PWB, Modular Office at THE Leadership Academy

(the “Project”); and

WHEREAS, the Work to be performed by the Principal is more particularly set forth in that certain Agreement between the Principal and the Obligee, dated _________________, 20___, which Agreement and all other contract documents set forth therein (collectively, the “Contract Documents”) are incorporated herein and made a part hereof by this reference; and

WHEREAS, by the terms of the Contract Documents, the Principal is required to furnish a bond ensuring the Principal’s prompt, full and faithful performance of the Work under the Contract Documents ("Bond").

NOW THEREFORE, we, ________________________________________, as Principal, and ________________________________________, as Surety, are held and firmly bound, along with our respective heirs, executors, administrators, successors and assigns, jointly and severally, unto the VISTA UNIFIED SCHOOL DISTRICT, as Obligee, for payment of the penal sum of ______________________ Dollars ($_______), said sum being not less than one hundred percent (100%) of the total amount payable by the Obligee under the terms of the Contract Documents, in lawful money of the United States, as more particularly set forth herein.

The condition of the obligation is such that if the Principal promptly, fully and faithfully performs each and all of the obligations and things to be done and performed by the Principal in strict accordance with the terms of the Contract Documents as they may be modified or amended from time to time, and if the Principal indemnifies and saves harmless the Obligee and all of its officers, agents and employees from any and all losses, liability and damages, claims, judgments, liens, costs, and fees of every description which may be incurred by the Obligee by reason of the failure or default on the part of the Principal in the performance of any or all of the terms or the obligations of the Contract Documents, including all modifications and amendments thereto, and any warranties or guarantees required thereunder, then this obligation shall be void; otherwise, it shall be, and remain, in full force and effect.

The Surety, for value received, hereby stipulates and agrees that no change, adjustment of the Contract Time, adjustment of the Contract Price, alterations, deletions, additions, or any other modifications to the terms of the Contract Documents, the Work to be performed thereunder, or to the Specifications or the Drawings shall limit, restrict or otherwise impair Surety’s obligations or Obligee’s rights hereunder. Surety hereby waives notice from the Obligee of any such changes, adjustments of Contract Time, adjustments of Contract Price, alterations, deletions, additions or other modifications to the Contract Documents, the Work to be performed under the Contract Documents, or the Drawings or the Specifications.

In the event of the Obligee’s termination of the Contract due to the Principal’s breach or default of the Contract Documents, within twenty (20) days after written notice from the Obligee to the Surety of the Principal’s breach or default of the Contract Documents and Obligee’s termination of the Contract, the Surety shall notify Obligee in writing of Surety’s assumption of obligations hereunder by its election to either remedy the default or breach of the Principal or to take charge of the Work of the Contract Documents and complete the Work at its own expense ("Notice of Election"); 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 Obligee, which approval shall not be unreasonably withheld, limited or restricted. The insolvency of the Principal or the Principal’s mere denial of a failure of performance or default under the Contract Documents shall not by itself, without the Surety’s prompt, diligent inquiry and investigation of such denial, be justification for Surety’s failure to give the Notice of Election or for its failure to promptly remedy the failure of performance or default of the Principal or to complete the Work.

In the event the Surety fails to issue its Notice of Election to Obligee within the time specified herein, the Obligee may take all such action or actions necessary to cure or remedy the Principal’s failure of performance or default or to complete the Work. The Principal and the Surety shall be each jointly and severally liable to the Obligee for all damages and costs sustained by the Obligee as a result of the Principal’s failure of performance under the Contract Documents or default in its performance of obligations thereunder, including without limitation the costs of cure or completion exceeding the then remaining balance of the Contract Price; provided that the Surety’s liability hereunder for the costs of performance, damages and other costs sustained by the Obligee upon the Principal’s failure of performance under or default under the Contract Documents shall be limited to the penal sum hereof, which shall be deemed to include the costs or value of any Changes of any Work which increases the Contract Price.

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

In the event that suit or other proceeding is brought upon this Bond by the Obligee, the Surety shall pay to the Obligee all costs, expenses and fees incurred by the Obligee in connection therewith, including without limitation, attorneys’ fees.

[Remainder of Page Intentionally Left Blank]
IN WITNESS WHEREOF, the Principal and Surety have executed this instrument this ______ day of ______________, 20___ by their duly authorized agents or representatives.

(Principal’s Corporate Seal)   (Principal Name)

By: ________________________

(Signature)

(Typed or Printed name)

Title: ________________________

(Surety’s Corporate Seal)   (Surety Name)

By: ________________________

(Surety Signature)

(Typed or Printed name)

Title: ________________________

(Attach Attorney-in-Fact Certificate)   (Area Code and Telephone Number of Attorney-in-Fact for Surety)
IMPORTANT: THIS IS A REQUIRED FORM.

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

Any claims under this bond may be addressed to:

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

Telephone: ___________________________  
Telephone: ___________________________

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

NOTE: A copy of the power-of-attorney to local representatives of the Surety must be attached hereto.
LABOR AND MATERIAL PAYMENT BOND
(CALIFORNIA PUBLIC WORK)

WHEREAS, the VISTA UNIFIED SCHOOL DISTRICT (the “Obligee”) has awarded to __________________________________________________________ (the “Principal”) a contract for the Work commonly described as:

Bid #V19200775PWB, Modular Office at THE Leadership Academy

(the “Project”); and

WHEREAS, the Work to be performed by the Principal is more particularly set forth in that certain Agreement between the Principal and the Obligee, dated __________, 20___, which Agreement and all other contract documents set forth therein (collectively, the “Contract Documents”) are incorporated herein and made a part hereof by this reference; and

WHEREAS, by the terms of the Contract Documents, and in accordance with California Civil Code §§ 9550 et seq., the Principal is required to furnish a bond for the prompt, full and faithful payment to any Claimant, as hereinafter defined, for all labor, materials or services used, or reasonably required for use, in the performance of the Work on the Project (“Bond”); and

WHEREAS, the term "Claimant" shall refer to any of the persons described in California Civil Code § 9100, who provide or furnish labor, materials or services used or reasonably required for use in the performance of the Work under the Contract Documents, without regard to whether such labor, materials or services were sold, leased or rented.

NOW THEREFORE, we, _______________________________________, as Principal, and _______________________________________, as Surety, are held and firmly bound, along with our respective heirs, executors, administrators, successors and assigns, jointly and severally, unto the VISTA UNIFIED SCHOOL DISTRICT, as Obligee, for payment of the penal sum of ___________________________________ Dollars ($_________________), said sum being not less than one hundred percent (100%) of the total amount payable by the Obligee under the terms of the Contract Documents, in lawful money of the United States, as more particularly set forth herein.

This Bond shall inure to the benefit of all Claimants so as to give them, or their assigns and successors, a right of action upon this Bond.

The condition of the obligation is such that if the Principal, or its subcontractors, heirs, executors, administrators, successors or assigns fail to pay (1) any Claimant, (2) amounts due under the Unemployment Insurance Code with respect to Work or labor performed on the Project, or (3) amounts required to be deducted, withheld, and paid to the Employment Development Department from the wages of employees of the Principal and its subcontractors under Section 13020 of the Unemployment Insurance Code with respect to the Work and labor, then Surety will pay for the same in an amount not to exceed the sum specified above and, if an action is brought to enforce the liability on the Bond, the Surety shall pay such reasonable attorneys’ fees as fixed by the court, as set forth in Civil Code § 9554.

If the Principal promptly, fully and faithfully makes payment to any Claimant for all labor, materials or services used or reasonably required for use in the performance of the Work, then this obligation shall be void; otherwise, it shall be, and remain, in full force and effect.
The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, deletion, addition, or any other modification to the terms of the Contract Documents, the Work to be performed thereunder, the Specifications or the Drawings, or any other portion of the Contract Documents, shall in any way limit, restrict or otherwise affect its obligations under this Bond; the Surety hereby waives notice from the Obligee of any such change, extension of time, alteration, deletion, addition or other modification to the Contract Documents, the Work to be performed under the Contract Documents, the Drawings or the Specifications of any other portion of the Contract Documents.

IN WITNESS WHEREOF, the Principal and Surety have executed this instrument this ______ day of ______________________, 20___ by their duly authorized agents or representatives.

(Principal's Corporate Seal)  (Principal Name)

By: ____________________________

(Signature)

(Typed or Printed name)

Title: ____________________________

(Surety's Corporate Seal)  (Surety Name)

By: ____________________________

(Surety Signature)

(Typed or Printed name)

Title: ____________________________

(Attach Attorney-in-Fact Certificate)  (Area Code and Telephone Number of Attorney-in-Fact for Surety)
IMPORTANT: THIS IS A REQUIRED FORM.

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

Any claims under this bond may be addressed to:

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

Telephone: ____________________________  Telephone: ____________________________

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

STATE OF CALIFORNIA )
COUNTY OF __________________ ) ss.

On ____________________, before me, ____________________________, a Notary Public, personally appeared _______________________________, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

__________________________________________  (SEAL)

Notary Public in and for said State

Commission expires: _______________________

NOTE: A copy of the power-of-attorney to local representatives of the Surety must be attached hereto.
WORKERS' COMPENSATION CERTIFICATE
Bid Package #V19200775PWB

PROJECT: Modular Office at THE Leadership Academy

I, __________________________ am the __________________________
(Name) (Title)
of __________________________, declare, state and certify that:
(Contractor Name)

1. I am aware that California Labor Code § 3700(a) and (b) provides:

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

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

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

2. I am aware that the provisions of California Labor Code § 3700 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 this Contract.

________________________________________
(Contractor Name)

By: _____________________________________
(Signature)

________________________________________
(Typed or Printed Name)
DRUG-FREE WORKPLACE CERTIFICATION
Bid Package #V19200775PWB

I, __________________________ am the __________________________ of

_________________________. I declare, state and certify to all of the following:

1. I am aware of the provisions and requirements of California Government Code § 8350 et seq., the Drug Free Workplace Act of 1990.

2. I am authorized to certify, and do certify, on behalf of Contractor that a drug free workplace will be provided by Contractor by doing all of the following:

   A. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited in Contractor's workplace and specifying actions which will be taken against employees for violation of the prohibition;

   B. Establishing a drug-free awareness program to inform employees about all of the following:
      i. The dangers of drug abuse in the workplace;
      ii. Contractor's policy of maintaining a drug-free workplace;
      iii. The availability of drug counseling, rehabilitation and employee-assistance programs; and
      iv. The penalties that may be imposed upon employees for drug abuse violations;

   C. Requiring that each employee engaged in the performance of the Contract be given a copy of the statement required by subdivision (A), above, and that as a condition of employment by Contractor in connection with the Work of the Contract, the employee agrees to abide by the terms of the statement.

   D. Contractor agrees to fulfill and discharge all of Contractor's obligations under the terms and requirements of California Government Code § 8355 by, inter alia, publishing a statement notifying employees concerning: (a) the prohibition of any controlled substance in the workplace, (b) establishing a drug-free awareness program, and (c) requiring that each employee engaged in the performance of the Work of the Contract be given a copy of the statement required by California Government Code § 8355(a) and requiring that the employee agree to abide by the terms of that statement.

3. Contractor and I understand that if the District determines that Contractor has either: (a) made a false certification herein, or (b) violated this certification by failing to carry out and to implement the requirements of California Government Code § 8355, the Contract awarded herein is subject to termination, suspension of payments, or both. Contractor and I further understand that, should Contractor violate the terms of the Drug-Free Workplace Act of 1990, Contractor may be subject to debarment in accordance with the provisions of California Government Code § 8350 et seq.

4. Contractor and I acknowledge that Contractor and I are aware of the provisions of California Government Code § 8350 et seq. and hereby certify that Contractor and I will adhere to, fulfill, satisfy and discharge all provisions of and obligations under the Drug-Free Workplace Act of 1990.

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

Executed at __________________________

this __________ day of ________, 20___________.

_____________________

(Signature)

_____________________

(Handwritten or Typed Name)
GENERAL CONDITIONS

TABLE OF CONTENTS

ARTICLE 1: DEFINITIONS; GENERAL

1.1 District.
1.2 Contractor.
1.3 Architect.
1.4 The Work.
1.5 The Project.
1.6 Surety.
1.7 Subcontractors; Sub-Subcontractors.
1.8 Material Supplier.
1.9 Drawings and Specifications.
1.10 Special Conditions; Supplemental Conditions.
1.11 Contract Documents.
1.12 Intent and Correlation of Contract Documents.
1.12.2 Technical Terms.
1.12.3 Conflict in Contract Documents.
1.13 Shop Drawings; Samples; Product Data (“Submittals”).
1.14 Division of State Architect (“DSA”).
1.15 Project Inspector.
1.16 Contract Document Terms.
1.17 Contractor’s Superintendent.
1.18 Record Drawings.
1.19 Construction Manager.
1.20 Construction Equipment.
1.21 Site.
1.22 Field Clarifications.
1.23 Defective or Non-Conforming Work.
1.24 Delivery.
1.25 Notice to Proceed.
1.26 Progress Reports; Verified Reports.

ARTICLE 2: DISTRICT

2.1 Information Required of District.
2.1.1 Surveys; Site Information.
2.1.2 Permits; Fees.
2.1.3 Drawings and Specifications.
2.1.4 Furnishing of Information.

2.2 District’s Right to Stop the Work.
2.3 Partial Occupancy or Use.
2.3.1 District’s Right to Partial Occupancy.
2.3.2 No Acceptance of Defective or Nonconforming Work.
2.4 The Project Inspector.
2.4.1 Access to Work.
2.4.2 Limitations on Project Inspector.

ARTICLE 3: ARCHITECT; CONSTRUCTION MANAGER

3.1 Administration of the Contract.
3.1.1 Role of the Architect and Construction Manager.
3.1.2 Architect’s Periodic Site Inspections.
3.1.3 Contractor Responsibility for Construction Means, Methods and Sequences.
3.1.4 Review of Applications for Payment.
3.1.5 Rejection of Work.
3.1.6 Submittals.
3.1.6.1 Processing of Submittals Through Construction Manager.
3.1.6.2 Architect’s Review.
3.1.6.3 Time for Architect’s Review.
3.1.7 Changes to the Work; Change Orders.
3.1.8 Completion.
3.1.9 Interpretation of Contract Documents; Architect as Initial Arbiter of Disputes.
3.1.10 Request for Information.
3.1.11 Detail Drawings and Instructions.
3.1.11.1 Architect’s Additional Details.
3.1.11.2 Contractor Notice of Impacts.
3.2 Communications; Role of Construction Manager and Architect.

3.3 Termination of Architect; Substitute Architect or Construction Manager.

ARTICLE 4: THE CONTRACTOR

4.1 Contractor Review of Contract Documents.
   4.1.1 Examination of Contract Documents.
   4.1.2 Field Measurements.
   4.1.3 Dimensions; Layouts and Field Engineering.
   4.1.4 Work in Accordance with Contract Documents.

4.2 Site Investigation; Subsurface Conditions.
   4.2.1 Contractor Investigation.
   4.2.2 Subsurface Data.
   4.2.3 Subsurface Conditions.

4.3 Supervision and Construction Procedures.
   4.3.1 Supervision of the Work.
   4.3.2 Responsibility for the Work.
   4.3.3 Layouts.
   4.3.4 Construction Utilities.
   4.3.5 Existing Utilities; Removal, Relocation and Protection.
   4.3.6 Conferences and Meetings.
      4.3.6.1 Pre-Construction Conference.
      4.3.6.2 Progress Meetings.
      4.3.6.3 Special Meetings.
      4.3.6.4 Minutes of Meetings.
   4.3.7 Temporary Sanitary Facilities.
   4.3.8 Noise and Dust Control.
      4.3.8.1 Noise Control.
      4.3.8.2 Dust Control.
      4.3.8.3 Contractor Failure to Comply.
   4.3.9 Debris Recycling Statement.

4.4 Labor and Materials.
   4.4.1 Payment for Labor, Materials and Services.
   4.4.2 Employee Discipline.

4.4.3 Contractor’s Superintendent.
   4.4.4 Prohibition on Harassment.
      4.4.4.1 District’s Policy Prohibiting Harassment.
      4.4.4.2 Contractor’s Adoption of Anti-Harassment Policy.
      4.4.4.3 Prohibition on Harassment at the Site.

4.5 Taxes.

4.6 Permits, Fees and Notices; Compliance With Laws.
   4.6.1 Payment of Permits, Fees.
   4.6.2 Compliance With Laws.
   4.6.3 Notice of Variation from Laws.

4.7 Submittals.
   4.7.1 Purpose of Submittals.
   4.7.2 Contractor’s Submittals.
      4.7.2.1 Prompt Submittals.
      4.7.2.2 Approval of Subcontractor Submittals.
      4.7.2.3 Verification of Submittal Information.
      4.7.2.4 Contractor Responsibility for Deviations.
      4.7.2.5 No Performance of Work Without Architect Review.
   4.7.3 Architect Review of Submittals.
   4.7.4 Deferred Approval Items.

4.8 Materials and Equipment.
   4.8.1 Specified Materials, Equipment.
   4.8.2 Approval of Substitutions or Alternatives.
   4.8.3 Placement of Material and Equipment Orders.
   4.8.4 District’s Right to Place Orders for Materials and/or Equipment.

4.9 Safety.
   4.9.1 Safety Programs.
   4.9.2 Safety Precautions.
   4.9.3 Safety Signs, Barricades.
   4.9.4 Safety Notices.
   4.9.5 Safety Coordinator.
   4.9.6 Emergencies; First Aid.
   4.9.7 Hazardous Materials.
      4.9.7.1 General.
4.9.7.2 Prohibition on Use of Asbestos Construction Building Materials ("ACBMs").

4.9.7.3 Disposal of Hazardous Materials.

4.10 Maintenance of Documents.
   4.10.1 Documents at Site.
   4.10.2 Maintenance of Record Drawings.

4.11 Use of Site.

4.12 Clean-Up.

4.13 Access to the Work.

4.14 Information and Facilities/Services for the Project Inspector.

4.15 Patents and Royalties.

4.16 Cutting and Patching.


4.18 Wage Rates; Employment of Labor.
   4.18.1 Determination of Prevailing Rates.
   4.18.2 Payment of Prevailing Rates.
   4.18.3 Prevailing Rate Penalty.
   4.18.4 Payroll Records.
   4.18.5 Hours of Work.
      4.18.5.1 Limits on Hours of Work.
      4.18.5.2 Penalty for Excess Hours.
      4.18.5.3 Contractor Responsibility.
   4.18.6 Apprentices.
      4.18.6.1 Employment of Apprentices.
      4.18.6.2 Apprenticeship Certificate.
      4.18.6.3 Ratio of Apprentices to Journeymen.
      4.18.6.4 Exemption from Ratios.
      4.18.6.5 Contribution to Trust Funds.
   4.18.7 Employment of Independent Contractors.

4.19 Assignment of Antitrust Claims.

4.20 Limitations Upon Site Activities.

4.21 Labor Compliance Monitoring and Enforcement

4.21.1 Contractor/Subcontractor Registration

4.21.2 Compliance Monitoring and Enforcement

4.22 State Audit.

ARTICLE 5: SUBCONTRACTORS

5.1 Subcontracts.

5.2 Substitution of Listed Subcontractor.
   5.2.1 Substitution Process.
   5.2.2 Responsibility of Contractor Upon Substitution of Subcontractor.

5.3 Subcontractors’ Work.

5.4 Subcontractors’ Compliance With Subcontractor Registration and Labor Compliance Requirements.

ARTICLE 6: INSURANCE; INDEMNITY; BONDS

6.1 Workers’ Compensation Insurance; Employer’s Liability Insurance.

6.2 Commercial General Liability and Property Insurance.

6.3 Builder’s Risk “All-Risk” Insurance.

   6.4.1 Minimum Coverage Amounts.
   6.4.2 Required Qualifications of Insurers.

6.5 Evidence of Insurance; Subcontractor’s Insurance.
   6.5.1 Certificates of Insurance.
   6.5.2 Subcontractors’ Insurance.

6.6 Maintenance of Insurance.

6.7 Contractor’s Insurance Primary.

6.8 Indemnity.

6.9 Payment Bond; Performance Bond.

ARTICLE 7: CONTRACT TIME

7.1 Substantial Completion of the Work Within Contract Time.

7.2 Progress and Completion of the Work.
7.2.1 Time of Essence.
7.2.2 Substantial Completion.
7.2.3 Correction or Completion of the Work After Substantial Completion.
  7.2.3.1 Punchlist.
  7.2.3.2 Time for Completing Punchlist Items.
7.2.4 Final Completion.
7.2.5 Contractor Responsibility for Multiple Inspections.
7.2.6 Final Acceptance.
7.3 Construction Schedule.
  7.3.1 General Construction Schedule Requirements.
  7.3.2 Submittal of Preliminary Construction Schedule.
  7.3.3 Review of Preliminary Construction Schedule.
  7.3.4 Preparation of Submittal of Contract Construction Schedule.
  7.3.5 Revisions to Accepted Construction Schedule.
  7.3.6 Updates to Accepted Construction Schedule.
    7.3.6.1 Updated Construction Schedule Requirements.
    7.3.6.2 Monthly Submission of Updated Construction Schedule.
  7.3.7 Contractor Responsibility for Construction Schedule.
  7.3.8 Three (3) Week Look-Ahead Schedule; One (1) Week As Built Schedule.
  7.3.9 Unanticipated Unusually Severe Weather Conditions.
  7.3.10 Construction Schedules; Conditions Precedent To Progress Payment Disbursements.
  7.3.11 Contractor Schedule Compliance Obligations.
7.4 Adjustment to Contract Time.
  7.4.1 Excusable Delays.
  7.4.2 Compensable Delays.
  7.4.3 Inexcusable Delays.
  7.4.4 Adjustment of Contract Time.
    7.4.4.1 Procedure for Adjustment of Contract Time.
      7.4.4.1.1 Contractor Notice of Adjustment of Contract Time.
      7.4.4.1.2 Time Impact Evaluation.
    7.4.4.2 Limitations Upon Adjustment of Contract Time on Account of Delays.
7.5 Liquidated Damages.
7.6 District Right to Take-Over Work.

ARTICLE 8: CONTACT PRICE
8.1 Contract Price.
8.2 Cost Breakdown.
8.3 Progress Payments.
  8.3.1 Applications for Progress Payments.
  8.3.2 Initial Progress Payment Meeting.
  8.3.3 District’s Review of Applications for Progress Payments.
  8.3.4 Review of Applications for Progress Payments.
  8.3.5 District’s Disbursement of Progress Payments.
    8.3.5.1 Timely Distribution of Progress Payments.
    8.3.5.2 Untimely Disbursement of Progress Payments.
    8.3.5.3 District’s Right to Disburse Progress Payments by Joint Checks.
    8.3.5.4 No Waiver of Defective or Non-Conforming Work.
  8.3.6 Progress Payments for Changed Work.
  8.3.7 Materials or Equipment Not Incorporated into the Work.
8.3.7.1 Limitations Upon Payment.
8.3.7.2 Materials or Equipment Delivered and Stored at the Site.
8.3.7.3 Materials or Equipment Not Delivered or Stored at the Site.
8.3.7.4 Materials or Equipment in Fabrication or Transit.
8.3.8 Exclusions from Progress Payments.
8.3.9 Title to Work.
8.3.10 Substitute Security for Retention.
8.4 Final Payment.
8.4.1 Application for Final Payment.
8.4.2 Conditions Precedent to Disbursement of Final Payment.
8.4.3 Disbursement of Final Payment.
8.4.4 Waiver of Claims.
8.4.5 Claims Asserted After Final Payment.
8.5 Withholding of Payments.
8.6 Payments to Subcontractors.

ARTICLE 9: CHANGES
9.1 Changes in the Work.
9.2 Oral Order of Change in the Work.
9.3 Contractor Submittal of Data.
9.4 Adjustment to Contract Price and Contract Time on Account of Changes to the Work.
9.4.1 Adjustment to Contract Price.
9.4.1.1 Mutual Agreement.
9.4.1.2 Determination by the District.
9.4.1.3 Basis for Adjustment of Contract Price.
9.4.1.3.1 Labor.
9.4.1.3.2 Materials and Equipment.
9.4.1.3.3 Construction Equipment.
9.4.1.3.4 Mark-up on Costs of Changes to the Work.
9.4.1.4 Contractor Maintenance of Records.
9.4.2 Adjustments to Contract Time.
9.4.3 Addition or Deletion of Alternate Bid Item(s).
9.5 Change Orders.
9.6 Contractor Notice of Changes.
9.7 Disputed changes.
9.8 Emergencies.
9.9 Minor Changes in the Work.
9.10 Unauthorized Changes.

ARTICLE 10: SEPARATE CONTRACTORS
10.1 District’s Right to Award Separate Contracts.
10.2 District’s Coordination of Separate Contractors.
10.3 Mutual Responsibility.
10.4 Discrepancies or Defects.

ARTICLE 11: TESTS AND INSPECTIONS
11.1 Tests; Inspections; Observations.
11.1.1 Contractor’s Notice – On site Inspections.
11.1.2 Contractor’s Notice, Off-site Inspections.
11.1.3 Costs of Tests, Inspections and Approvals.
11.1.4 Testing/Inspection Laboratory.
11.1.5 Additional Tests, Inspections and Approvals.
11.2 Delivery of Certificates.
11.3 Timeliness of Tests, Inspections and Approvals.

ARTICLE 12: UNCOVERING AND CORRECTION OF WORK
12.1 Inspection of the Work.
12.1.1 Access to the Work.
12.1.2 Limitations Upon Inspections.
12.2 Uncovering of Work.
12.3 Rejection of Work.
12.4 Correction of Work.
12.5 Removal of Non-Conforming or Defective Work.
12.6 Failure of Contractor to Correct Work.
12.7 Acceptance of Defective or Non-Conforming Work.

ARTICLE 13: WARRANTIES
13.1 Workmanship and Materials.
13.2 Warranty Work.
13.3 Guarantee.
13.4 Survival of Warranties.

ARTICLE 14: SUSPENSION OF WORK
14.1 District’s Right to Suspend Work.

ARTICLE 15: TERMINATION
15.1 Termination for Cause.
  15.1.1 District’s Right to Terminate.
  15.1.2 District’s Rights Upon Termination.
  15.1.3 Completion by the Surety.
  15.1.4 Assignment and Assumption of Subcontracts.
  15.1.5 Costs of Completion.
  15.1.6 Contractor Responsibility for Damages.
  15.1.7 Conversion to Termination for Convenience.
  15.1.8 District’s Rights Cumulative.
15.2 Termination for Convenience of the District.

ARTICLE 16: MISCELLANEOUS
16.1 Governing Law.
16.2 Marginal Headings; Interpretation.
16.3 Successors and Assigns.
16.4 Cumulative Rights and Remedies; No Waiver.
16.5 Severability.
16.6 No Assignment by Contractor.
16.7 Gender and Number.
16.8 Independent Contractor Status.
16.9 Notices.
16.10 Disputes; Continuation of Work.
16.11 Claims Resolution.
  16.11.1 Claims.
    16.11.1.1 Claims Resolution Process.
  16.11.2 Government Code Claim Requirements.
  16.11.3 Arbitration.
  16.11.4 Inapplicability to Bid Bond.
16.12 Capitalized Terms.
16.13 Attorney’s Fees.
16.14 Waiver of Special/Consequential Damages.
16.15 Provisions Required by Law Deemed Inserted.
16.16 Days.
16.17 Prohibited Interests.
16.18 Entire Agreement.
GENERAL CONDITIONS

ARTICLE 1: DEFINITIONS; GENERAL

1.1 District. The “District” refers to VISTA UNIFIED SCHOOL DISTRICT and unless otherwise stated, includes the District's authorized representatives, including the Construction Manager, if a Construction Manager is designated, the District's Board of Trustees and the District's officers, employees, agents and representatives.

1.2 Contractor. The Contractor is the person or entity identified as such in the Agreement; references to “Contractor” include the Contractor’s authorized representative.

1.3 Architect. The Architect is the person or entity identified as such in the Agreement; references to the “Architect” include the Architect's authorized representative.

1.4 The Work. The “Work” is the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment or services provided or to be provided by the Contractor to fulfill the Contractor's obligations under the Contract Documents. The Work may constitute the whole or a part of the Project.

1.5 The Project. The Project is the total construction of which the Work performed by the Contractor under the Contract Documents which may be the whole or a part of the Project and which may include construction by the District or by separate contractors.

1.6 Surety. The Surety is the person or entity that executes, as surety, the Contractor's Labor and Material Payment Bond and/or Performance Bond.

1.7 Subcontractors; Sub-Subcontractors. A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work. “Subcontractor” does not include a separate contractor to the District or subcontractors of any separate contractor. A Sub-Subcontractor is a person or entity of any tier, who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site.

1.8 Material Supplier. A Material Supplier is any person or entity who only furnishes materials, equipment or supplies for the Work without fabricating, installing or consuming them in the Work.

1.9 Drawings and Specifications. The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing generally, the design, location and dimensions of the Work and may include without limitation, plans, elevations, sections, details, schedules or diagrams. The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards, criteria and workmanship for the Work and related services. The Drawings and Specifications are
intended to delineate and describe the Work and its component parts so as to permit skilled and competent contractors to bid upon the Work and prosecute the same to completion. Large scale Drawings shall take precedence over smaller scale Drawings as to shape and details of construction. Figured dimensions on Drawings shall govern, but Work which is not dimensioned shall be as directed or required by field conditions. Specifications shall govern as to materials, workmanship and installation procedures.

1.10 Special Conditions; Supplemental Conditions. If made a part of the Contract Documents, Special Conditions and Supplemental Conditions are special or supplemental provisions, not otherwise provided for in the Agreement or the General Conditions.

1.11 Contract Documents. The Contract Documents consist of the Agreement between the District and the Contractor, Conditions of the Contract (whether General, Special, Supplemental or otherwise), Drawings, Specifications, including addenda thereto issued prior to execution of the Agreement and any other documents listed in the Agreement. The Contract Documents shall include modifications issued after execution of the Agreement. The Contract Documents form the Contract for Construction.

1.12 Intent and Correlation of Contract Documents.

1.12.1 Work of the Contract Documents. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable therefrom as being necessary to produce the intended results. Organization of the Specifications into divisions, sections or articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. Where any portion of the Contract Documents is silent and information appears elsewhere in the Contract Documents, such other portions of the Contract Documents shall control.

1.12.2 Technical Terms. Unless otherwise stated in the Contract Documents, words or terms which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

1.12.3 Conflict in Contract Documents. Conflicts, inconsistencies or ambiguities in the Contract Documents shall be resolved by the Architect in accordance with Article 3.1.9 of the General Conditions; where conflicts or inconsistencies arise between the Drawings and the Specifications, in resolving such conflicts or inconsistencies, the Architect will be governed generally by the following standards: the Drawings are intended to describe matters relating to placement, type, quantity and the like; the Specifications are intended to describe matters relating to quality, materials, compositions, manufacturers and the like. If conflicts exist between
portions of the Contract Documents regarding the quality of any item, product, equipment or materials, unless otherwise directed or authorized by the District, the Contractor shall provide the item, product, equipment or material of the highest or more stringent quality.

1.13 Shop Drawings; Samples; Product Data (“Submittals”). Shop Drawings are diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-Subcontractor, manufacturer, Material Supplier, or distributor to illustrate some portion of the Work. Samples are physical examples of materials, equipment or workmanship forming a part of, or to be incorporated into the Work. Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work. Shop Drawings, Samples and Product Data prepared or furnished by the Contractor or any of its Subcontractors or Material Suppliers are collectively referred to as “Submittals”.

1.14 Division of State Architect (“DSA”). The DSA is the California Division of the State Architect including without limitation the DSA's Office of Construction Services, Office of Design Services and the Office of Regulatory Services; references to the DSA in the Contract Documents shall mean the DSA, its offices and its authorized employees and agents. The authority of the DSA over the Work and the performance thereof shall be as set forth in the Contract Documents and Title 24 of the California Code of Regulations.

1.15 Project Inspector. The Project Inspector is the individual designated and employed by the District in accordance with the requirements of Title 24 of the California Code of Regulations. The Project Inspector shall be authorized to act on behalf of the District as provided for in the Contract Documents and in Title 24 of the California Code of Regulations, as the same may be amended from time to time.

1.16 Contract Document 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 Architect. 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.

1.17 Contractor's Superintendent. The Contractor's Superintendent is the individual employed by the Contractor whose principal responsibility shall be the supervision and coordination of the Work; the Contractor's Superintendent shall not perform routine construction labor.

1.18 Record Drawings. The Record Drawings are a set of the Drawings marked by the Contractor during the performance of the Work to indicate completely and accurately the actual as-built condition of the Work. The Record Drawings shall be sufficient for
a capable and qualified draftsman to modify the Drawings to reflect and indicate the Work actually in place at Final Completion of the Work.

1.19 Construction Manager. The Construction Manager is an independent contractor retained by the District and is authorized and empowered to act on behalf of the District as set forth in the Contract Documents. The District reserves the right to remove or replace the Construction Manager prior to completion of the Work without adjustment of the Contract Price or the Contract Time or otherwise affect, limit or restrict Contractor's obligations hereunder.

1.20 Construction Equipment. “Construction Equipment” is equipment utilized for the performance of any portion of the Work, but which is not incorporated into the Work.

1.21 Site. The Site is the physical area designated in the Contract Documents for Contractor's performance, construction and installation of the Work.

1.22 Field Clarifications. A written or graphic document consisting of supplementary details, instructions or information issued on behalf of the District which clarifies or supplements the Contract Documents and which becomes a part of the Contract Documents upon issuance. Field Clarifications do not constitute an adjustment of the Contract Time or the Contract Price, unless a Change Order relating to a Field Clarification is authorized and issued under the Contract Documents.

1.23 Defective or Non-Conforming Work. Defective or non-conforming 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 or industry; (c) not being in compliance with the requirements of any inspection, reference, standard, test, or approval required by the Contract Documents; or (d) damage occurring prior to Final Completion of all of the Work.

1.24 Delivery. The term “delivery” used in conjunction with any equipment, materials or other items to be incorporated into the Work shall mean the unloading and storage in a protected condition pending incorporation into the Work.

1.25 Notice to Proceed. The Notice to Proceed is the written notice issued by or on behalf of the District to the Contractor authorizing the Contractor to proceed with commencement of the Work and which establishes the date for commencement of the Contract Time.

1.26 Progress Reports; Verified Reports. Progress Reports, if required, are written reports prepared by the Contractor and periodically submitted to the District in the form and content as required by the Contract Documents. Verified Reports are periodic written reports prepared by the Contractor and submitted to the DSA; Verified Reports shall be in such form and content as required by the applicable provisions of Title 24 of the California Code of Regulations. A material obligation of the Contractor is the preparation of complete and accurate Progress Reports, if required, and Verified Reports as well as the timely submission of the same.
ARTICLE 2: DISTRICT

2.1 Information Required of District.

2.1.1 Surveys; Site Information. Information, if any, concerning physical characteristics of the Site, including without limitation, surveys, soils reports, and utility locations, to be provided by the District are set forth in the Contract Documents. Information not provided by the District or necessary information in addition to that provided by the District concerning physical characteristics of the Site which is required shall be obtained by Contractor without adjustment to the Contract Price or the Contract Time.

2.1.2 Permits; Fees. Except as otherwise provided in the Contract Documents, the District shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities which relate to the Work of the Contractor under the Contract Documents. If permits and fees are designated as the responsibility of the Contractor under the Contract Documents, the Contractor shall be solely responsible for obtaining the same; the cost of such permits or fees and any costs incurred by the Contractor in obtaining such permits shall be included within the Contract Price.

2.1.3 Drawings and Specifications. Except as otherwise provided for in the Contract Documents, the District shall furnish the Contractor, free of charge, the number of digital copies of the Drawings and the Specifications as set forth in the Special Conditions. All of the Drawings and the Specifications provided by the District to the Contractor remain the property of the District; the Contractor shall not use the Drawings or the Specifications in connection with any other work of improvement other than the Work of the Project.

2.1.4 Furnishing of Information. Information or services to be provided by the District under the Contract Documents shall be furnished by the District with reasonable promptness to avoid delay in the orderly progress of the Work. Information about existing conditions furnished by the District under the Contract Documents is obtained from sources believed to be reliable, but the District neither guarantees nor warrants that such information is complete and accurate. The Contractor shall verify all information provided by the District. To the extent that the Contract Documents depict existing conditions on or about the Site, or the Work involves the renovation, removal or remodeling of existing improvements or the Work involves any tie-in or other connection with any existing improvements, the conditions and/or existing improvements depicted in the Contract Documents are as they are believed to exist. Contractor shall bear the risk of any variations between conditions or existing improvements depicted in the Contract Documents and those conditions or existing improvements actually encountered in the performance of the Work. Subject to the provisions of Article 4.2.3, the existence of any variations between conditions or existing improvements depicted in the Contract Documents and those actually encountered in the performance of the
Work shall not result in any District liability therefor, nor shall any such variations result in an adjustment of the Contract Time or the Contract Price.

2.2 District’s Right to Stop the Work. In addition to the District’s right to suspend the Work or terminate the Contract pursuant to the Contract Documents, the District, may, by written order, direct the Contractor to stop the Work, or any portion thereof, until the cause for such stop work order has been eliminated if the Contractor. If the Contractor fails within seven (7) days to correct Work which is not in conformity and in accordance with the requirements of the Contract Documents, or (ii) otherwise fails to carry out the Work in conformity and accordance with the Contract Documents, the District reserves the right to remedy such action. The right of the District to stop the Work hereunder shall not be deemed a duty on the part of the District to exercise such right for the benefit of the Contractor or any other person or entity, nor shall the District’s exercise of such right waive or limit the exercise of any other right or remedy of the District under the Contract Documents or at law.

2.3 Partial Occupancy or Use.

2.3.1 District’s Right to Partial Occupancy. The District may occupy or use any completed or partially completed portion of the Work, provided that: (i) the District has obtained the consent of, or is otherwise authorized by, public authorities with jurisdiction thereof, to so occupy or use such portion of the Work and (ii) the District and the Contractor have accepted, in writing, the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, utilities, damage to the Work, insurance and the period for correction of the Work and commencement of warranties required by the Contract Documents for such portion of the Work partially used or occupied by the District. If the Contractor and the District are unable to agree upon the matters set forth in (ii) above, the District may nevertheless use or occupy any portion of the Work, with the responsibility for such matters subject to resolution in accordance with the Contract Documents. Immediately prior to such partial occupancy or use of the Work, or portions thereof, the District, the Project Inspector, the Contractor and the Architect shall jointly inspect the portions of the Work to be occupied or to be used to determine and record the condition of the Work. Repairs, replacements or other corrective action noted in such inspection shall be promptly performed and completed by the Contractor so that the portion of the Work to be occupied or used by the District is in conformity with the requirements of the Contract Documents and the District’s occupancy or use thereof is not impaired. The District’s use or occupancy of the Work or portions thereof pursuant to the preceding shall not be deemed “completion” of the Work as that term is used in Public Contract Code §7107.

2.3.2 No Acceptance of Defective or Nonconforming Work. Unless otherwise expressly agreed upon by the District and the Contractor, the District's partial occupancy or use of the Work or any portion thereof, shall not constitute the District's acceptance of the Work not complying with the requirements of the Contract Documents or which is otherwise defective.
2.4 **The Project Inspector.** In addition to the authority and rights of the Project Inspector as provided for elsewhere in the Contract Documents, all of the Work shall be performed under the observation of the Project Inspector. The performance of the duties of the Project Inspector under the Contract Documents shall not relieve or limit the Contractor’s performance of its obligations under the Contract Documents.

2.4.1 **Access to Work.** The Contractor shall provide the Project Inspector with access to all parts of the Work at any time, wherever located and whether partially or completely fabricated, manufactured, furnished or installed. The Project Inspector shall have the authority to stop Work if the Work is not in conformity with the Contract Documents.

2.4.2 **Limitations on Project Inspector.** 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.

**ARTICLE 3: ARCHITECT; CONSTRUCTION MANAGER**

3.1 **Administration of the Contract.**

3.1.1 **Role of the Architect and Construction Manager.** The Architect and the Construction Manager will provide administration of the Contract as described in the Contract Documents, and will be the District’s representatives during construction until the time that Final Payment is due the Contractor under the Contract Documents. The Architect and Construction Manager will advise and consult with the District and the Project Inspector with respect to the administration of the Contract and the Work. The Architect is authorized to act on behalf of the District to the extent provided for in the Contract Documents; and shall have the responsibilities and powers established by law, including Title 24 of the California Code of Regulations. The Architect and Construction Manager are authorized to stop the Work whenever deemed necessary in the sole discretion of the Architect or the Construction Manager to insure that the Work is completed in accordance with the Contract Documents.

3.1.2 **Architect’s Periodic Site Visits.** The Architect will visit the Site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the completed Work and to determine, in general, if the Work is being performed in a manner indicating that the Work, when completed, will be in accordance with the Contract Documents. The Architect will not be required to make exhaustive or continuous Site inspections to check quality or quantity of the Work. On the basis of Site observations as an architect, the Architect will keep the District informed of the progress of the Work, and will endeavor to guard the District against defects and deficiencies in the Work.
3.1.3 **Contractor Responsibility for Construction Means, Methods and Sequences.** Neither the Architect or the Construction Manager will have control over or charge of and be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, these being solely the Contractor's responsibility. Neither the Architect nor Construction Manager will have control over or charge of and be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.

3.1.4 **Review of Applications for Payment.** In accordance with Article 8 hereof, the Architect and Construction Manager will review the Contractor's Applications for Progress Payments and for Final Payment, evaluate the extent of Work performed and the amount properly due the Contractor on such Application for Payment.

3.1.5 **Rejection of Work.** The Architect is authorized to reject Work which 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 such 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.

3.1.6 **Submittals.**

3.1.6.1 **Processing of Submittals Through Construction Manager.** Submittals required by the Contract Documents shall be prepared by or on behalf of the Contractor in accordance with the requirements of the Contract Documents. Submittals shall be transmitted by the Contractor to the Construction Manager for distribution by the Construction Manager to the Architect and the District. Upon completion of the Architect's review of a Submittal, the Construction Manager shall transmit the reviewed Submittal to the Contractor for the Contractor's distribution to its Subcontractor(s) and other affected parties.

3.1.6.2 **Architect's Review.** The Architect will review and approve or take other appropriate action upon the Contractor's Submittals, but only for the limited purpose of checking for general conformance with information given and the design concept expressed in the Contract Documents. Review of Submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's Submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect's review of Submittals shall not constitute approval of safety measures, programs or precautions or, unless otherwise specifically
stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item in a Submittal shall not indicate approval of an assembly of which the item is a component with the Submittal(s) required and relating to such assembly have been reviewed by the Architect.

3.1.6.3 Time for Architect’s Review. The Architect’s review of Submittals will be conducted promptly so as not to delay or hinder the progress of the Work or the activities of the Contractor, the District or the District’s separate contractors while allowing sufficient time, in the Architect’s reasonable professional judgment, to permit adequate review of Submittals. The foregoing notwithstanding, the Architect’s review and return of Submittals will conform with the time limits and other conditions, if any, set forth in the Specifications or the Submittal Schedule if the Submittal Schedule is required by other provisions of the Contract Documents.

3.1.7 Changes to the Work; Change Orders. The Architect and Construction Manager will prepare Change Orders, and with the written approval of the District, may authorize minor Changes in the Work which do not result in adjustment of the Contract Time or the Contract Price.

3.1.8 Completion. The Architect will conduct observations to determine the date(s) of Substantial Completion and the date(s) of Final Completion, will receive and forward to the District, for the District's review and records, written warranties and related documents required by the Contract Documents and assembled by the Contractor, and will verify that the Contractor has complied with all requirements of the Contract Documents and is entitled to receipt of Final Payment.

3.1.9 Interpretation of Contract Documents; Architect as Initial Arbiter of Disputes. The Architect will interpret and decide matters concerning the requirements of the Contract Documents on written request of either the District or the Contractor. The Architect's response to such requests will be made with reasonable promptness and within the time limits agreed upon, if any. If no agreement is reached establishing the time for the Architect’s review and response to requests under this Article 3.1.9, the Architect shall be afforded a fifteen (15) day period after receipt of such request to review and respond thereto. Interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both the District and the Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions so rendered in good faith. The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents. If there is any disagreement, dispute or other matter in controversy between the District and the Contractor, in addition to other requirements established by the Contract Documents or by law, the submission of the same to
the Architect for its decision shall be a condition precedent to initiation of dispute resolution procedures.

3.1.10 Request for Information. If the Contractor encounters any condition which the Contractor believes, in good faith and with reasonable basis, is the result of an ambiguity, conflict, error or omission in the Contract Documents (collectively "the Conditions"), it shall be affirmative obligation of the Contractor to timely notify the Architect, in writing, of the Conditions encountered and to request information from the Architect necessary to address and resolve any such Conditions before proceeding with any portion of the Work affected or which may be affected by such Conditions. 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 Architect to address and resolve any Conditions the Contractor shall act with promptness in submitting any such written request so as to allow the Architect a reasonable period of time to review, evaluate and respond to any such request, taking into account the then current status of the progress and completion of the Work and the actual or potential impact of any such 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 Architect. The Architect's responses to any such Contractor request for information shall conform with the standards and time frame set forth in Article 3.1.9 of these General Conditions. The foregoing provisions notwithstanding, in the event that the Architect reasonably determines that any of Contractor's request(s) for information: (i) does not reflect adequate or competent supervision or coordination by the Contractor or any Subcontractor; or (ii) does not reflect the Contractor's adequate or competent knowledge of the requirements of the Work or the Contract Documents; or (iii) is not justified for any other reason, Contractor shall be liable to the District for all costs incurred by the District associated with the processing, reviewing, evaluating and responding to any such request for information, including without limitation, fees of the Architect and any other design consultant to the Architect or the District. In responding to any of Contractor's request(s) for information, the Architect shall, in the response, indicate if the Architect has made the determination pursuant to the preceding sentence and, if so, the amount of costs to be borne by the Contractor for the processing, review, evaluation and response to the request for information. Thereafter, the District is authorized to deduct such amount from any portion of the Contract Price then or thereafter due the Contractor.

3.1.11 Detail Drawings and Instructions.

3.1.11.1 Architect's Additional Details. In case of ambiguity, conflict, or lack of information, Architect shall furnish additional instructions by means of drawings or otherwise, necessary for proper execution of the Work. All such drawings and instructions shall be consistent with Contract Documents, true
developments thereof, and reasonably inferable therefrom. Such additional instructions shall be furnished with reasonable promptness, but not more than fourteen (14) days, provided that Contractor informs Architect and District in writing of the relationship of the requested critical path of the Construction Schedule. Architect will furnish necessary additional details to more fully explain the Work, which details shall be deemed part of the Contract Documents.

3.11.2 Contractor Notice of Impacts. If the Contractor believes that detail drawings issued by the Architect reflects a change to the scope of work or additional work beyond that reflected in the Contract Documents or reasonably referable therefrom, the Contractor shall give written notice thereof to Architect and District within five (5) days of the receipt of same. If the Contractor does not give the Architect and District such written notice within five (5) days, the details shall be deemed to be reasonable development of the Work depicted in the Contract Documents without adjustment of the Contract Time or the Contract Price. If notice is given by the Contractor, the Contractor shall set forth in detail the extent of Contract Price or Contract Time adjustments resulting from such details along with the basis upon which the requested Contract Time/Contract Price adjustment is computed. The Architect will review any such notice and request for adjustment of the Contract Time/Contract Price and render the Architect’s decision in accordance with the Contract Documents.

3.2 Communications; Role of Construction Manager and Architect. All communications regarding the Work, the performance thereof or the Contract Documents shall be in writing; verbal communications shall be reduced to writing. Communications between the Contractor and the District or the Architect shall be through the Construction Manager. Communications between separate contractors, if any, shall be through the Construction Manager. All written communications between the Contractor and any Subcontractor, Material Supplier or others directly or indirectly engaged by the Contractor to perform or provide any portion of the Work shall be available to the District, the Construction Manager and the Architect for review, inspection and reproduction as may be requested from time to time. Failure or refusal of the Contractor to permit the District, the Construction Manager or Architect to review, inspect or reproduce such written communications may be deemed a default of Contractor hereunder.

3.3 Termination of Architect or Construction Manager; Substitute Architect or Construction Manager. In case of termination of employment of the Architect or the Construction Manager, the District shall appoint a substitute architect or substitute construction manager whose status under the Contract Documents shall be that of the Architect or the Construction Manager, as applicable.

ARTICLE 4: THE CONTRACTOR

4.1 Contractor Review of Contract Documents.
4.1.1 Examination of Contract Documents. The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the District pursuant to the Contract Documents and shall at once report to the Architect any errors, inconsistencies or omissions discovered. If the Contractor performs any Work knowing, or with reasonable diligence should have known that, it involves an error, inconsistency or omission in the Contract Documents without prior notice to the Architect of the same, the Contractor shall assume full responsibility for such performance and shall bear all attributable costs for correction of the same.

4.1.2 Field Measurements. Prior to commencement of the Work, or portions thereof, the Contractor shall take field measurements and verify field conditions at the Site and shall carefully compare such field measurements and conditions and other information known to the Contractor with information provided in the Contract Documents. Errors, inconsistencies or omissions discovered shall be reported to the Architect at once.

4.1.3 Dimensions; Layouts and Field Engineering. Unless otherwise expressly provided, dimensions indicated in the Drawings are intended for reference only. The Drawings are intended to be diagrammatic and schematic in nature; the Contractor shall be solely responsible for coordinating the Work of the Contract Documents. All field engineering required for laying out the Work and establishing grades for earthwork operations shall be by the Contractor at its expense. Any field engineering or other engineering to be provided or performed by the Contractor under the Contract Documents and required or necessary for the proper execution or installation of the Work shall be provided and performed by the an engineer duly registered under the laws of the State of California in the engineering discipline for such portion of the Work. Upon commencement of any item of the Work, the Contractor is responsible for dimensions of such item of Work and related Work; without adjustment of the Contract Time or Contract Price, the Contractor is responsible for making component parts of the Work fit together properly.

4.1.4 Work in Accordance With Contract Documents. The Contractor shall perform all of the Work in strict conformity with the Contract Documents and approved Submittals.

4.2 Site Investigation; Subsurface Conditions.

4.2.1 Contractor Investigation. The Contractor shall be responsible for, and by executing the Agreement acknowledges, that it has carefully examined the Site and has taken all steps it deems reasonably necessary to ascertain all conditions which may affect the Work, or the cost thereof, including, without limitation, conditions bearing upon transportation, disposal, handling or storage of materials; availability of labor and materials; access to the Site; and the physical conditions and the character of equipment, materials, labor and services necessary to perform the Work. Any failure of the Contractor to do so will not relieve it from the responsibility for fully and completely performing all Work without adjustment to the Contract
Price or the Contract Time. The District assumes no responsibility to the Contractor for any understandings or representations concerning conditions or characteristics of the Site, or the Work, made by any of its officers, employees or agents prior to the execution of the Agreement, unless such understandings or representations are expressly set forth in the Agreement.

4.2.2 Subsurface Data. By executing the Agreement, the Contractor acknowledges that it has examined the boring data and other subsurface data available and satisfied itself as to the character, quality and quantity of surface and subsurface materials, including without limitation, obstacles which may be encountered in performance of the Work, insofar as this information is reasonably ascertainable from an inspection of the Site, review of available subsurface data and analysis of information furnished by the District under the Contract Documents. Subsurface data or other soils investigation report provided by the District hereunder are not a part of the Contract Documents. Information contained in such data or report regarding subsurface conditions, elevations of existing grades, or below grade elevations are approximate only and is neither guaranteed or warranted by the District to be complete and accurate. The Contractor shall examine all boring and other subsurface data to make its own independent interpretation of the subsurface conditions and acknowledges that its bid is based upon its own opinion of the conditions which may be encountered.

4.2.3 Subsurface Conditions. If the Work under the Contract Documents involves digging trenches or other excavations that extend deeper than four feet below the surface, the Contractor shall promptly and before the following conditions are disturbed, notify the Project Inspector, in writing, of any: (i) material that the Contractor believes may be material that is hazardous waste, as defined in California Health and Safety Code § 25117, that is required to be removed to a Class I or Class II or Class III disposal site in accordance with provisions of existing law; (ii) subsurface or latent physical conditions at the site differing from those indicated; or (iii) unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in the Work or the character provided for in the Contract Documents. If upon notice to the District of the conditions described above and upon the District's investigation thereof, the District determines that the conditions so materially differ or involve such hazardous materials which require an adjustment to the Contract Price or the Contract Time, the District shall issue a Change Order in accordance with Article 9 hereof. In accordance with California Public Contract Code §7104, any dispute arising between the Contractor and the District as to any of the conditions listed in (i), (ii) or (iii) above, shall not excuse the Contractor from the completion of the Work within the Contract Time and the Contractor shall proceed with all Work to be performed under the Contract Documents. The District reserves the right to terminate the Contract pursuant to Article 15.2 hereof should the District determine not to proceed because of any condition described in (i), (ii) or (iii) above.
4.3 Supervision and Construction Procedures.

4.3.1 Supervision of the Work. The Contractor shall supervise and direct performance of the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract Documents, unless Contract Documents give other specific instructions concerning these matters. The Contractor shall be responsible for inspection of completed or partially completed portions of Work to determine that such portions are in proper condition to receive subsequent Work.

4.3.2 Responsibility for the Work. The Contractor shall be responsible to the District for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and all other persons performing any portion of the Work under a contract with the Contractor. The Contractor shall not be relieved of the obligation to perform the Work in accordance with the Contract Documents either by activities or duties of the Construction Manager, Project Inspector or the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

4.3.3 Layouts. The Contractor is solely responsible for laying-out the Work so that construction of the Work conforms to the requirements of the Contract Documents and so that all component parts of the Work are coordinated. The Contractor shall be responsible for maintenance and preservation of benchmarks, reference points and stakes for the Work. The cost of maintenance and preservation of benchmarks, reference points and stakes shall be included within the Contract Price. The Contractor shall be solely responsible for all loss or costs resulting from the loss, destruction, disturbance or damage of benchmarks, reference points or stakes.

4.3.4 Construction Utilities. The District will furnish and pay the costs of utility services for the Work as set forth in the Special Conditions; all other 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.

4.3.5 Existing Utilities; Removal, Relocation and Protection. In accordance with California Government Code § 4215, the District shall assume the responsibility for the timely removal, relocation, or protection of existing main or trunkline utility facilities located on the Site which are not identified in the Drawings, Specifications or other Contract Documents. Contractor shall be compensated for the costs of locating, repairing damage not due to the Contractor's failure to exercise
reasonable care, and removing or relocating such utility facilities not indicated in the Drawings, Specifications and other Contract Documents with reasonable accuracy and for equipment on the Site necessarily idled during such work. Contractor shall not be assessed Liquidated Damages for delay in completion of the Work when such delay is caused by the failure of the District or the District of the utility to provide for removal or relocation of such utility facilities. Nothing in this Article 4.3.5 shall be deemed to require the District to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the Site can be inferred from the presence of other visible facilities, such as buildings, meters and junction boxes, on or adjacent to the Site. If the Contractor encounters utility facilities not identified by the District in the Drawings, Specifications, or other Contract Documents, the Contractor shall immediately notify, in writing, the District, the Project Inspector, the Architect, the Construction Manager and the utility owner. In the event that such utility facilities are owned by a public utility, the public utility shall have the sole discretion to perform repairs or relocation work or permit the Contractor to do such repairs or relocation work at a reasonable price.

4.3.6 Conferences and Meetings. A material obligation of the Contractor under the Contract Documents is the attendance at required meetings by the Contractor's supervisory personnel for the Work and the Contractor's management personnel 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, Material Suppliers at meetings and conferences relating to the Work as necessary, appropriate or as requested by the District.

4.3.6.1 Pre-Construction Conference. The Contractor’s representatives (and representatives of Subcontractors as requested by the District) shall attend a Pre-Construction Conference at such time and place as designated by the District. The Pre-Construction Conference will generally address the requirements of the Work and Contract Documents, and to establish construction procedures. Subject matters of the Pre-Construction Conference will include as appropriate: (a) administrative matters, including an overview of the respective responsibilities of the District, Architect, Construction Manager, Contractor, Subcontractor, Project Inspector and others performing any part of the Work or services relating to the Work; (b) Submittals; (c) Changes and Change Order processing; (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) communication procedures, including the handling of Requests for Information; (h) emergency and safety procedures; (i) Site visitor policies; (j) conduct of Contractor/Subcontractor personnel at the Site; and (k) punchlist/close-out procedures.
4.3.6.2 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 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.

4.3.6.3 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.

4.3.6.4 Minutes of Meetings. Following conclusion of the Pre-Construction Conference, Progress Meetings and Special Meetings, 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) dates 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.

4.3.7 Temporary 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.

4.3.8 Noise and Dust Control.

4.3.8.1 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 and only as permitted 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 site, at the District’s request, the Contractor shall schedule the performance of all such Work around normal site hours or make other arrangements so that the Work does not cause such disruption or disturbance. In no event shall such arrangements result in adjustment of the Contract Price or the Contract Time.

4.3.8.2 Dust Control. The Contractor shall be fully and solely responsible for maintaining and keeping 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. Such 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 the sole party 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 site, at the District’s request, the Contractor shall schedule the performance of all such Work around normal site hours and make other arrangements so that the Work does not cause such disruption or disturbance. In no event shall such arrangements result in adjustment of the Contract Price or the Contract Time.

4.3.8.3 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, upon notice from the District, Architect, Project Inspector or Construction Manager to the Contractor, 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 such 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 such actions shall be the sole responsibility of, and be borne by, the Contractor; the District may deduct such amounts from the Contract Price then or thereafter due the Contractor.

4.3.9 Debris Recycling; Contractor Submittal of Debris Recycling Statement. The Contractor and all Subcontractors shall maintain current, complete and
accurate records of debris and other waste (collectively “Waste Materials”) resulting from performance of the Work. The Contractor shall compile the records of the Contractor and all Subcontractors on a monthly basis. Based on such compilation, the Contractor shall, each month during performance of the Work, complete the form of Debris Recycling Statement (Attachment C to the Special Conditions) for itself and all Subcontractors performing Work at the Site. The Debris Recycling Statement must be executed by the Contractor’s Superintendent, Construction Manager or other authorized employee; the completed/executed form of Debris Recycling Statement shall be submitted by the Contractor to the District each month during the Work concurrently with the Contractor’s submission of its Applications for Progress Payment. During the Contract term, monthly records for each calendar year shall be compiled by the Contractor’s Superintendent and submitted to the District’s Project Manager, no later than January 15th of the following year.

4.4 Labor and Materials.

4.4.1 Payment for Labor, Materials and Services. Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, Construction Equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated in the Work.

4.4.2 Employee Discipline. The Contractor shall enforce strict discipline and good order among the Contractor’s employees, the employees of any Subcontractor or Sub-subcontractor, and all other persons performing any part of the Work at the Site. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. The Contractor shall dismiss from its employ and direct any Subcontractor or Sub-subcontractor to dismiss from their employment any person deemed by the District to be unfit or incompetent to perform Work and thereafter, the Contractor shall not employ nor permit the employment of such person for performance of any part of the Work without the prior written consent of the District, which consent may be withheld in the reasonable discretion of the District.

4.4.3 Contractor’s Superintendent. Contractor shall employ a competent Superintendent who is fluent in spoken and written English along with necessary assistants who shall be in attendance at the Site at all times during the performance of Work at the Site. Before commencing the Work, Contractor shall designate in writing the name, qualifications, experience and references from owners and architects on previous projects for Contractor’s proposed Superintendent who, on approval of District, shall have full authority to represent and act for Contractor. All directions given to the Superintendent shall be as binding as if given to Contractor. A facsimile of the signatures of the authorized representatives of Contractor shall be submitted to Architect and District. The Contractor’s communications relating to the Work or the Contract Documents shall be through the Contractor’s
Superintendent. The Superintendent shall represent the Contractor and communications given to the Superintendent shall be binding as if given to the Contractor. The Contractor shall dismiss the Superintendent or any of his/her assistants if they are deemed, in the sole reasonable judgment of the District, to be unfit, incompetent or incapable of performing the functions assigned to them. In such event, the District shall have the right to approve of the replacement superintendent or assistant. Unless expressly excused by the District, the Contractor’s Superintendent shall attend all Project meetings as the Contractor’s representative.

4.4.4 Prohibition on Harassment.

4.4.4.1 District’s Policy Prohibiting Harassment. 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.

4.4.4.2 Contractor’s Adoption of Anti-Harassment Policy. Contractor shall adopt and implement all appropriate and necessary policies prohibiting any form of discrimination in the workplace, including without limitation harassment on the basis of any classification protected under local, state or federal law, regulation or policy. 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. Contractor shall require that any Subcontractor or Sub-subcontractor performing any portion of the Work to adopt and implement policies in conformity with this Article 4.4.4.

4.4.4.3 Prohibition on Harassment at the Site. Contractor shall not permit any person, whether employed by Contractor, a Subcontractor, Sub-subcontractor, or any other person or entity, performing any Work at or about the Site to engage in any prohibited form of harassment. Any such person engaging in a prohibited form of harassment directed to any individual performing or providing any portion of the Work at or about the Site shall be subject to appropriate sanctions in accordance with the anti-harassment policy adopted and implemented pursuant to Article 4.4.4.2 above. 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 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. Contractor and the Surety shall defend, indemnify and hold harmless the District and its employees, officers, board of trustees, agents, and representatives from any and all claims, liabilities, judgments, awards, actions or causes of actions, including without limitation, attorneys' fees, which arise out of, or pertain in any manner to: (i) the assertion by any person dismissed from performing or providing work at the direction of the District pursuant to this Article 4.4.4.3; 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.

4.5 Taxes. The Contractor shall pay, without adjustment of the Contract Price, all sales, consumer, use and other taxes for the Work or portions thereof provided by the Contractor under the Contract Documents.

4.6 Permits, Fees and Notices; Compliance With Laws.

4.6.1 Payment of Permits, Fees. The District shall secure and pay for the building permits, other permits, governmental fees, licenses and inspections necessary or required for the proper execution and completion of the Work, except as otherwise provided in the Special Conditions. If permits/approvals are designated in the Special Conditions as the Contractor’s responsibility, the Contractor shall obtain such permits/approvals at its sole cost and expense without adjustment of the Contract Price. Fees, costs or other expenses associated with or arising in connection with Deferred Approval Items shall be the responsibility of the Contractor without adjustment of the Contract Price.
4.6.2 **Compliance With Laws.** The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and other orders of public authorities bearing on performance of the Work.

4.6.3 **Notice of Variation From Laws.** If the Contractor knows, or has reason to believe, that any portion of the Contract Documents are at variance with applicable laws, statutes, ordinances, building codes, regulations or rules, the Contractor shall promptly notify the Architect, Construction Manager and the Project Inspector, in writing, of the same. If the Contractor performs Work knowing, or with reasonable diligence should have known, it to be contrary to laws, statutes, ordinances, building codes, rules or regulations applicable to the Work without such notice to the Architect and the Project Inspector, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs arising or associated therefrom, including without limitation, the removal, replacement or correction of the same.

4.7 **Submittals.**

4.7.1 **Purpose of Submittals.** Shop Drawings, Product Data, Samples and similar submittals (collectively “Submittals”) are not Contract Documents. The purpose for submission of Submittals is to demonstrate, for those portions of the Work for which Submittals are required, the manner in which the Contractor proposes to provide or incorporate such item of the Work in conformity with the information given and the design concept expressed in the Contract Documents.

4.7.2 **Contractor’s Submittals.**

4.7.2.1 **Prompt Submittals.** The Contractor shall review, approve and submit to the Architect or such other person or entity designated by the District, the number of copies of Submittals required by the Contract Documents. All Submittals required by the Contract Documents shall be prepared, assembled and submitted by the Contractor to the Architect within the time frames set forth in the Submittal Schedule incorporated and made a part of the Approved Construction Schedule prepared and submitted by the Contractor pursuant to Article 7 of these General Conditions. Contractor’s submission of Submittals in conformity with the Submittal Schedule is a material obligation of the Contractor. In the event of Contractor’s failure or refusal to deliver Submittals to the Architect in accordance with the Submittal Schedule, the Contractor shall be subject to per diem assessments in the amount set forth in the Special Conditions for each day of delayed submission for any Submittal beyond the date set forth in the Submittal Schedule for Contractor’s submission of such Submittal. Contractor and District acknowledge and agree that if Contractor shall fail to deliver Submittals in accordance with the Submittal Schedule, the District will incur costs and expenses not contemplated by the Contract Documents, the exact amount of which are difficult to ascertain and fix. Contractor and the District acknowledge and agree that the per diem assessment for delayed submission of Submittals set forth in the Special
Conditions represents a reasonable estimate of costs and expenses the District will incur as a result of delayed submission of Submittals and that the same is not a penalty. Notwithstanding Contractor's submission of all required Submittals in accordance with the Submittal Schedule, in the event that the District or the Architect reasonably determines that all or any portion of such Submittals fail to comply with the requirements of Articles 4.7.2.2, 4.7.2.3 and 4.7.2.4 of these General Conditions and/or such Submittals are not otherwise complete and accurate so as to require re-submission, Contractor shall bear all costs associated with the review and approval of the second resubmitted Submittals, including without limitation Architect's fees incurred in connection therewith; provided that such costs are in addition to, and not in lieu of, any per diem assessments imposed under this Article 4.7.2.1 for Contractor's delayed submission of Submittals. In the event of the District's imposition of the per diem assessments due to the Contractor's delayed submission of Submittals or in the event of the District's assessment of costs and expenses incurred to review incomplete or inaccurate Submittals, the District may deduct the same from any portion the Contract Price then or thereafter due the Contractor. Submittals not required by the Contract Documents or which do not otherwise conform with the requirements of the Contract Documents may be returned without action. No adjustment to the Contract Time or the Contract Price shall be granted to the Contractor on account of its failure to make timely submission of any Submittal.

4.7.2.2 Approval of Subcontractor Submittals. All Submittals prepared by Subcontractors, of any tier, Material Suppliers, manufacturers or distributors shall bear the written approval of the Contractor thereto prior to submission to the Architect for review. Any Submittal not bearing the Contractor's written approval shall be subject to return to the Contractor for re-submittal in conformity therewith, with the same being deemed to not have been submitted. Any delay, impact or cost associated therewith shall be the sole and exclusive responsibility of the Contractor without adjustment to the Contract Time or the Contract Price.

4.7.2.3 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 Construction 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 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."

4.7.2.4 **Contractor Responsibility for Deviations.** The Contractor shall not be relieved of responsibility for correcting deviations from the requirements of the Contract Documents by the Architect’s review of Submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submission of the Submittal and the Architect has given written approval to the specific deviation. A material obligation of the Contractor is its specific/detailed identification and notation on the transmittal cover-sheet of each submission of Submittals any deviation between the Work as indicated in the Contract Documents and as indicated in the Submittal. The Contractor shall not be relieved of responsibility for errors or omissions in Submittals by the Architect’s review thereof.

4.7.2.5 **No Performance of Work Without Architect Review.** The Contractor shall perform no portion of the Work requiring the Architect’s review of Submittals until the Architect has completed its review and returned the Submittal to the Contractor indicating “No Exception Taken” to such 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. Such Work shall be in accordance with the final action taken by the Architect in review of Submittals and other applicable portions of the Contract Documents.

4.7.3 **Architect Review of Submittals.** The purpose of the Architect’s review of Submittals and the time for the Architect’s return of Submittals to the Contractor shall be as set forth elsewhere in the Contract Documents. If the Architect returns 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 Architect’s direction. When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the Architect shall be entitled to rely upon the accuracy and completeness of such calculations and certifications accompanying Submittals. The Architect’s review of the Submittals is for the limited purposes described in the Contract Documents.

4.7.4 **Deferred Approval Items.** In the event that any portion of the Work is designated in the Contract Documents as a “Deferred Approval” item, 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.

4.8 **Materials and Equipment.**

4.8.1 **Specified Materials, Equipment.** References in the Contract Documents to any specific article, device, equipment, product, material, fixture, patented process,
form, method or type of construction, by name, make, trade name, or catalog number, with or without the words “or equal” shall be deemed to establish a minimum standard of quality or performance, and shall not be construed as limiting competition.

4.8.2 Approval of Substitutions or Alternatives. The Contractor may propose to furnish alternatives or substitutes for a particular item specified in the Contract Documents, provided that such proposed substitution or alternative complies with the requirements of the Specifications relating to substitutions of specified items and the Contractor certifies to the Architect that the quality, performance capability and functionality (including visual and/or aesthetic effect) of the proposed alternative or substitute will meet or exceed the quality, performance capability and functionality of the item or process specified, and must demonstrate to the Architect that the use of the substitution or alternative is appropriate and will not delay completion of the Work or result in an increase to the Contract Price. The Contractor shall submit engineering, construction, dimension, visual, aesthetic and performance data to the Architect to permit its proper evaluation of the proposed substitution or alternative. If requested by the Architect, Contractor shall promptly furnish any additional information or data regarding a proposed substitution or alternative which the Architect deems reasonably necessary for the evaluation of the proposed substitution or alternative. The Contractor shall not provide, furnish or install any substitution or alternative without the Architect's review and final action on the proposed substitution or alternative; any alternative or substitution installed or incorporated into the Work without first obtaining the Architect's review and final action of the same shall be subject to removal pursuant to Article 12 hereof. The Architect's decision evaluating the Contractor's proposed substitutions or alternatives shall be final. Neither the Contract Time nor the Contract Price shall be increased on account of any substitution or alternative proposed by the Contractor and which is accepted by the Architect; provided, however, that in the event a substitution or alternative accepted by the Architect and purchase, fabrication and/or installation or such accepted substitution or alternative shall be less expensive than the originally specified item, the Contract Price shall be reduced by the actual cost savings realized by the Contractor's furnishing and/or installation of such approved substitution or alternative. The Contractor shall be solely responsible for all costs and fees incurred by the District to review a proposed substitution or alternative, including without limitation fees of the Architect, of the Architect's consultant(s) and/or governmental agencies to review and/or approve any proposed substitution or alternative. The Contractor shall be solely responsible for any increase in the cost of any accepted substitution or alternative or any Work affected by such alternative or substitution. The foregoing notwithstanding, all requests for the Architect's review and approval of any proposed substitution or alternative and all engineering, construction, dimension and performance data substantiating the equivalency of the proposed substitution or alternative shall be submitted by Contractor not later than thirty-five (35) days following the date of the District's award of the Contract to Contractor by action of the District's Board of Trustees; any request for approval of proposed alternatives or substitutions submitted thereafter may be rejected summarily. The foregoing process and time
limits shall apply to any proposed substitution or alternative regardless of whether the substitute or alternate item is to be provided, furnished or installed by Contractor, any Subcontractor, any Sub-Subcontractor, Material Supplier or Manufacturer.

4.8.3 Placement of Material and Equipment Orders. Contractor shall, after award of the Contract, promptly and timely place all orders for materials and/or equipment necessary for completion of the Work so that delivery of the same shall be made without delay or interruption to the timely completion of the Work. Contractor shall require that any Subcontractor or Sub-Subcontractor performing any portion of the Work similarly place orders for all materials and/or equipment to be furnished by any such Subcontractor or Sub-Subcontractor in a prompt and timely manner so that delivery of the same shall be made without delay or interruption to the timely completion of the Work. Upon request of the District, Construction Manager or the Architect, the Contractor shall furnish reasonably satisfactory written evidence of the placement of orders for materials and/or equipment necessary for completion of the Work, including without limitation, orders for materials and/or equipment to be provided, furnished or installed by any Subcontractor or Sub-Subcontractor.

4.8.4 District’s Right to Place Orders for Materials and/or Equipment. Notwithstanding any other provision of the Contract Documents, in the event that the Contractor shall, upon request of the District or the Architect, fail or refuse, for any reason, to provide reasonably satisfactory written evidence of the placement of orders for materials and/or equipment necessary for completion of the Work, or should the District determine, in its sole and reasonable discretion, that any orders for materials and/or equipment have not been placed in a manner so that such materials and/or equipment will be delivered to the Site so the Work can be completed without delay or interruption, the District shall have the right, but not the obligation, to place such orders on behalf of the Contractor. If the District exercises the right to place orders for materials and/or equipment pursuant to the foregoing, the District’s conduct shall not be deemed to be an exercise, by the District, of any control over the means, methods, techniques, sequences or procedures for completion of the Work, all of which remain the responsibility and obligation of the Contractor. Notwithstanding the right of the District to place orders for materials and/or equipment pursuant to the foregoing, the election of the District to exercise, or not to exercise, such right shall not relieve the Contractor from any of Contractor’s obligations under the Contract Documents, including without limitation, completion of the Work within the Contract Time and for the Contract Price. If the District exercises the right hereunder to place orders for materials and/or equipment on behalf of Contractor pursuant to the foregoing, Contractor shall reimburse the District for all costs and fees incurred by the District in placing such orders; such costs and fees may be deducted by the District from the Contract Price then or thereafter due the Contractor.
4.9 Safety.

4.9.1 Safety Programs. The Contractor shall be solely responsible for initiating, maintaining and supervising all safety programs required by applicable law, ordinance, regulation or governmental orders in connection with the performance of the Contract, or otherwise required by the type or nature of the Work. The Contractor's safety program shall include all actions and programs necessary for compliance with California or federally statutorily mandated workplace safety programs, including without limitation, compliance with the California Drug Free Workplace Act of 1990 (California Government Code §§8350 et seq.). Without limiting or relieving the Contractor of its obligations hereunder, the Contractor shall require that its Subcontractors similarly initiate and maintain all appropriate or required safety programs. Prior to commencement of Work at the Site, the Contractor shall provide the Architect, Project Inspector, the Construction Manager and District with the Contractor's proposed safety program for the Work for the Construction Manager's review. The Architect, the Construction Manager and the Project Inspector are authorized to enforce the Contractor's obligation to implement the safety program accepted by the Construction Manager.

4.9.2 Safety Precautions. The Contractor shall be solely responsible for initiating and maintaining reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to: (i) employees on the Work and other persons who may be affected thereby; (ii) the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and (iii) other property or items at the site of the Work, or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction. The Contractor shall take adequate precautions and measures to protect existing roads, sidewalks, curbs, pavement, utilities, adjoining property and improvements thereon (including without limitation, protection from settlement or loss of lateral support) and to avoid damage thereto. Without adjustment of the Contract Price or the Contract Time, the Contractor shall repair, replace or restore any damage or destruction of the foregoing items as a result of performance or installation of the Work.

4.9.3 Safety Signs, Barricades. The Contractor shall erect and maintain, as required by existing conditions and conditions resulting from performance of the Contract, reasonable safeguards for safety and protection of property and persons, including, without limitation, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Districts and users of adjacent sites and utilities.

4.9.4 Safety Notices. The Contractor shall give or post all notices required by applicable law and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.
4.9.5 **Safety Coordinator.** The Contractor shall designate a responsible member of the Contractor's organization at the Site whose duty shall be the prevention of accidents and the implementation and maintenance safety precautions and programs. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Project Inspector and the Architect.

4.9.6 **Emergencies; First Aid.** In an emergency affecting safety of persons or property, the Contractor shall act, to prevent threatened damage, injury or loss. The Contractor shall maintain stocked emergency first aid kits at the Site which comply with applicable law, rule or regulation.

4.9.7 **Hazardous Materials.**

4.9.7.1 **General.** In the event that the Contractor, any Subcontractor or anyone employed directly or indirectly by them shall use, at the Site, or incorporate into the Work, any material or substance deemed to be hazardous or toxic under any law, rule, ordinance, regulation or interpretation thereof (collectively “Hazardous Materials”), the Contractor shall comply with all laws, rules, ordinances or regulations applicable thereto and shall exercise all necessary safety precautions relating to the use, storage or disposal thereof.

4.9.7.2 **Prohibition on Use of Asbestos Construction Building Materials (“ACBMs”).** Notwithstanding any provision of the Drawings or the Specifications to the contrary, it is the intent of the District that ACBMs not be used or incorporated into any portion of the Work. In the event that any portion of the Work depicted in the Drawings or the Specifications shall require materials or products which the Contractor knows, or should have known with reasonably diligent investigation, to contain ACBMs, Contractor shall promptly notify the Architect and the Project Inspector of the same so that an appropriate alternative can be made in a timely manner so as not to delay the progress of the Work. Contractor warrants to the District that there are no materials or products used or incorporated into the Work which contain ACBMs. Whether before or after completion of the Work, if it is discovered that any product or material forming a part of the Work or incorporated into the Work contains ACBMs, the Contractor shall at its sole cost and expense remove such product or material in accordance with any laws, rules, procedures and regulations applicable to the handling, removal and disposal of ACBMs and to replace such product or material with non-ACBM products or materials and to return the affected portion(s) of the Work to the finish condition depicted in the Drawings and Specifications relating to such portion(s) of the Work. Contractor's obligations under the preceding sentence shall survive the termination of the Contract, the warranty period provided under the Contract Documents, the Contractor's completion of the Work or the District's acceptance of the Work. In the event that the Contractor shall fail or refuse, for any reason, to commence the removal and replacement of any material or product containing ACBMs forming a part of, or incorporated into the Work, within ten (10) days of the date of the District’s written notice to the
Contractor of the existence of ACBM materials or products in the Work, the District may thereafter proceed to cause the removal and replacement of such materials or products in any manner which the District determines to be reasonably necessary and appropriate; all costs, expenses and fees, including without limitation fees and costs of consultants and attorneys, incurred by the District in connection with such removal and replacement shall be the responsibility of the Contractor and the Contractor's Performance Bond Surety.

4.9.7.3 Disposal of Hazardous Materials. Contractor shall be solely and exclusively responsible for the disposal of any Hazardous Materials on or about Site resulting from the Contractor's performance of Work and other activities. The Contractor's obligations hereunder shall include without limitation, the transportation and disposal of any Hazardous Materials in strict conformity with any and all applicable laws, regulations, orders, procedures or ordinances.

4.10 Maintenance of Documents.

4.10.1 Documents at Site. The Contractor shall maintain at the Site: (i) one record copy of the Drawings, Specifications and all addenda thereto; (ii) Change Orders approved by the District and all other modifications to the Contract Documents; (iii) Submittals reviewed by the Architect; (iv) Record Drawings; (v) Material Safety Data Sheets (“MSDS”) accompanying any materials, equipment or products delivered or stored at the Site or incorporated into the Work; and (vi) all building and other codes or regulations applicable to the Work, including without limitation, Title 24, Part 2 of the California Code of Regulations. During performance of the Work, all documents maintained by Contractor at the Site shall be available to the District, the Construction Manager, the Architect, the Project Inspector and DSA for review, inspection or reproduction. Upon completion of the Work, all documents maintained at the Site by the Contractor pursuant to the foregoing shall be assembled and transmitted to the Architect for delivery to the District.

4.10.2 Maintenance of Record Drawings. During its performance of the Work, the Contractor shall maintain Record Drawings consisting of a set of the Drawings which are marked to indicate all field changes made to adapt the Work depicted in the Drawings to field conditions, changes resulting from Change Orders and all concealed or buried installations, including without limitation, piping, conduit and utility services. All buried or concealed items of Work shall be completely and accurately marked and located on the Record Drawings. The Record Drawings shall be clean and all changes, corrections and dimensions shall be marked in a neat and legible manner in a contrasting color. Record Drawings relating to the Structural, Mechanical, Electrical and Plumbing portions of the Work shall indicate without limitation, circuiting, wiring sizes, equipment/member sizing and shall depict the entirety of the as built conditions of such portions of the Work. The Record Drawings shall be continuously maintained by the Contractor during the performance of the Work. At any time during the Contractor's performance of the Work, upon the request of the District, the Project Inspector or the Architect, the
Contractor shall make the Record Drawings maintained here under available for the District's review and inspection. The District's review and inspection of the Record Drawings during the Contractor's performance of the Work shall be only for the purpose of generally verifying that Contractor is continuously maintaining the Record Drawings in a complete and accurate manner; any such inspection or review shall not be deemed to be the District's approval or verification of the completeness or accuracy thereof. The failure or refusal of the Contractor to continuously maintain complete and accurate Record Drawings or to make available the Record Drawings for inspection and review by the District may be deemed by the District to be Contractor's default of a material obligation hereunder. Without waiving, restricting or limiting any other right or remedy of the District for the Contractor's failure or refusal to continuously maintain the Record Drawings, the District may, upon reasonably determining that the Contractor has not, or is not, continuously maintaining the Record Drawings in a complete and accurate manner, take appropriate action to cause the continuous maintenance of complete and accurate Record Drawings, in which event all fees and costs incurred or associated with such action shall be charged to the Contractor and the District may deduct the amount of such fees and costs from any portion of the Contract Price then or thereafter due the Contractor. In accordance with Article 8.4.2 of these General Conditions, prior to receipt of the Final Payment, Contractor shall deliver the Record Drawings to the Construction Manager for transmittal of the District.

4.11 Use of Site. The Contractor shall confine operations at the Site to areas permitted by law, ordinances or permits, subject to any restrictions or limitations set forth in the Contract Documents. The Contractor shall not unreasonably encumber the Site or adjoining areas with materials or equipment. The Contractor shall be solely responsible for providing security at the Site with all such costs included in the Contract Price. The District shall at all times have access to the Site.

4.12 Clean-Up. The Contractor shall at all times keep the Site and all adjoining areas free from the accumulation of any waste material or rubbish caused or generated by performance of the Work. Without limiting the generality of the foregoing, Contractor shall maintain the Site in a “broom-clean” standard on a daily basis. In the event that the Work of the Contract Documents includes painting and/or the installation of floor covering, prior to commencement of any painting operations or the installation of any flooring covering, the area and adjoining areas of the Site where paint is to be applied or floor covering is to be installed shall be in a “broom-clean” condition. Prior to completion of the Work, Contractor shall remove from the Site all rubbish, waste material, excess excavated material, tools, Construction Equipment, machinery, surplus material and any other items which are not the property of the District under the Contract Documents. At completion of the Work, the Contractor shall clean the building interior and exterior, including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal surfaces, areas where debris, dust and similar items have collected, clean and polish all glass, plumbing fixtures, finish hardware, metal/wood/stone finishes. As directed by the Construction Manager, District or Architect, the Contractor shall remove temporary fencing, barricades, planking, temporary sanitary facilities, temporary utility distributions and other
temporary facilities. Upon completion of the Work, the Site and all adjoining areas shall be left in a neat and broom clean condition satisfactory to District. The Project Inspector or Construction Manager shall be authorized to direct the Contractor's clean-up obligations hereunder. If the Contractor fails to clean up as provided for in the Contract Documents, the District may do so, and all costs incurred in connection therewith shall be charged to the Contractor; the District may deduct such costs from any portion of the Contract Price then or thereafter due the Contractor.

4.13 Access to the Work. The Contractor shall provide the DSA, the District, the Construction Manager, the Project Inspector, the Architect and the Architect's consultant(s) with access to the Work, whether in place, preparation and progress and wherever located.

4.14 Information and Facilities/Services for the Project Inspector. The Contractor shall furnish the Project Inspector access to the Work for obtaining such information as may be necessary to keep the Project Inspector fully informed respecting the progress, quality and character of the Work and materials, equipment or other items incorporated therein. The Contractor shall provide, without adjustment of the Contract Price, for use by the Project Inspector, the District and Construction Manager the facilities, equipment, furnishings and services set forth in the Special Conditions. If the Contractor does not provide the facilities, furnishings, equipment and services set forth in the Special Conditions, or fails to pay timely any charges or fees arising out of the use of the same, the District may, as applicable, procure facilities, furnishings, equipment and services required by the Contract Documents or pay outstanding charges. Contractor shall reimburse the District for all costs, including the District's administrative costs, incurred by the District pursuant to the preceding sentence; in lieu of the Contractor's reimbursement and at the sole and exclusive discretion of the District, such costs may be deducted by the District from any portion of the Contract Price or thereafter due the Contractor.

4.15 Patents and Royalties. The Contractor and the Surety shall defend, indemnify and hold harmless the District and its agents, employees and officers from any claim, demand or legal proceeding arising out of or pertaining, in any manner, to any actual or claimed infringement of patent rights in connection with performance of the Work under the Contract Documents.

4.16 Cutting and Patching. The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make the component parts thereof fit together properly. The Contractor shall not damage or endanger any portion of the Work, or the fully or partially completed construction of the District or separate contractors by cutting, patching, excavation or other alteration. When modifying new Work or when installing Work adjacent to an existing structure/facility, the Contractor shall match, as closely as conditions of the Site and materials will allow the finishes, textures and colors of the existing structure/facility and refinish elements of the existing structure/facility. The Contractor shall not cut, patch or otherwise alter the construction by the District or separate contractor without the prior written consent of the District or separate contractor thereto, which consent shall not be unreasonably
withheld. The Contractor shall not unreasonably withhold consent to the request of
the District or separate contractor to cut, patch or otherwise alter the Work.

4.17 **Encountering of Hazardous Materials.** In the event the Contractor encounters
Hazardous Materials at the Site which have not been rendered harmless or for which
there is no provision in the Contract Documents for containment, removal, abatement
or handling of such Hazardous Materials, the Contractor shall immediately stop the
Work in the affected area, but shall diligently proceed with the Work in all other
unaffected areas. Upon encountering such Hazardous Materials, the Contractor shall
immediately notify the Project Inspector and the Architect, in writing, of such
condition. The Contractor shall proceed with the Work in such affected area only
after such Hazardous Materials have been rendered harmless, contained, removed
or abated. In the event such Hazardous Materials are encountered, the Contractor
shall be entitled to an adjustment of the Contract Time to the extent that the Work is
stopped and Substantial Completion of the Work is affected thereby. In no event shall
there be an adjustment to the Contract Price solely on account of the Contractor
encountering such Hazardous Materials.

4.18 **Wage Rates; Employment of Labor.**

4.18.1 **Determination of Prevailing Rates.** Pursuant to the provisions of Division 2,
Part 7, Chapter 1, Article 2 of the California Labor Code at § 1770 et seq., this is a
public works project and the District has obtained from the Director of the
Department of Industrial Relations the general prevailing rate of per diem wages
and the prevailing rate for holiday and overtime work in the locality in which the
Work is to be performed. Holidays shall be as defined in the collective bargaining
agreement applicable to each particular craft, classification or type of worker
employed under the Contract. Per diem wages include employer payments for
health and welfare, pensions, vacation, travel time and subsistence pay as
provided in California Labor Code § 1773.8, apprenticeship or other training
programs authorized by California Labor Code § 3093, and similar purposes when
the term “per diem wages” is used herein. Holiday and overtime work, when
permitted by law, shall be paid for at the rate of at least one and one-half (1½) times
the above specified rate of per diem wages, unless otherwise specified. The
Contractor shall post, at appropriate and conspicuous locations on the Site, a
schedule showing all determined general prevailing wage rates.

4.18.2 **Payment of Prevailing Rates.** There shall be paid each worker of the
Contractor, or any Subcontractor, of any tier, engaged in the Work, not less than
the general prevailing wage rate, regardless of any contractual relationship which
may be alleged to exist between the Contractor or any Subcontractor, of any tier,
and such worker.

4.18.3 **Prevailing Rate Penalty.** The Contractor shall, as a penalty, forfeit not more
than Two Hundred Dollars ($200.00) to the District for each calendar day or portion
thereof, for each worker paid less than the prevailing rates for such work or craft in
which such worker is employed for the Work by the Contractor or by any
Subcontractor, of any tier, in connection with the Work. The amount of the penalty for failure to pay applicable prevailing wage rates shall be determined and assessed in accordance with the standards established pursuant to Labor Code § 1775(a)(2). The amount of the penalty shall be determined based on consideration of both of the following: (i) whether the failure of the Contractor or Subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of the Contractor or Subcontractor; and (ii) whether the Contractor or Subcontractor has a prior record of failing to meet its prevailing wage obligations. The penalty may not be less than forty dollars ($40) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, unless the failure of the Contractor or Subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of the contractor or subcontractor. The penalty may not be less than eighty dollars ($80) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the Contractor or Subcontractor has been assessed penalties within the previous three years for failing to meet its prevailing wage obligations on a separate contract, unless those penalties were subsequently withdrawn or overturned. The penalty may not be less than one hundred twenty dollars ($120) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the Labor Commissioner determines that the violation was willful, as defined in subdivision (c) of Section 1777.1. When the penalty amount due hereunder is collected from the Contractor or Subcontractor, any outstanding wage claim under Chapter 1 (commencing with Section 1720) of Part 7 of Division 2 against that Contractor or Subcontractor shall be satisfied before applying that amount to the penalty imposed on that Contractor or Subcontractor hereunder. The difference between prevailing wage rates and the amount paid to each worker each calendar day, or portion thereof, for which each worker paid less than the prevailing wage rate, shall be paid to each worker by the Contractor.

4.18.4 Payroll Records. Pursuant to California Labor Code § 1776, the Contractor and each Subcontractor, of any tier, shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each person employed for the Work. The payroll records shall be certified, submitted to the Department of Industrial Relation as required by law, and available for inspection at all reasonable hours at the principal office of the Contractor on the following basis: (i) a certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or his/her authorized representative on request; (ii) a certified copy of all payroll records shall be made available for inspection or furnished upon request to the District, the Division of Labor Standards Enforcement and the Division of Apprenticeship Standards of the Department of Industrial Relations; (iii) a certified copy of payroll records shall be made available upon request to the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the District, the Division of Apprenticeship Standards, or the Division of Labor
Standards Enforcement. If the requested payroll records have not been provided, the requesting party shall, prior to being provided the records, reimburse the cost of preparation by the Contractor, Subcontractors and the entity through which the request was made; the public shall not be given access to such records at the principal office of the Contractor; (iv) the Contractor shall file a certified copy of the payroll records with the entity that requested such records within ten (10) days after receipt of a written request; (v) any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the District, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual’s name, address and social security number. The name and address of the Contractor or any Subcontractor, of any tier, performing a part of the Work shall not be marked or obliterated. The Contractor shall inform the District of the location of payroll records, including the street address, city and county and shall, within five (5) working days, provide a notice of a change of location and address. In the event of noncompliance with the requirements of this Article 4.18.4, the Contractor shall have ten (10) days in which to comply, subsequent to receipt of written notice specifying in what respects the Contractor must comply herewith. Should noncompliance still be evident after such 10-day period, the Contractor shall, as a penalty to the District, forfeit one hundred dollars ($100.00) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from any portion of the Contract Price then or thereafter due the Contractor. The Contractor is solely responsible for compliance with the foregoing provisions.

4.18.5 Hours of Work.

4.18.5.1 Limits on Hours of Work. Pursuant to California Labor Code § 1810, eight (8) hours of labor shall constitute a legal day's work. Pursuant to California Labor Code §1811, the time of service of any worker employed at any time by the Contractor or by a Subcontractor, of any tier, upon the Work or upon any part of the Work, is limited and restricted to eight (8) hours during any one calendar day and forty (40) hours during any one calendar week, except as hereafter provided. Notwithstanding the foregoing provisions, Work performed by employees of Contractor or any Subcontractor, of any tier, in excess of eight (8) hours per day and forty (40) hours during any one week, shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1½) times the basic rate of pay.

4.18.5.2 Penalty for Excess Hours. The Contractor shall pay to the District a penalty of Twenty-five Dollars ($25.00) for each worker employed on the Work by the Contractor or any Subcontractor, of any tier, for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any calendar day and forty (40) hours in any one calendar week, in
violation of the provisions of the California Labor Code, unless compensation to the worker so employed by the Contractor is not less than one and one-half (1½) times the basic rate of pay for all hours worked in excess of eight (8) hours per day.

4.18.5.3 Contractor Responsibility. Any Work performed by workers necessary to be performed after regular working hours or on Sundays or other holidays shall be performed without adjustment to the Contract Price or any other additional expense to the District. The Contractor shall be responsible for costs incurred by the District which arise out of Work performed by the Contractor at times other than regular working hours and regular working days. Upon determination of such costs, the District may deduct such costs from the Contract Price then or thereafter due the Contractor.

4.18.6 Apprentices.

4.18.6.1 Employment of Apprentices. Any apprentices employed to perform any of the Work shall be paid the standard wage paid to apprentices under the regulations of the craft or trade for which such apprentice is employed, and such individual shall be employed only for the work of the craft or trade to which such individual is registered. Only apprentices, as defined in California Labor Code § 3077 who are in training under apprenticeship standards and written apprenticeship agreements under California Labor Code § 3070 et seq. are eligible to be employed for the Work. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which such apprentice is training.

4.18.6.2 Apprenticeship Certificate. When the Contractor or any Subcontractor, of any tier, in performing any of the Work employs workers in any Apprenticeable Craft or Trade, the Contractor and such Subcontractor shall apply to the Joint Apprenticeship Committee administering the apprenticeship standards of the craft or trade in the area of the site of the Work for a certificate approving the Contractor or such Subcontractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected, provided, however, that the approval as established by the Joint Apprenticeship Committee or Committees shall be subject to the approval of the Administrator of Apprenticeship. The Joint Apprenticeship Committee or Committees, subsequent to approving the Contractor or Subcontractor, shall arrange for the dispatch of apprentices to the Contractor or such Subcontractor in order to comply with California Labor Code § 1777.5. The Contractor and Subcontractors shall submit contract award information to the applicable Joint Apprenticeship Committee which shall include an estimate of journeyman hours to be performed under the Contract, the number of apprentices to be employed, and the approximate dates the apprentices will be employed. There shall be an affirmative duty upon the Joint Apprenticeship Committee or Committees, administering the apprenticeship standards of the crafts or trades in the area of the site of the Work, to ensure equal employment
and affirmative action and apprenticeship for women and minorities. Contractors or Subcontractors shall not be required to submit individual applications for approval to local Joint Apprenticeship Committees provided they are already covered by the local apprenticeship standards.

4.18.6.3 Ratio of Apprentices to Journeymen. The ratio of Work performed by apprentices to journeymen, who shall be employed in the Work, may be the ratio stipulated in the apprenticeship standards under which the Joint Apprenticeship Committee operates, but in no case shall the ratio be less than one hour of apprentice work for each five hours of labor performed by a journeyman, except as otherwise provided in California Labor Code § 1777.5. The minimum ratio for the land surveyor classification shall not be less than one apprentice for each five journeymen. Any ratio shall apply during any day or portion of a day when any journeyman, or the higher standard stipulated by the Joint Apprenticeship Committee, is employed at the site of the Work and shall be computed on the basis of the hours worked during the day by journeymen so employed, except for the land surveyor classification. The Contractor shall employ apprentices for the number of hours computed as above before the completion of the Work. The Contractor shall, however, endeavor, to the greatest extent possible, to employ apprentices during the same time period that the journeymen in the same craft or trade are employed at the site of the Work. Where an hourly apprenticeship ratio is not feasible for a particular craft or trade, the Division of Apprenticeship Standards, upon application of a Joint Apprenticeship Committee, may order a minimum ratio of not less than one apprentice for each five journeymen in a craft or trade classification. The Contractor or any Subcontractor covered by this Article and California Labor Code § 1777.5, upon the issuance of the approval certificate, or if it has been previously approved in such craft or trade, shall employ the number of apprentices or the ratio of apprentices to journeymen stipulated in the apprenticeship standards. Upon proper showing by the Contractor that it employs apprentices in such craft or trade in the State of California on all of its contracts on an annual average of not less than one apprentice to each five journeymen, the Division of Apprenticeship Standards may grant a certificate exempting the Contractor from the 1-to-5 ratio as set forth in this Article and California Labor Code §1777.5. This Article shall not apply to contracts of general contractors, or to contracts of specialty contractors not bidding for work through a general or prime contractor, involving less than Thirty Thousand Dollars ($30,000.00) or twenty (20) working days. The term “Apprenticeable Craft or Trade,” as used herein shall mean a craft or trade determined as an Apprenticeable occupation in accordance with rules and regulations prescribed by the Apprenticeship Council.

4.18.6.4 Exemption From Ratios. The Joint Apprenticeship Committee shall have the discretion to grant a certificate, which shall be subject to the approval of the Administrator of Apprenticeship, exempting the Contractor from the 1-to-5 ratio set forth in this Article when it finds that any one of the following conditions are met: (i) unemployment for the previous three-month period in
such area exceeds an average of fifteen percent (15%) or; (ii) the number of
apprentices in training in such area exceeds a ratio of 1-to-5 in relation to
journeymen, or; (iii) the Apprenticeable Craft or Trade is replacing at least one-
thirtieth (1/30) of its journeymen annually through apprenticeship training,
either on a statewide basis or on a local basis, or; (iv) if assignment of an
apprentice to any Work performed under the Contract Documents would
create a condition which would jeopardize such apprentice's life or the life,
safety or property of fellow employees or the public at large, or if the specific
task to which the apprentice is to be assigned is of such a nature that training
cannot be provided by a journeyman. When such exemptions from the 1-to-5
ratio between apprentices and journeymen are granted to an organization
which represents contractors in a specific trade on a local or statewide basis,
the member contractors will not be required to submit individual applications
for approval to local Joint Apprenticeship Committees, provided they are
already covered by the local apprenticeship standards.

4.18.6.5 Contributions to Trust Funds. The Contractor or any Subcontractor,
of any tier, who, performs any of the Work by employment of journeymen or
apprentices in any Apprenticeable Craft or Trade and who is not contributing
to a fund or funds to administer and conduct the apprenticeship program in
any such craft or trade in the area of the site of the Work, to which fund or
funds other contractors in the area of the site of the Work are contributing,
shall contribute to the fund or funds in each craft or trade in which it employs
journeymen or apprentices in the same amount or upon the same basis and
in the same manner as the other contractors do, but where the trust fund
administrators are unable to accept such funds, contractors not signatory to
the trust agreement shall pay a like amount to the California Apprenticeship
Council. The Division of Labor Standards Enforcement is authorized to
enforce the payment of such contributions to such fund(s) as set forth in
California Labor Code § 227. Such contributions shall not result in an increase
in the Contract Price.

4.18.6.6 Contractor's Compliance. The responsibility of compliance with this
Article for all Apprenticeable Trades or Crafts is solely and exclusively that of
the Contractor. All decisions of the Joint Apprenticeship Committee(s) under
this Article are subject to the provisions of California Labor Code § 3081. In
the event the Contractor willfully fails to comply with the provisions of this
Article and California Labor Code § 1777.5, pursuant to California Labor Code
§ 1777.7, the Contractor: (i) may be denied the right to bid on any public works
contract for a period of one (1) year from the date the determination of non-
compliance is made by the Administrator of Apprenticeship; and (ii) shall
forfeit, as a civil penalty, an amount not to exceed one hundred dollars
($100.00) for each calendar day of noncompliance. Notwithstanding the
provisions of California Labor Code § 1727, upon receipt of such
determination, the District shall withhold such amount from the Contract Price
then due or to become due. Any such determination shall be issued after a
full investigation, a fair and impartial hearing, and reasonable notice thereof in
accordance with reasonable rules and procedures prescribed by the California Apprenticeship Council. Any funds withheld by the District pursuant to this Article shall be deposited in the General Fund or other similar fund of the District. The interpretation and enforcement of California Labor Code §§ 1777.5 and 1777.7 shall be in accordance with the rules and procedures of the California Apprenticeship Council.

4.18.7 Employment of Independent Contractors. Pursuant to California Labor Code § 1021.5, Contractor shall not willingly and knowingly enter into any agreement with any person, as an independent contractor, to provide any services in connection with the Work where the services provided or to be provided requires that such person hold a valid contractors license issued pursuant to California Business and Professions Code § 7000 et seq. and such person does not meet the burden of proof of his/her independent contractor status pursuant to California Labor Code § 2750.5. In the event that Contractor shall employ any person in violation of the foregoing, Contractor shall be subject to the civil penalties under California Labor Code § 1021.5 and any other penalty provided by law. In addition to the penalties provided under California Labor Code § 1021.5, Contractor's violation of this Article 4.18.7 or the provisions of California Labor Code § 1021.5 shall be deemed an event of Contractor's default under Article 15.1 of these General Conditions. The Contractor shall require any Subcontractor or Sub-Subcontractor performing or providing any portion of the Work to adhere to and comply with the foregoing provisions.

4.19 Assignment of Antitrust Claims. Pursuant to California Government Code § 4551, the Contractor and its Subcontractor(s), of any tier, hereby offers and agrees to assign to the District all rights, title and interest in and to all causes of action they may have under Section 4 of the Clayton Act, (15 U.S.C. § 15) or under the Cartwright Act (California Business and Professions Code § 16700 et seq.), arising from purchases of goods, services or materials hereunder or any Subcontract. This assignment shall be made and become effective at the time the District tenders Final Payment to the Contractor, without further acknowledgment by the parties. If the District receives, either through judgment or settlement, a monetary recovery in connection with a cause of action assigned under California Government Code § 4550 et seq., the assignor thereof shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the District any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the District as part of the Contract Price, less the expenses incurred by the District in obtaining that portion of the recovery. Upon demand in writing by the assignor, the District shall, within one year from such demand, reassign the cause of action assigned pursuant to this Article if the assignor has been or may have been injured by the violation of law for which the cause of action arose: and (i) the District has not been injured thereby; or (ii) the District declines to file a court action for the cause of action.

4.20 Limitations Upon Site Activities. Except in the circumstances of an emergency, no construction activities shall be permitted at or about the Site except during the
District’s hours and days set forth in the Special Conditions. Work performed outside of the hours and days noted in the Special Conditions will not result in adjustment of the Contract Time or the Contract Price; unless Work outside of the hours and days noted in the Special Conditions is expressly authorized by the District.

4.21 Labor Compliance Monitoring and Enforcement

4.21.1 Contractor/Subcontractor Registration. A Contractor or Subcontractor shall not be qualified to bid on, be listed on a bid proposal (subject to the requirements of Public Contract Code § 4104), or engage in the performance of any contract for public work unless currently registered and qualified to perform public work pursuant to Labor Code § 1725.5, except under the limited circumstances set forth in Labor Code § 1771.1(a). The District may not accept a bid or enter into a contract for a public works project with an unregistered contractor.

4.21.2 Compliance Monitoring and Enforcement. Pursuant to Labor Code § 1771.4, this Contract is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Each Contractor and Subcontractor performing work on the Project shall be required to comply with the provisions of the California Labor Code, beginning with § 1720, and the regulations of the Department of Industrial Relations’ Division of Labor Standards Enforcement (i.e., the Labor Commissioner), including, but not limited to, the standard provisions requiring payment of prevailing wages, maintenance and submission of certified payroll records, and the hiring of apprentices as appropriate. Unless otherwise specified, the Contractor shall be required to post job site notices regarding the requirements of this paragraph, as prescribed by regulation. Contractor and each Subcontractor shall be required to furnish the records specified in Labor Code § 1776 directly to the Labor Commissioner at least monthly, or more frequently if specified in the Contract Documents, and in a format prescribed by the Labor Commissioner.

4.22 State Audit. Pursuant to and in accordance with the provisions of Government Code § 8546.7, or any amendments thereto, all books, records and files of the District, the Contractor, or any Subcontractor relating to the Work or the performance of work involving the expenditure of public funds in excess of Ten Thousand Dollars ($10,000), including, but not limited to, the administration thereof, shall be subject to the examination and audit by the State Auditor of the State of California, at the request of District or as part of any audit of District, for a period of three (3) years after Final Payment is made under this Contract. Contractor shall preserve and cause to be preserved such books, records and files for the audit period. Upon request of the District, the Contractor shall make all such books, records or files available for review, inspection and/or reproduction.

ARTICLE 5: SUBCONTRACTORS

5.1 Subcontracts. Any Work performed for the Contractor by a Subcontractor shall be pursuant to a written agreement between the Contractor and such Subcontractor which specifically incorporates by reference the Contract Documents and which specifically binds the Subcontractor to the applicable terms and conditions of the
Contract Documents, including without limitation, the policies of insurance required under Article 6 of these General Conditions and the termination provisions of Article 15, and obligates the Subcontractor to assume toward the Contractor all the obligations and responsibilities of the Contractor which by the Contract Documents the Contractor assumes toward the District, the Project Inspector, DSA, the Construction Manager and the Architect. The foregoing notwithstanding, no contractual relationship shall exist, or be deemed to exist, between any Subcontractor and the District, unless the Contract is terminated and District, in writing, elects to assume the Subcontract. Each Subcontract for a portion of the Work shall provide that such Subcontract may be assigned to the District if the Contract is terminated by the District pursuant to Article 15.1 hereof, subject to the prior rights of the Surety obligated under a bond relating to the Contract. The Contractor shall provide to the District copies of all executed Subcontracts and Purchase Orders to which Contractor is a party within thirty (30) days after Contractor's execution of the Agreement. During performance of the Work, the Contractor shall, from time to time, as and when requested by the District, the Architect or the Construction Manager provide the District with copies of any and all Subcontracts or Purchase Orders relating to the Work and all modifications thereto. The Contractor’s failure or refusal, for any reason, to provide copies of such Subcontracts or Purchase Orders in accordance with the two preceding sentences is Contractor's default of a material term of the Contract Documents.

5.2 Substitution of Listed Subcontractor.

5.2.1 Substitution Process. Any request of the Contractor to substitute a listed Subcontractor will be considered only if such request is in strict conformity with this Article 5.2 and California Public Contract Code § 4107. All costs incurred by the District, including without limitation, costs of the Project Inspector, the Architect, the Construction Manager or attorney’s fees in the review and evaluation of a request to substitute a listed Subcontractor shall be borne by the Contractor; such costs may be deducted by the District from the Contract Price then or thereafter due the Contractor.

5.2.2 Responsibilities of Contractor Upon Substitution of Subcontractor. The District's consent to Contractor's substitution of a listed Subcontractor shall not relieve Contractor from its obligation to complete the Work within the Contract Time and for the Contract Price. The substitution of a listed Subcontractor shall not, under any circumstance, result in, or give rise to any to any increase of the Contract Price or the Contract Time on account of such substitution. In the event of the District's consent to the substitution of a listed Subcontractor, the Architect shall determine the extent to which, if any, revised or additional Submittals will be required of the newly substituted Subcontractor. In the event that the Architect determines that revised or additional Submittals are required of the newly substituted Subcontractor, the Architect shall promptly notify the Contractor, in writing, of such requirement. In such event, revised or additional Submittals shall be submitted to Architect not later than thirty (30) days following the date of the Architect's written notice to the Contractor pursuant to the foregoing sentence;
provided that if in the reasonable and good faith judgment of the Architect, the progress of the Work or completion of the Work requires submission of additional or revised Submittals by the newly substituted Subcontractor in less than thirty (30) days, the Architect shall so state in its written notice to the Contractor. In the event that the revised or additional Submittals are not submitted by Contractor within thirty (30) days, or such earlier time as determined by the Architect pursuant to the preceding sentence, following the Architect's written notice of the requirement for revised or additional Submittals, Contractor shall be subject to the per diem assessments for late Submittals as set forth in Article 4.7.2.1 of these General Conditions. Any revised or additional Submittals required pursuant to this Article 5.2.2 shall conform with the requirements of Article 4.7 of these General Conditions. Contractor shall reimburse the District for all fees and costs, including without limitation fees of the Construction Manager, Architect and/or any design consultant to the Architect or the District and DSA fees, incurred or associated with the processing, review and evaluation of any revised or additional Submittals required pursuant to this Article 5.2.2; the District may deduct such fees and costs from any portion of the Contract Price then or thereafter due the Contractor. In the event that additional or revised Submittals are required pursuant to this Article 5.2.2, such requirement shall not result in an increase to the Contract Time or the Contract Price.

5.3 Subcontractors’ Work. Whenever the Work of a Subcontractor is dependent upon the Work of the Contractor or another Subcontractor, the Contractor shall require the Subcontractor to: (a) coordinate its Work with the dependent Work; (b) provide necessary dependent data and requirements; (c) supply and/or install items to build into the dependent Work of others; (d) make appropriate provisions for dependent Work of others; (e) carefully examine and understand the portions of the Contract Documents (including Drawings, Specifications and Field Clarifications) and Submittals relating to the dependent Work; and (f) examine the existing dependent Work and verify that the dependent Work is in proper condition for the Subcontractor’s Work. If the dependent Work is not in a proper condition, the Subcontractor shall notify the Contractor in writing and not proceed with the Subcontractor’s Work until the dependent Work has been corrected or replaced and is in a proper condition for the Subcontractor’s Work.

5.4 Subcontractors’ Compliance With Subcontractor Registration and Labor Compliance Requirements. Each Subcontractor performing Work on the Project shall comply with the Department of Industrial Relations’ subcontractor registration and labor compliance monitoring and enforcement requirements described in Article 4.21. A material obligation of the Contractor is its enforcement of Subcontractor obligations relating to such requirements; failure of the Contractor to strictly enforce such Subcontractor obligations is a material obligation of the Contractor under the Contract Documents.
ARTICLE 6: INSURANCE; INDEMNITY; BONDS

6.1 Workers’ Compensation Insurance; Employer’s Liability Insurance. The Contractor shall purchase and maintain Workers' Compensation Insurance as will protect the Contractor from claims under workers’ or workmen's compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Contractor shall purchase and maintain Employer's Liability Insurance covering bodily injury (including death) by accident or disease to any employee which arises out of the employee's employment by Contractor. The Employer's Liability Insurance required of Contractor hereunder may be obtained by Contractor as a separate policy of insurance or as an additional coverage under the Workers' Compensation Insurance required to be obtained and maintained by Contractor hereunder. The limits of liability for the Employer's Liability Insurance required hereunder shall be as set forth in the Special Conditions.

6.2 Commercial General Liability and Property Insurance. The Contractor shall purchase and maintain Commercial General Liability and Property Insurance covering the types of claims set forth below which may arise out of or result from Contractor's operations under the Contract Documents and for which the Contractor may be legally responsible: (i) claims for damages because of bodily injury, sickness or disease or death of any person other than the Contractor’s employees; (ii) claims for damages insured by usual personal injury liability coverage which are sustained (a) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (b) by another person; (iii) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom; (iv) claims for damages because of bodily injury, death of a person or property damages arising out of ownership, maintenance or use of a motor vehicle; (v) contractual liability insurance applicable to the Contractor's obligations under the Contract Documents; and (vi) Completed Operations.

6.3 Builder’s Risk “All-Risk” Insurance. The Contractor shall obtain Builders Risk insurance covering the full insurable value of the Work from risks of loss, damage or destruction of Work in progress or in place at the Site prior to Final Acceptance including without limitation coverage for losses resulting from the perils of fire, malicious mischief, vandalism, and collapse. The Builder’s Risk Insurance Policy shall include coverage for seismic risks if so indicated in the Special Conditions.

6.4 Insurance Policy Requirements. Each policy of insurance required by the Contract Documents shall confirm the following requirements.

6.4.1 Minimum Coverage Amounts. The insurance required of the Contractor hereunder shall be written for not less than any limits of liability specified in the Contract Documents, or required by law, whichever is greater. In the event of any loss or damage covered by a policy of insurance required to be obtained and
maintained by the Contractor hereunder, the Contractor shall be solely and exclusively responsible for the payment of the deductible, if any, under such policy of insurance, without adjustment to the Contract Price on account thereof.

6.4.2 Required Qualifications of Insurers. The Contractor and Subcontractors’ policies of Commercial General Liability and Property/Casualty insurance and the Contractor’s Builders Risk insurance will be accepted by the District only if the insurer(s) are: (a) A.M. Best rated A- or better; (b) A.M. Best Financial Size Category VII or higher; and (c) authorized under California law to transact business in the State of California and authorized to issue insurance policies in the State of California. If at any time during performance of the Work, the insurer(s) issuing a policy of insurance covering Commercial General Liability, Property/Casualty or Builder Risk is/are not A.M. Best rated A- or better and is/are not A.M. Best Financial Size Category VII or higher, the Contractor or Subcontractor, as applicable, shall within thirty (30) days of the District’s written notice of the insufficiency of an insurer to the Contractor, obtain insurance coverage(s) from alternative insurer(s) who is/are then A.M. Best rated A- or better and who is/are A.M. Best Financial Size Category VII or higher. If the Contractor fails to deliver Certificate(s) of Insurance from an alternative insurer(s) meeting or exceeding the A.M. Best rating and A.M. Best Financial Size Category set forth above, within thirty (30) days of the date of the District’s issuance of a written notice pursuant to the preceding sentence, in addition to any other right or remedy of the District under the Contract Documents or arising by operation of law, the District may withhold disbursement of any Progress Payment otherwise due hereunder until the Contractor has delivered such Certificate(s) of Insurance from an alternative insurer(s).

6.5 Evidence of Insurance; Subcontractor’s Insurance.

6.5.1 Certificates of Insurance. Prior to commencing the Work, Contractor shall deliver to the District Certificates of Insurance evidencing the insurance coverages required by the Contract Documents. Failure or refusal of the Contractor to so deliver Certificates of Insurance may be deemed by the District to be a default of a material obligation of the Contractor under the Contract Documents, and thereupon the District may proceed to exercise any right or remedy provided for under the Contract Documents or at law. The Certificates of Insurance and the insurance policies required by the Contract Documents shall contain a provision that coverages afforded under such policies will not be canceled or allowed to expire until at least thirty (30) days prior written notice has been given to the District. The insurance policies required of Contractor hereunder shall also name the District, the Architect and the Construction Manager as additional insureds as their interests may appear. Should any policy of insurance be canceled before Final Acceptance of the Work by the District and the Contractor fails to immediately procure replacement insurance as required, the District reserves the right to procure such insurance and to deduct the premium cost thereof and other costs incurred by the District in connection therewith from any sum then or thereafter due the Contractor under the Contract Documents. The Contractor shall, from time to time, furnish the
District, when requested, with satisfactory proof of coverage of each type of insurance required by the Contract Documents; failure of the Contractor to comply with the District's request may be deemed by the District to be a default of a material obligation of the Contractor under the Contract Documents.

6.5.2 Subcontractors' Insurance. Contractor shall require that every Subcontractor, of any tier, performing or providing any portion of the Work obtain and maintain the policies of insurance set forth in Articles 6.1 and 6.2 of these General Conditions; the coverages and limits of liability of such policies of insurance to be obtained and maintained by Subcontractors shall be as set forth in the Special Conditions. The policies of insurance to be obtained and maintained by Subcontractors hereunder are in addition to, and not in lieu of, Contractor obtaining and maintaining such policies of insurance. Each of the policies of insurance obtained and maintained by a Subcontractor hereunder shall conform with the requirements of this Article 6. Upon request of the District, Contractor shall promptly deliver to the District Certificates of Insurance evidencing that the Subcontractors have obtained and maintained policies of insurance in conformity with the requirements of this Article 6. Failure or refusal of the Contractor to provide the District with Subcontractors' Certificates of Insurance evidencing the insurance coverages required hereunder is a material default of Contractor hereunder.

6.6 Maintenance of Insurance. Any insurance bearing on the adequacy of performance of Work shall be maintained after the District's Final Acceptance of all of the Work for the full one year correction of Work period and any longer specific guarantee or warranty periods set forth in the Contract Documents. Should such insurance be canceled before the end of any such periods and the Contractor fails to immediately procure replacement insurance as specified, the District reserves the right to procure such insurance and to charge the cost thereof to the Contractor. Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from its operations or performance of the Work under the Contract Documents, including without limitation the Contractor's obligation to pay Liquidated Damages. In no instance will the District's exercise of its option to occupy and use completed portions of the Work relieve the Contractor of its obligation to maintain insurance required under this Article until the date of Final Acceptance of the Work by the District, or such time thereafter as required by the Contract Documents. The insurer providing any insurance coverage required hereunder shall be to the reasonable satisfaction of the District.

6.7 Contractor's Insurance Primary. All insurance and the coverages thereunder required to be obtained and maintained by Contractor hereunder, if overlapping with any policy of insurance maintained by the District, shall be deemed to be primary and non-contributing with any policy maintained by the District and any policy or coverage thereunder maintained by District shall be deemed excess insurance. To the extent that the District maintains a policy of insurance covering property damage arising out of the perils of fire or other casualty covered by the Contractor's Builder's Risk Insurance or the Comprehensive General Liability Insurance of the Contractor or any Subcontractor, the District, Contractor and all Subcontractors waive rights of
subrogation against the others. The costs for obtaining and maintaining the insurance coverages required herein shall be included in the Contract Price.

6.8 **Indemnity.** Unless arising solely out of the active negligence, gross negligence or willful misconduct the District or the Architect, the Contractor shall indemnify, defend and hold harmless the Indemnified Parties who are: (i) the District and its Board of Trustees, officers, employees, agents and representatives (including the Project Inspector); (ii) the Architect and its consultants for the Work and their respective agents and employees; and (iii) the Construction Manager and its agents and employees. The Contractor's obligations hereunder includes indemnity, defense and hold harmless of the Indemnified Parties from and against any and all damages, losses, claims, demands or liabilities whether for damages, losses or other relief, including, without limitation attorney's fees and costs which arise, in whole or in part, from the Work, the Contract Documents or the acts, omissions or other conduct of the Contractor, any Subcontractor or any person or entity engaged by them for the Work. The Contractor's obligations under the foregoing include without limitation: (i) injuries to or death of persons; (ii) damage to property; or (iii) theft or loss of property; (iv) Stop Notice claims asserted by any person or entity in connection with the Work; and (v) other losses, liabilities, damages or costs resulting from, in whole or part, any acts, omissions or other conduct of Contractor, any of Contractor's Subcontractors, of any tier, or any other person or entity employed directly or indirectly by Contractor in connection with the Work and their respective agents, officers or employees. The obligations of the Contractor, as set forth in (v) above shall include, without limitation losses, costs, expenses, damages and other claims asserted by any other Contractor to the District in connection with the Work or in connection with a work of improvement related to or affected by the Work. If any action or proceeding, whether judicial, administrative, arbitration or otherwise, shall be commenced on account of any claim, demand or liability subject to Contractor's obligations hereunder, and such action or proceeding names any of the Indemnified Parties as a party thereto, the Contractor shall, at its sole cost and expense, defend the named Indemnified Parties in such action or proceeding with counsel reasonably satisfactory to the named Indemnified Parties. In the event that there shall be any judgment, award, ruling, settlement, or other relief arising out of any such action or proceeding to which any of the Indemnified Parties are subject to, or bound by, Contractor shall pay, satisfy or otherwise discharge any such judgment, award, ruling, settlement or relief; Contractor shall indemnify and hold harmless the Indemnified Parties from any and all liability or responsibility arising out of any such judgment, award, ruling, settlement or relief. The Contractor's obligations hereunder are binding upon Contractor's Performance Bond Surety and these obligations shall survive notwithstanding Contractor's completion of the Work or the termination of the Contract.

6.9 **Payment Bond; Performance Bond.** Prior to commencement of the Work, the Contractor shall furnish a Performance Bond as security for Contractor's faithful performance of the Contract and a Labor and Material Payment Bond as security for payment of persons or entities performing work, labor or furnishing materials in connection with Contractor's performance of the Work under the Contract Documents. Unless otherwise stated in the Special Conditions, the amounts of the
Performance Bond and the Payment Bond required hereunder shall be one hundred percent (100%) of the Contract Price. Said Labor and Material Payment Bond and Performance Bond shall be in the form and content set forth in the Contract Documents. The failure or refusal of the Contractor to furnish either the Performance Bond or the Labor and Material Payment Bond in strict conformity with this Article 6.9 may be deemed by the District as a default by the Contractor of a material obligation hereunder. Upon request of the Contractor, the District may consider and accept, but is not obligated to do so, multiple sureties on such bonds. The Surety on any bond required under the Contract Documents shall be: (i) an Admitted Surety Insurer as that term is defined in California Code of Civil Procedure § 995.120; (ii) A.M. Best rated A- or better; and (iii) A.M. Best Financial Size Category VII or better. The Contractor's delivery of Bonds issued by a Surety who does not meet or exceed each of the criteria set forth above will be rejected.

ARTICLE 7: CONTRACT TIME

7.1 Substantial Completion of the Work Within Contract Time. Unless otherwise expressly provided in the Contract Documents, the Contract Time is the period of time, including authorized adjustments thereto, allotted in the Contract Documents for achieving Substantial Completion of the Work. The date for commencement of the Work is the date established by the Notice to Proceed issued by the District pursuant to the Agreement, which shall not be postponed by the failure to act of the Contractor or of persons or entities for whom the Contractor is responsible. The date of Substantial Completion is the date certified by the Architect and the Project Inspector as such in accordance with the Contract Documents.

7.2 Progress and Completion of the Work.

7.2.1 Time of Essence. Time limits stated in the Contract Documents are of the essence. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing and achieving Substantial Completion of the Work. The Contractor shall employ and supply a sufficient force of workers, material and equipment, and prosecute the Work with diligence so as to maintain progress, to prevent Work stoppage and to achieve Substantial Completion of the Work within the Contract Time.

7.2.2 Substantial Completion. Substantial Completion is that stage in the progress of the Work when the Work is complete in accordance with the Contract Documents so the District can occupy or use the Work for its intended purpose. Substantial Completion shall be determined by the Architect, the Construction Manager and the Project Inspector upon request by the Contractor in accordance with the Contract Documents. The good faith and reasonable determination of Substantial Completion by the Project Inspector, the Construction Manager and the Architect shall be controlling and final.
7.2.3 Correction or Completion of the Work After Substantial Completion.

7.2.3.1 Punchlist. Upon achieving Substantial Completion of the Work, the District, The Project Inspector, the Construction Manager, the Architect and the Contractor shall jointly inspect the Work and prepare a comprehensive list of items of the Work to be corrected or completed by the Contractor (“the Punchlist”). The exclusion of, or failure to include, any item on the Punchlist shall not alter or limit the obligation of the Contractor to complete or correct any portion of the Work in accordance with the Contract Documents.

7.2.3.2 Time for Completing Punchlist Items. In addition to setting forth items for correction or completion pursuant to Article 7.2.3.1, the Construction Manager, if any, Contractor and Architect shall, after the joint inspection, establish a reasonable time for Contractors’ completion of all Punchlist items. If mutual agreement is not reached for the Contractor’s completion of Punchlist items, the Architect shall determine such time, and in such event, the time determined by the Architect shall be final and binding upon the District and Contractor so long as the Architect’s determination is made in good faith. The Contractor shall promptly and diligently proceed to complete all Punchlist items within the time established. In the event that the Contractor shall fail or refuse, for any reason, to complete all Punchlist items within the time established, Contractor shall be subject to assessment of Liquidated Damages in accordance with Article 7.4 hereof. The foregoing notwithstanding, if the Contractor fails or refuses to complete all Punchlist items, the District may in its sole and exclusive discretion and without further notice to Contractor, elect to cause the completion of all remaining Punchlist items provided, however that such election by the District is in addition to and not in lieu of any other right or remedy of the District under the Contract Documents or at law. If the District elects to complete Punchlist items of the Work, pursuant to the foregoing, Contractor shall be responsible for all costs incurred by the District in connection herewith and the District may deduct such costs from the Contract Price then or thereafter due the Contractor, if these costs exceed the remaining Contract Price due to the Contractor, the Contractor and the Performance Bond Surety are liable to District for any such excess costs.

7.2.4 Final Completion. Final Completion is that stage of the Work when all Work has been completed in accordance with the Contract Documents, including without limitation, the performance of all correction or completion items noted upon Substantial Completion, and the Contract has been otherwise fully performed by the Contractor. Final Completion shall be determined by the Architect and the Project Inspector upon request of the Contractor. The good faith and reasonable determination of Final Completion by the Project Inspector and the Architect shall be controlling and final.

7.2.5 Contractor Responsibility for Multiple Inspections. In the event the Contractor shall request determination of Substantial Completion or Final Completion by the Project Inspector and the Architect and it is determined by the
Project Inspector and the Architect that the Work does not then justify certification of Substantial Completion or Final Completion and re-inspection is required at a subsequent time to make such determination, the Contractor shall be responsible for all costs of such re-inspection, including without limitation, the fees of the Architect and the salary of the Project Inspector. The District may deduct such costs from the Contract Price then due or thereafter due to the Contractor.

7.2.6 Final Acceptance. Final Acceptance of the Work shall occur upon approval of the Work by the District's Board of Trustees; such approval shall be submitted for adoption at the next regularly scheduled meeting of the District's Board of Trustees after the determination of Final Completion. The commencement of any warranty or guarantee period under the Contract Documents shall be deemed to be the date upon which the District's Board of Trustees approves of the Final Acceptance of the Work.

7.3 Construction Schedule.

7.3.1 General Construction Schedule Requirements. Unless otherwise provided in the Special Conditions, the Construction Schedules required under this Article 7 shall: (i) be prepared utilizing the then most recent edition of Primavera Suretrak Project Manager, Primavera Project Planner, or similar software approved by the District in advance; (ii) indicate the date(s) for commencement and completion of various portions of the Work including without limitation, procurement, fabrication and delivery of major items, materials or equipment; (iii) indicate manpower and other resources required for completion of each Construction Schedule activity; (iv) indicate costs for completion of each Construction Schedule activity; (v) identify each Submittal required by the Contract Documents, the date for the Contractor's submission of each Submittal and the date for the return of the reviewed Submittal to the Contractor; (vi) no Site activity shall reflect a duration of less than one (1) or more than fifteen (15) working days; (vii) no more than twenty five percent (25%) of the total number of activities shown on any Construction Schedule shall be critical path activities or near critical path activities; “near critical path” is defined as float less than ten (10) working days; (viii) indicate major milestones, including development of Punchlists and completion of Punchlists, equipment start-up and testing, close-out activities; and (ix) shall incorporate an activity code structure sufficient to allow future sorting/grouping by responsibility, Site area/location, CSI divisions and Milestones. Failure by the Contractor to include any element of the Work required by the Contract Documents or completion of the Work shall not excuse the Contractor from completing all work required within the Contract Time, notwithstanding District's, Construction Manager’s and Architect's acceptance of any Construction Schedule prepared by the Contractor.

7.3.2 Submittal of Preliminary Construction Schedule. Within fifteen (15) days following execution of the Agreement, the Contractor shall prepare and submit to the District, the Construction Manager and the Architect a Preliminary Construction Schedule indicating, in graphic form, the estimated rate of progress and sequence of all Work required under the Contract Documents. Failure of the Contractor to
submit the Preliminary Construction Schedule within said fifteen (15) days will result in assessment of Liquidated Damages as set forth in the Special Conditions for each calendar day beyond such fifteen (15) day period, until the Preliminary Construction Schedule is submitted by the Contractor. The purpose of the Preliminary Construction Schedule is to ensure adequate planning and execution of the Work so that it is completed within the Contract Time and to permit evaluation of the progress of the Work. The Contractor may submit a Preliminary Construction Schedule depicting completion of the Work in a duration shorter than the Contract Time; provided that such Preliminary Construction Schedule shall not be a basis for adjustment to the Contract Price in the event that completion of the Work shall occur after the time depicted therein, nor shall such Preliminary Construction Schedule be the basis for any extension of the Contract Time, the Contractor's entitlement to any extension of the Contract Time shall be based upon the Contract Time and not on any shorter duration which may be depicted in the Contractor's Preliminary Construction Schedule. If the Construction Schedules required under this Article 7.3 incorporate therein any “float” time, such float shall be deemed to jointly belong to and owned by the District and the Contractor. As used herein, “float time” shall be deemed to refer to the time between earliest finish date and the latest finish date of each activity shown on the Construction Schedule.

7.3.3 Review of Preliminary Construction Schedule. The District, the Construction Manager and the Architect shall review the Preliminary Construction Schedule submitted by the Contractor pursuant to Article 7.3.1 above for conformity with the requirements of the Contract Documents. Within fifteen (15) days of the date of receipt of the Preliminary Construction Schedule, the Preliminary Construction Schedule will be returned to the Contractor with comments to the form or content thereof. Review of the Preliminary Progress Schedule and any comments thereto by the District, the Construction Manager and/or the Architect shall not be deemed to be the assumption of construction means, methods or sequences by the District, the Construction Manager or the Architect, all of which remain the Contractor's obligations under the Contract Documents.

7.3.4 Preparation and Submittal of Contract Construction Schedule. Within fifteen (15) days of the District's return of the Preliminary Construction Schedule to the Contractor pursuant to Article 7.3.2 above, the Contractor shall prepare and submit to the District, Architect and the Construction Manager the Construction Schedule which incorporates therein the comments to the Preliminary Construction Schedule. Upon the Contractor's submittal of such Construction Schedule, the District, the Construction Manager and the Architect shall review the same for purposes of determining conformity with the requirements of the Contract Documents. Within fifteen (15) days of the receipt of the Construction Schedule, the District will accept such Construction Schedule or will return the same to the Contractor with comments to the form or content. In the event there are comments to the form or content thereof, the Contractor, shall within seven (7) days of receipt of such comments, revise and resubmit the Construction Schedule incorporating therein such comments. Upon the District's acceptance of the form and content of a Construction Schedule, the same shall be deemed the “Accepted Construction Schedule.”
Schedule.” The District's acceptance of a Construction Schedule shall be for the sole and limited purpose of determining conformity with the requirements of the Contract Documents. By the Accepted Construction Schedule, the District shall not be deemed to have exercised control over, or approval of, construction means, methods or sequences, all of which remain the responsibility and obligation of the Contractor in accordance with the terms of the Contract Documents. Further, the Accepted Construction Schedule shall not operate to limit or restrict any of Contractor's obligations under the Contract Documents nor relieve the Contractor from the full, faithful and timely performance of such obligations in accordance with the terms of the Contract Documents. The activities, commencement and completion dates of activities, and the sequencing of activities depicted on the Accepted Construction Schedule shall not be modified or revised by the Contractor without the prior consent, or direction, of the District, Construction Manager and the Architect. Updates to the Accepted Construction Schedule pursuant to Article 7.3.5 below shall not be deemed revisions to the Accepted Construction Schedule. In the event that the Accepted Construction Schedule shall depict completion of the Work in a duration shorter than the Contract Time, the same shall not be a basis for an adjustment of the Contract Time or the Contract Price in the event that actual completion of the Work shall occur after such the time depicted in such Accepted Construction Schedule. In such event, the Contract Price shall not be subject to adjustment on account of any additional costs incurred by the Contractor to complete the Work prior to the Contract Time, as adjusted in accordance with the terms of the Contract Documents. Any adjustment of the Contract Time or the Contract Price shall be based upon the Contract Time set forth in the Contract Documents and not any shorter duration which may depicted in the Accepted Construction Schedule.

7.3.5 Revisions to Accepted Construction Schedule. In the event that the progress of the Work or the sequencing of the activities of the Work shall materially differ from that indicated in the Accepted Construction Schedule, as determined by the District in its reasonable discretion and judgment, the District may direct the Contractor to revise the Accepted Construction Schedule; within fifteen (15) days of the District's direction, the Contractor shall prepare and submit to the District, Architect and the Construction Manager a revised Accepted Construction Schedule, for review and approval by the District. The Contractor may request consent of the District to revise the Accepted Construction Schedule. Any such request shall be considered by the District only if in writing setting forth the Contractor's proposed revision(s) to the Accepted Construction Schedule and the reason(s) therefor. The District may consent to, or deny, any such request of the Contractor to revise the Accepted Construction Schedule in its reasonable discretion.

7.3.6 Updates to Accepted Construction Schedule.

7.3.6.1 Updated Construction Schedule Requirements. The Contractor shall monitor and update the Accepted Construction Schedule on a monthly basis, or more frequently as required by the conditions or progress of the Work, or
as may be requested by the District. The Contractor shall provide the District, the Construction Manager and the Architect with Updated Accepted Construction Schedules indicating progress achieved and activities commenced or completed within the prior Updated Accepted Construction Schedule. Updates to the Accepted Construction Schedule shall not include any revisions to the activities, commencement and completion dates of activities or the sequencing of activities depicted on the Accepted Construction Schedule. Any such revisions to the Accepted Construction Schedule shall result in the District's rejection of such update and Contractor shall, within seven (7) days of the District's rejection of such update, submit to the Architect and the Construction Manager an Updated Accepted Construction Schedule which does not incorporate any such revisions. The Contractor shall also submit, with its updates to the Accepted Construction Schedule a narrative statement including a description of current and anticipated problem areas of the Work, delaying factors and their impact, and an explanation of corrective action taken or proposed by the Contractor. If the progress of the Work is behind the Accepted Construction Schedule, the Contractor shall indicate what measures will be taken to place the Work back on schedule. The District may, from time to time, and in the District's sole and exclusive discretion, transmit to the Contractor's Performance Bond Surety the Accepted Construction Schedule, any updates thereof and the narrative statement described hereinabove. The District's election to transmit, or not to transmit such information, to the Contractor's Performance Bond Surety shall not limit the Contractor's obligations under the Contract Documents.

7.3.6.2 Monthly Submission of Updated Construction Schedules. Concurrently with its submission of its Applications for Progress Payments, the Contractor shall submit the Updated Construction Schedule for the immediately preceding month. Each submission of a monthly Updated Construction Schedule shall consist of: (i) one (1) reproducible copy; (ii) three (3) color copies; and (iii) manipulable electronic file (Primavera format) stored on CD or DVD. If a narrative report accompanies any monthly Updated Construction Schedule, the Contractor shall submit four (4) copies of such narratives.

7.3.7 Contractor Responsibility for Construction Schedule. The Contractor shall be responsible for the preparation, submittal and maintenance of the Construction Schedules required by the Contract Documents, and any failure of the Contractor to do so may be deemed by the District as the Contractor's default in the performance of a material obligation of the Contractor under Contract Documents. Any and all costs or expenses required or incurred to prepare, submit, revise, maintain or update the Construction Schedules shall be solely that of the Contractor and no such cost or expense shall be charged to the District. The Contract Price shall not be subject to adjustment on account of costs, fees or expenses incurred or associated with the Contractor's preparation, submittal, and maintenance or updating of the Construction Schedules.
7.3.8 Three (3) Week Look-Ahead Schedule; One (1) Week As Built Schedule. A combined three (3) week Look-Ahead Schedule for the three (3) week period immediately following each weekly Progress Meeting with a one (1) week As-Built Schedule for the previous week shall be prepared by the Contractor and submitted by the Contractor to the Construction Manager for review and approval at each weekly Progress Meeting. The Contractor’s preparation and submittal of the Three (3) Week Look-Ahead Schedule; One (1) Week As-Built Schedule described above are material obligations of the Contractor; failure or refusal of the Contractor to strictly comply with the foregoing shall be a basis for the District’s exercise of the default termination procedures set forth in the Contract Documents.

7.3.9 Unanticipated Unusually Severe Weather Conditions. The Preliminary Construction Schedule and all subsequent Construction Schedule Updates shall incorporate a critical path activity titled “Remaining Inclement Weather Days” which shall be the last activity in each Construction Schedule prior to the activity titled “Substantial Completion”. The Remaining Inclement Weather Days activity shall have an initial duration equal to the total number of allowed “rain days” set forth in the Special Conditions. The Contractor shall apply in writing to the District to use an Inclement Weather Day only when a critical path activity on the then current Updated Construction Schedule has been delayed because of unanticipated unusually severe weather conditions. If, at Substantial Completion, there are inclement weather days still remaining, the Substantial Completion day shall not be adjusted. If, additional inclement weather days are required, the District shall adjust the Substantial Completion date accordingly.

7.3.10 Construction Schedules; Conditions Precedent To Progress Payment Disbursements. In addition to, and not in lieu of conditions precedent set forth elsewhere in the Contract Documents relating to the District’s disbursement of Progress Payments, the Contractor’s preparation and submission of the Preliminary Construction Schedule, Construction Schedule Updates and the Three (3) Week Look-Ahead Schedule; One (1) Week As-Built Schedule in accordance with the Contract Documents requirements are conditions precedent to the District’s obligation to disburse any Progress Payment to the Contractor.

7.3.11 Contractor Schedule Compliance Obligations. If in the sole reasonable judgment of the District: (i) the Contractor’s progress of Work is materially behind that indicated in the then current Construction Schedule or (ii) the Contractor’s progress of Work will not result in the Contractor’s achievement of Substantial Completion within the Contract Time or the Contractor’s completion of Milestones/Phases of the Work as required by the Contract Documents, the Contractor shall take the action(s) described herein, as directed or authorized by the District. Unless the actions of the District, Construction Manager, Architect or Project Inspector are the sole causative factors resulting in delayed progress of the Work or the inability to achieve Substantial Completion within the Contract Time, the Contractor’s actions hereunder shall not result in adjustment of the Contract Time or the Contract Price. Actions to be directed or authorized by the District include, without limitation, the Contractor’s (i) increase of labor resources (whether
on-Site or off-Site); (ii) increase the number of working hours per shift, increase the number of shifts per working day, increase the number of working days and/or increase Construction Equipment at the Site; and/or (iii) re-sequence Work activities to achieve maximum concurrent performance and completion of multiple Work activities.

7.4 Adjustment of Contract Time. If Substantial Completion is delayed, adjustment, if any, to the Contract Time on account of such delay shall be in accordance with this Article 7.4.

7.4.1 Excusable Delays. If Substantial Completion of the Work is delayed by Excusable Delays, the Contract Time shall be subject to adjustment for such reasonable period of time as determined by the Architect; Excusable Delays shall not result in any increase in the Contract Price. Excusable Delays refer to unforeseeable and unavoidable casualties or other unforeseen causes beyond the control, and without fault or neglect, of the Contractor, any Subcontractor, Material Supplier or other person directly or indirectly engaged by the Contractor in performance of any portion of the Work. Excusable Delays include unanticipated and unavoidable labor disputes, unusual and unanticipated delays in transportation of equipment, materials or Construction Equipment reasonably necessary for completion and proper execution of the Work, unanticipated unusually severe weather conditions or DSA directive to stop the Work. 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. The foregoing provisions notwithstanding, if the Special Conditions set forth a number of “Rain Days” to be anticipated during performance of the Work, the Contract Time shall not be adjusted for rain related unusually severe weather conditions until and unless the actual number of Rain Days during performance of the Work shall exceed those noted in the Special Conditions and such additional Rain Days shall have directly and adversely impacted the critical path of the Work as depicted in the Approved Construction Schedule or the most recent updated Approved Construction Schedule relative to the date(s) of such additional Rain Days.
7.4.2 Compensable Delays. If Substantial Completion of the Work is delayed and such delay is caused by the acts or omissions of the District, the Architect, the Inspector of Record, or separate contractor employed by the District (collectively “Compensable Delays”), upon Contractor’s request and notice, in strict conformity with Articles 7 and 9 of these General Conditions, the Contract Time will be adjusted by Change Order for such reasonable period of time as determined by the Architect and the District. In accordance with California Public Contract Code §7102, if the Contractor’s progress is delayed by any of the events described in the preceding sentence, Contractor shall not be precluded from the recovery of damages directly and proximately resulting therefrom, provided that the District is liable for the delay, the delay is unreasonable under the circumstances involved and the delay was not within the reasonable contemplation of the District and the Contractor at the time of execution of the Agreement. In such 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 such delay, and shall exclude indirect or other consequential damages. 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, Articles 9 and 14 of these General Conditions.

7.4.3 Inexcusable Delays. Inexcusable Delays refer to any delay to the progress of the Work caused by events or factors other than those specifically identified in Articles 7.4.1 and 7.4.2 above. Neither the Contract Price nor the Contract Time shall be adjusted on account of Inexcusable Delays.

7.4.4 Adjustment of Contract Time.

7.4.4.1 Procedure for Adjustment of Contract Time. The Contract Time shall be subject to adjustment only in strict conformity with applicable provisions of the Contract Documents. Failure of Contractor to request adjustment(s) of the Contract Time in strict conformity with applicable provisions of the Contract Documents shall be deemed Contractor’s waiver of the same.

7.4.4.1.1 Contractor Notice of Adjustment of Contract Time. The Contract Time shall be subject to adjustment only if the Contractor provides notice of an adjustment of the Contract Time and all supporting substantiation and documentation of the basis and extent of the requested Contract Time adjustment in strict conformity to Article 9.6 of these General Conditions.

7.4.4.1.2 Time Impact Evaluation. The supporting substantiation and documentation of the basis and extent of Contract Time adjustments required by the provisions of Article 9.6 shall include, without limitation, a complete Time Impact Evaluation (“TIE”) of the factors justifying an
adjustment of the Contract Time and the extent of such adjustment of the Contract Time.

7.4.4.2 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. 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 which ends last. If an Inexcusable 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 Inexcusable Delay. In addition to the foregoing limitations upon extension of the Contract Time, no adjustment of the Contract Time shall be made on account of any Excusable Delays or Compensable Delays unless such delay(s) actually and directly impact Work or Work activities on the critical path of the then current and updated Approved Construction Schedule as of the date on which such delay first occurs. The District shall not be deemed in breach of, or otherwise in default of any obligation hereunder, if the District shall deny any request by the Contractor for an adjustment of the Contract Time for any delay which does not actually and directly impact Work or Work activities on the critical path of the then current and updated Approved Construction Schedule.

7.5 Liquidated Damages. Should the Contractor neglect, fail or refuse to: (i) submit the Preliminary Construction Schedule within the time set forth in the Contract Documents; (ii) submit Submittals in accordance with Submittal Schedule incorporated into the Accepted Construction Schedule; (iii) achieve Substantial Completion of the Work within the Contract Time, (subject to adjustments authorized under the Contract Documents); or (iv) to complete Punchlist items within the time established pursuant to the Contract Documents, the Contractor agrees to pay to the District the amount of per diem Liquidated Damages set forth in the Special Conditions, not as a penalty but as Liquidated Damages. The Liquidated Damages amounts set forth in the Special Conditions are agreed upon by and between the Contractor and the District because of the difficulty of fixing the District's actual damages in the event of the Contractor's delayed submission of the Preliminary Construction Schedule, delayed submission of Submittals, delayed Substantial Completion or delayed completion of Punchlist items. The Contractor and the District specifically agree that said amounts are reasonable estimates of the District's damages in such event, and that such amounts do not constitute a penalty. Liquidated Damages may be deducted by the District from the Contract Price then or thereafter due the Contractor. The Contractor and the Surety shall be liable to the District for any Liquidated Damages exceeding any amount of the Contract Price then held or retained by the District. In the event that the Contractor shall fail or refuse to complete Punchlist items and the District elects to exercise its right to cause completion or correction of such items pursuant to Article 7.2.3.2 hereof, the District's assessment of Liquidated Damages pursuant to the foregoing shall be in addition,
and not in lieu of, the District's right to charge Contractor with the cost of completing or correcting such items of the Work, as provided for under Article 7.2.3.2. The Contractor and the District acknowledge and agree that the provisions of this Article 7.5 are reasonable under the circumstances existing at the time of the Contractor's execution of the Agreement.

7.6 District Right to Take-Over Work. Unless caused by the District, Architect, Construction Manager or the Project Inspector, if the Contractor fails or refuses, for any reason and at any time, to furnish adequate materials, labor, equipment or services to maintain progress of the Work in accordance with the then current Construction Schedule after twenty-four (24) hours advance written notice from the Construction Manager to the Contractor of its failure or refusal, the District may thereafter furnish or cause to be furnish such materials, labor, equipment or services necessary to maintain progress of the Work in accordance with the then current Construction Schedule. All costs, expenses or other charges (whether direct, indirect and administrative) incurred by the District in furnishing such materials, labor, equipment or services shall be at the sole cost of the Contractor and the District may deduct the same from the Contract Price then or thereafter due the Contractor. The District's exercise of rights pursuant to the foregoing shall not be deemed a waiver or limitation of any other right or remedy of the District under the Contract Documents.

ARTICLE 8: CONTRACT PRICE

8.1 Contract Price. The Contract Price is the amount stated in the Agreement as such, and subject to any authorized adjustments thereto in accordance with the Contract Documents, is the total amount payable by the District to the Contractor for performance of the Work under the Contract Documents. The District's payment of the Contract Price to the Contractor shall be in accordance with the Contract Documents.

8.2 Cost Breakdown. Within fifteen (15) days of the execution of the Agreement by Contractor, Contractor shall furnish, on forms provided by the District, a detailed estimate and complete Cost Breakdown of the Contract Price. The Cost Breakdown shall be subject to review and approval by the Construction Manager, Architect and District of the form and content thereof. In the event that the District shall reasonably object to any portion of the Cost Breakdown, within ten (10) days of the District's receipt of the Cost Breakdown, the District shall notify the Contractor, in writing of the District's objection(s) to the Cost Breakdown. Within five (5) days of the date of the District's written objection(s), Contractor shall submit a revised Cost Breakdown to the District, Architect and the Construction Manager for review and acceptance. The foregoing procedure for the preparation, review and approval of the Cost Breakdown shall continue until the District, Architect and the Construction Manager have approved of the entirety of the Cost Breakdown. Once the Cost Breakdown is accepted by the District, Architect and the Construction Manager, the Cost Breakdown shall not be thereafter modified or amended by the Contractor without the prior consent and approval of the District, Architect and the Construction Manager, which may be granted or withheld in their sole reasonable discretion. Schedule of
Values shall carry a line item of five percent (5%) for closeout documentation which is in addition to the retention.

8.3 Progress Payments.

8.3.1 Applications for Progress Payments. During the Contractor’s performance of the Work, the Contractor shall submit monthly, on the first working day of each month, to the Project Inspector, Construction Manager and the Architect, Applications for Progress Payments, on forms approved by the District, setting forth an itemized estimate of Work completed in the preceding month for the purpose of the District's making of Progress Payments thereon. Values utilized in the Applications for Progress Payments shall be based upon the District accepted Cost Breakdown pursuant to Article 8.2 above and such values shall be only for determining the basis of Progress Payments to Contractor, and shall not be considered as fixing a basis for adjustments, whether additive or deductive, to the Contract Price, or for determining the extent of Work actually completed.

8.3.2 Initial Progress Payment Meeting. Prior to submitting any Application for Progress Payment and for the purpose of expediting review of Application for Progress Payments and disbursement of Progress Payments, Contractor agrees to meet with the Project Inspector, Construction Manager and Architect to review and discuss each of the Contractor’s Proposed Applications for Progress Payment. If any item submitted for payment is disputed during this review, Contractor agrees to use its best efforts to resolve the disputed items with Project Inspector, Construction Manager and Architect before formally submitting the Application for Progress Payment. The Architect, the Construction Manager and District specifically reserve the right to dispute any item included in Contractor’s Application for Progress Payment, regardless of whether such item was identified as disputed in the initial review process provided for herein.

8.3.3 District's Review of Applications for Progress Payments. In accordance with Public Contract Code § 20104.50, upon receipt of an Application for Progress Payment, the District shall cause the same to be reviewed by the Project Inspector, the Construction Manager, if one is designated by the District, and the Architect, as soon as is practicable after receipt of such Application for Progress Payment. Such review shall be for the purpose of determining that the Application for Progress Payment is a proper Progress Payment request. For purposes of this Article 8.3.3, an Application for Progress Payment shall be deemed “proper” only if it is submitted on the form approved by the District, with all of the requested information of such form of Application for Progress Payment completely and accurately provided by the Contractor and such completed Application for Progress Payment is accompanied by: (i) a Certification, executed under penalty of perjury by the Contractor’s Superintendent and/or Construction Manager, that all Certified Payroll Records for the Contractor and all Subcontractors have been completed and submitted to the Labor Commissioner in strict conformity with the requirements of Labor Code § 1770 et seq.; (ii) duly completed and executed forms of Conditional Waiver and Release of Rights Upon Progress Payment in accordance with
California Civil Code § 8132 of the Contractor, all Subcontractors of any tier, and Material Suppliers covering the Progress Payment requested; (iii) duly completed and executed forms of Unconditional Waiver and Release of Rights upon Progress Payment in accordance with California Civil Code § 8134 of the Contractor, all Subcontractors of any tier, and Material Suppliers covering the Progress Payment received by the Contractor under the prior Application for Progress Payment; (iv) an updated Construction Schedule in accordance with Article 7.3.5 of the General Conditions and applicable provisions of the Specifications relating to the Contractor's updates to the Construction Schedule; (v) for the first (1st) Application for Progress Payment, a certification that the Preliminary Construction Schedule conforming to requirements of the Contract Documents has been prepared and submitted by the Contractor; for subsequent Applications for Progress Payment a certification by the Contractor that it has continuously maintained, or caused to maintained, the Record Drawings reflecting the actual as-built conditions of the Work performed by for which the Progress Payment is requested, it being understood that such certification is subject to verification by the District, Architect, Project Inspector or the Construction Manager prior to disbursement of the Progress Payment; and (vi) completed/executed form of Debris Recycling Statement. In accordance with Public Contract Code § 20104.50, an Application for Progress Payment determined by the District not to be a proper Application for Progress Payment shall be returned by the District to the Contractor as soon as is practicable after receipt of the same from the Contractor, but in no event not more than seven (7) days after the District's receipt thereof. The District's return of any Application for Progress Payment pursuant to the preceding sentence shall be accompanied by a written document setting forth the reason(s) why the Application for Progress Payment is not proper.

8.3.4 Review of Applications for Progress Payments. Upon receipt of an Application for Progress Payment, the Architect, Construction Manager and the Project Inspector shall inspect and verify the Work to determine whether it has been performed in accordance with the terms of the Contract Documents and to determine the portion of the Application for Progress Payment which is properly due to the Contractor under the terms of the Contract Documents.

8.3.5 District's Disbursement of Progress Payments

8.3.5.1 Timely Disbursement of Progress Payments. In accordance with Public Contract Code §§ 7201 and 20104.50, within thirty (30) days after the District's receipt of a proper Application for Progress Payment, there shall be paid, by District, to Contractor a sum equal to ninety-five percent (95%) of the value of the Work indicated in the Application for Progress Payment which is actually in place as of the date of the Application for Progress Payment and as verified and approved by the Project Inspector and the Architect and the prorata portion of the Contractor's overhead, supervision and general conditions costs and profit for that month; provided, however, that the District's obligation to disburse any Progress Payment shall be subject to the District's receipt of all documents set forth in Article 8.3.3 above, each and all of which are
conditions precedent to the District's obligation to disburse Progress Payments. The ninety-five percent (95%) may be reduced if the District determines that the Project is "substantially complex" in accordance with Public Contract Code § 7201. If an Application for Progress Payment is determined not to be proper due to the failure or refusal of the Contractor to submit documents with the Application for Progress Payment, as required by Article 8.3.2, or incompleteness or inaccuracies in any such documents submitted or if it is reasonably determined that the Record Drawings have not been continuously maintained to reflect the actual as built conditions of the Work completed in the period for which the Progress Payment is requested, the thirty (30) day period hereunder for the District's timely disbursement of a Progress Payment shall be deemed to commence on the date that the District is actually in receipt of documents not submitted with the Application for Progress Payment, or corrections to documents with the Application for Progress Payment so as to render them complete and accurate, or the date upon which the Contractor accurately and fully completes preparation of the Record Drawings relating to the Work for which the Progress Payment is requested.

8.3.5.2 Untimely Disbursement of Progress Payments. 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). The foregoing notwithstanding, in the event that the District shall determine that any Application for Progress Payment is not proper, pursuant to Article 8.3.3 above, and the District does not return such Application for Progress Payment within the seven (7) day period provided for in Article 8.3.3, the period of time for the District's disbursement of the Progress Payment on such Application for Progress Payment without incurring the interest liability shall be reduced by the number of days exceeding the seven (7) day return period.

8.3.5.3 District's Right to Disburse Progress Payments by Joint Checks. Provided that the District is in receipt of the applicable Subcontract or Purchase Order, the District, may in its sole discretion, issue joint checks to the Contractor and such Subcontractor or Material Supplier in satisfaction of its obligation to make Progress Payments or the Final Payment due hereunder.

8.3.5.4 No Waiver of Defective or Non-Conforming Work. 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.

8.3.6 Progress Payments for Changed Work. The Contractor's Applications for Progress Payment may include requests for payment on account of Changes in the
Work which have been properly authorized and approved by the Project Inspector, the Architect and all other governmental agencies with jurisdiction over such Change in accordance with the terms of the Contract Documents and for which a Change Order has been issued. Except as provided for herein, no other payment shall be made by the District for Changes in the Work.

8.3.7 Materials or Equipment Not Incorporated Into the Work.

8.3.7.1 Limitations Upon Payment. 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 which, 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.

8.3.7.2 Materials or Equipment Delivered and Stored at the Site. The District may, in its sole and exclusive discretion, make payment for materials or equipment not yet incorporated into the Work if, at or prior to the time of the Contractor's submittal of an Application for Progress Payment incorporating therein a request for payment of such materials or equipment if all of the following are complied with: (i) the materials or equipment have been delivered to the Site; (ii) adequate arrangements, reasonably satisfactory to the District, have been made by the Contractor to store and protect such materials or equipment at the Site including without limitation, insurance reasonably satisfactory to the District, covering and protecting against the risk of loss, destruction, theft or other damage to such materials or equipment while in storage if such coverage is not afforded under the policy of Builder's Risk insurance obtained by the District pursuant to the Contract Documents; and (iii) the establishment of procedures reasonably satisfactory to the District by which title to such materials or equipment will be vested in the District upon the District's payment therefor. The Contractor acknowledges that the discretion to make, or not to make, payment for materials or equipment delivered or stored at the site of the Work pursuant to the preceding sentence shall be exercised exclusively by the District; the District's exercise of discretion not to make payment for materials or equipment delivered or stored at the Site, but not yet incorporated into the Work shall not be deemed the District's default hereunder. In the event that the District shall elect to make payment for materials or equipment delivered and stored at the Site, the costs and expenses incurred to comply with the requirements of (ii) and (iii) of this Article 8.3.6.2 shall be borne solely and exclusively by the Contractor and no payment shall be made by the District on account of such costs and expenses.

8.3.7.3 Materials or Equipment Not Delivered or Stored at the Site. No payments shall be made by the District for materials or equipment to be incorporated into the Work where such materials or equipment have not been delivered or stored at the Site. The foregoing notwithstanding, the District may, in its sole and exclusive discretion, elect to make payment for materials or equipment not incorporated into the Work and which are not delivered or
stored at the Site at or prior to the time of the Contractor's submittal of an Application for Progress Payment incorporating therein a request for payment of such materials or equipment provided that each and all of the following have been complied with: (i) adequate arrangements, reasonably satisfactory to the District, have been made by the Contractor to store and protect such materials or equipment which include without limitation, insurance reasonably satisfactory to the District, covering and protecting against the risk of loss, destruction, theft or other damage to such materials or equipment while in storage if coverage for the same is not afforded under the policy of Builder's Risk insurance obtained by the District pursuant to the Contract Documents; and (ii) the establishment of procedures reasonably satisfactory to the District by which title to such materials or equipment will be vested in the District upon the District's payment therefor. The Contractor acknowledges that the discretion to make, or not to make, payment for such materials or equipment pursuant to the preceding sentence shall be exercised exclusively by the District; the District's exercise of discretion not to make payment for such materials or equipment shall not be deemed the District's default hereunder. In the event that the District shall elect to make payment for materials or equipment not at the Site, the costs and expenses incurred to comply with the requirements of (i) and (ii) of this Article 8.3.7.3 shall be borne solely and exclusively by the Contractor and no payment shall be made by the District on account of such costs and expenses.

8.3.7.4 Materials or Equipment in Fabrication or Transit. The provisions of this Article 8.3.7 notwithstanding, the District shall not make any payment on account of any materials or equipment which is in the process of being fabricated or which are in transit to the Site or other storage location.

8.3.8 Exclusions From Progress Payments. In addition to the District's right to withhold disbursement of any Progress Payment provided for in the Contract Documents, neither the Contractor's Application for Progress Payment shall include, nor shall the District be obligated to disburse any portion of the Contract Price for amounts which the Contractor does not intend to pay any Subcontractor, of any tier, or Material Supplier because of a dispute or any other reason.

8.3.9 Title to Work. The Contractor warrants that title to all Work covered by an Application for Progress Payment will pass to the District no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Progress Payment, all Work for which a Progress Payment has been previously issued and the Contractor has received payment from the District therefor shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, stop notices, security interests or encumbrances in favor of the Contractor, Subcontractors, Material Suppliers or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.
8.3.10 Substitute Security for Retention. In accordance with the provisions of California Public Contract Code § 22300, eligible and equivalent securities may be substituted for any monies withheld by the District to ensure the Contractor's performance under the Contract Documents at the request and expense of the Contractor and in conformity with the provisions of California Public Contract Code §22300. The foregoing and the provisions of California Public Contract Code §22300 notwithstanding, failure of the Contractor to request the substitution of eligible and equivalent securities for monies to be withheld by the District prior to the Contractor's submission of its first Application for Progress Payment shall be deemed a waiver of such right.

8.4 Final Payment.

8.4.1 Application for Final Payment. When the Contractor has achieved Final Completion of the Work and has otherwise fully performed its obligations under the Contract Documents, the Contractor shall submit an Application for Final Payment on such form as approved by the District. Thereupon, the Architect and the Project Inspector will promptly make a final inspection of the Work and when the Architect and the Project Inspector find the Work acceptable under the Contract Documents and that the Contract has been fully performed by the Contractor, the Architect and the Project Inspector will thereupon promptly approve the Application for Final Payment, stating that to the best their knowledge, information and belief, the Work has been completed in accordance with the terms of the Contract Documents. The Final Payment shall include the remaining balance of the Contract Price and any retention from Progress Payments previously withheld by the District.

8.4.2 Conditions Precedent to Disbursement of Final Payment. Neither Final Payment nor any remaining Contract Price shall become due until the Contractor submits to the District each and all of the following, the submittal of which are conditions precedent to the District's obligation to disburse the Final Payment: (i) an affidavit or certification by the Contractor that payrolls, bills for materials and other indebtedness incurred in connection with the Work for which the District or the District's property may or might be responsible or encumbered have been paid or otherwise satisfied; (ii) a certificate evidencing that insurance required by the Contract Documents to remain in force after the Contractor's receipt of Final Payment is currently in effect; (iii) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover any period following Final Payment as required by the Contract Documents; (iv) consent of the Surety on the Labor and Material Payment Bond and Performance Bond, to Final Payment if required; (v) duly completed and executed forms of Conditional or Unconditional Waivers and Releases of rights upon Final Payment of the Contractor, Subcontractors of any tier and Material Suppliers in accordance with California Civil Code §§ 8136 and 8138, with each of the same stating that there are, or will be, no claims for additional compensation after disbursement of the Final Payment; (vi) Operations and Maintenance manuals and separate warranties provided by any manufacturer or distributor of any materials or equipment incorporated into the Work; (vii) the Record Drawings; (viii) the form of Guarantee
included in the Contract Documents duly executed by an authorized representative of the Contractor; (ix) any and all other items or documents required by the Contract Documents to be delivered to the District upon completion of the Work; (x) the completion and submittal of all reports required by the Contract Documents, including without limitation, verified reports required by applicable provisions of the California Code of Regulations; and (xi) if required by the District, such other data establishing payment or satisfaction of obligations such as receipts, releases and waivers of liens, stop notices, claims, security interest or encumbrances arising out of the Contract to the extent and in such form as may be required by the District.

8.4.3 Disbursement of Final Payment. Provided that the District is then in receipt of all documents and other items in Article 8.4.2 above as conditions precedent to the District’s obligation to disburse Final Payment, not later than sixty (60) days following Final Acceptance the District shall disburse the Final Payment to the Contractor. Pursuant to California Public Contract Code §7107, if there is any dispute between the District and the Contractor at the time that disbursement of the Final Payment is due, the District may withhold from disbursement of the Final Payment an amount not to exceed one hundred fifty percent (150%) of the amount in dispute.

8.4.4 Waiver of Claims. The Contractor’s acceptance of the Final Payment is a waiver and release by the Contractor of any and all claims against the District for compensation or otherwise in connection with the Contractor’s performance of the Contract.

8.4.5 Claims Asserted After Final Payment. Any lien, stop 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 who further agrees to indemnify, defend and hold harmless the District and its officers, agents, representatives and employees from and against any claims, demands or judgments arising or associated therewith, including without limitation attorney’s fees incurred by the District in connection therewith. In the event any lien, stop 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 notice or other claim, including, without limitation all costs and reasonable attorney’s fees incurred by District in connection therewith.

8.5 Withholding of Payments. The District may withhold the Final Payment, in whole or in part, or backcharge the Contractor to the extent it may deem advisable to protect the District on account of: (i) defective Work or Work not in conformity with the requirements of the Contract Documents which is not remedied; (ii) failure of the Contractor to make payments when due Subcontractors or Material Suppliers for materials or labor; (iii) claims filed or reasonable evidence of the probable filing of claims by Subcontractors, laborers, Material Suppliers, or others performing any
portion of the Work under the Contract Documents for which the District may be liable or responsible including, without limitation, Stop Payment Notice Claims filed with the District pursuant to California Civil Code § 9350 et seq.; (iv) a reasonable doubt that the Contract can be completed for the then unpaid balance of the Contract Price; (v) tax demands filed in accordance with California Government Code § 12419.4; (vi) other claims, penalties and/or forfeitures for which the District is required or authorized to retain funds otherwise due the Contractor; (vii) amounts due from the Contractor to the District under the terms of the Contract Documents; (viii) violations of Labor Code § 1720 et seq. addressing the obligations of the Contractor or any Subcontractor relating to the employment of labor in connection with the Work (including, without limitation, delinquent submission of Certified Payroll Records or the submission of inadequate Certified Payroll Records); or (ix) the Contractor's failure to perform any of its obligations under the Contract Documents or its default under the Contract Documents or its failure to maintain adequate progress of the Work. In addition to the foregoing, the District shall not be obligated to process any Application for Final Payment, nor shall Contractor be entitled to any Final Payment so long as any lawful or proper direction concerning the Work or the performance thereof or any portion thereof, given by the District, the Project Inspector, the Architect or any public authority having jurisdiction over the Work, or any portion thereof, shall not be fully and completely complied with by the Contractor. When the District is reasonably satisfied that the Contractor has remedied any such deficiency, payment shall be made of the amount withheld. In lieu of making payment of withheld amounts to the Contractor, the District may, in its sole exclusive discretion, apply withheld amounts to the payment and satisfactions of debts and obligations of the Contractor relating to the Work. In doing, the District shall be an agent of the Contractor for the sole and limited purpose of making payment(s) to others for the Work on behalf of the Contractor; payments made by the District pursuant to the foregoing shall be deemed payments to the Contractor and the Contract Price shall be adjusted to reflect such payment(s). The District shall not be liable to the Contractor or others for its good faith decision to make or not make payment(s) of amounts withheld from the Contractor pursuant to the foregoing. If the District elects to make payments to other of amounts withheld from the Contractor, the District may do so without prior judicial determination; the District will render the Contractor a complete and accurate accounting of amounts withheld and paid to others on behalf of the Contractor.

8.6 Payments to Subcontractors. The Contractor shall pay all Subcontractors for and on account of Work of the Contract performed by such Subcontractors in accordance with the terms of their respective subcontracts and as provided for pursuant to California Public Contract Code §10262, the provisions of which are deemed incorporated herein by this reference. In the event of the Contractor's failure to make payment to Subcontractors in conformity with California Public Contract Code §10262, the provisions of California Public Contract Code §10253 shall apply; by this reference, the provisions of California Public Contract Code §10253 are incorporated herein in its entirety, except that the references in said Section 10253 to “the director” shall be deemed to refer to the District. The Contractor shall timely make payment of retention due Subcontractors in accordance with Public Contract Code § 7107.
ARTICLE 9: CHANGES

9.1 Changes in the Work. The District, at any time, by written order, may make Changes within the general scope of the Work under the Contract Documents or issue additional instructions; require additional Work or direct deletion of Work. The Contractor shall not proceed with any Change involving an increase or decrease in the Contract Price or the Contract Time without prior written authorization from the District. The foregoing notwithstanding, the Contractor shall promptly commence and diligently complete any Change to the Work subject to the District's written authorization issued pursuant to the preceding sentence; the Contractor shall not be relieved or excused from its prompt commencement and diligent completion of any Change subject to the District's written authorization by virtue of the absence or inability of the Contractor and the District to agree upon the extent of any adjustment to the Contract Time or the Contract Price on account of such Change. The issuance of a Change Order pursuant to this Article 9 in connection with any Change authorized by the District under this Article 9.1 shall not be deemed a condition precedent to Contractor's obligation to promptly commence and diligently complete any such Change authorized by the District hereunder. The District's right to make Changes shall not invalidate the Contract nor relieve the Contractor of any liability or other obligations under the Contract Documents. Any requirement of notice of Changes in the scope of Work to the Surety shall be the responsibility of the Contractor. Changes to the Work depicted or described in the Drawings or the Specifications shall be subject to approval by the DSA. The District may make Changes to bring the Work or the Project into compliance with environmental requirements or standards established by state or federal statutes and regulations enacted after award of the Contract.

9.2 Oral Order of Change in the Work. Any oral 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 and the Project Inspector written notice within ten (10) 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 ten (10) days of such 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 such 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 order, directions, instructions, interpretation or determination that the Contractor regards as
a Change. Unless the Contractor acts in strict accordance with this procedure, any such 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.

9.3 Contractor Submittal of Data. Within ten (10) days after receipt of a written order directing a Change in the Work or furnishing the written notice regarding any oral order directing a Change in the Work, the Contractor shall submit to the Architect, the Project Inspector, the Construction Manager and the District a detailed written statement setting forth the general nature of the Change, the amount of any adjustment to the Contract Price on account thereof, properly itemized and supported by sufficient substantiating data to permit evaluation of the same, and the extent of adjustment of the Contract Time, if any, required by such Change. No claim or adjustment to the Contract Price or the Contract Time shall be allowed if not asserted by the Contractor in strict conformity herewith or if asserted after Final Payment is made under the Contract Documents.

9.4 Adjustment to Contract Price and Contract Time on Account of Changes to the Work.

9.4.1 Adjustment to Contract Price. Adjustments to the Contract Price due to Changes in the Work shall be determined by application of one of the following methods, in the following order of priority:

9.4.1.1 Mutual Agreement. By negotiation and mutual agreement, on a lump sum basis, between the District and the Contractor on the basis of the estimate of the actual and direct increase or decrease in costs on account of the Change. Upon request of the District or the Architect, the Contractor shall provide a detailed estimate of increase or decrease in costs directly associated with performance of the Change along with cost breakdowns of the components of the Change and supporting data and documentation. The Contractor’s estimate of increase or decrease in costs pursuant to the foregoing, if requested, shall be in sufficient detail and in such form as to allow the District, the Project Inspector and the Architect to review and assess the completeness and accuracy thereof. The Contractor shall be solely responsible for any additional costs or additional time arising out of, or related in any manner to, its failure to provide the estimate of costs within the time specified in the request of the District or the Architect for such estimate.

9.4.1.2 Determination by the District. By the District, whether or not negotiations are initiated pursuant to Article 9.4.1.1 above based upon actual and necessary costs incurred by the Contractor as determined by the District on the basis of the Contractor’s records. In the event that the procedure set forth in this Article 9.4.1.2 is utilized to determine the extent of adjustment to the Contract Price on account of Changes to the Work, 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, the Architect and the Project Inspector, 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, the Architect and the Project Inspector 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 Article 9.4.1.2, Contractor shall, pursuant to Article 9.7 below, diligently proceed to perform and complete any such Change.

9.4.1.3 Basis for Adjustment of Contract Price. If Changes in the Work require an adjustment of the Contract Price pursuant to Articles 9.4.1.1 or 9.4.1.2 above, the basis for adjustment of the Contract Price shall be as follows:

9.4.1.3.1 Labor. Contractor shall be compensated for the costs of labor actually and directly utilized in the performance of the Change. Such labor costs shall be limited to field labor for which there is a prevailing wage rate classification. Wage rates for labor shall not exceed the prevailing wage rates in the locality of the Site and shall be in the labor classification(s) necessary for the performance of the Change. Use of a labor classification which would increase labor costs associated with any Change shall not be permitted. Labor costs shall exclude costs incurred by the Contractor in preparing estimate(s) of the costs of the Change, in the maintenance of records relating to the costs of the Change, coordination and assembly of materials and information relating to the Change or performance thereof, or the supervision and other overhead and general conditions costs associated with the Change or performance thereof.

9.4.1.3.2 Materials and Equipment. Contractor shall be compensated for the costs of materials and equipment necessarily and actually used or consumed in connection with the performance of Changes. Costs of materials and equipment may include reasonable costs of transportation from a source closest to the site of the Work and delivery to the Site. If discounts by Material Suppliers are available for materials necessarily used in the performance of Changes, they shall be credited to the District. If materials and/or equipment necessarily used in the performance of Changes are obtained from a supplier or source owned in whole or in part by the Contractor, compensation therefor shall not exceed the current wholesale price for such materials or equipment. If, in the reasonable opinion of the District, the costs asserted by the Contractor for materials and/or equipment in connection with any Change is excessive, or if the
Contractor fails to provide satisfactory evidence of the actual costs of such materials and/or equipment from its supplier or vendor of the same, the costs of such materials and/or equipment and the District's obligation for payment of the same shall be limited to the then lowest wholesale price at which similar materials and/or equipment are available in the quantities required to perform the Change. The District may elect to furnish materials and/or equipment for Changes to the Work, in which event the Contractor shall not be compensated for the costs of furnishing such materials and/or equipment or any mark-up thereon.

9.4.1.3.3 Construction Equipment. Contractor shall be compensated for the actual cost of the necessary and direct use of Construction Equipment in the performance of Changes to the Work. Use of such Construction Equipment in the performance of Changes to the Work shall be compensated in increments of fifteen (15) minutes. Rental time for Construction Equipment moved by its own power shall include time required to move such Construction Equipment to the site of the Work from the nearest available rental source of the same. If Construction Equipment is not moved to the Site by its own power, Contractor will be compensated for the loading and transportation costs in lieu of rental time. The foregoing notwithstanding, neither moving time or loading and transportation time shall be allowed if the Construction Equipment is used for performance of any portion of the Work other than Changes to the Work. Unless prior approval in writing is obtained by the Contractor from the Architect, the Project Inspector and the District, no costs or compensation shall be allowed for time while Construction Equipment is inoperative, idle or on standby, for any reason. The Contractor shall not be entitled to an allowance or any other compensation for Construction Equipment or tools used in the performance of Changes to the Work where such Construction Equipment or tools have a replacement value of $500.00 or less. Construction Equipment costs claimed by the Contractor in connection with the performance of any Change to the Work shall not exceed rental rates established by distributors or construction equipment rental agencies in the locality of the Site; any costs asserted which exceed such rental rates shall not be allowed or paid. Unless otherwise specifically approved in writing by the Architect, the Project Inspector and the District, the allowable rate for the use of Construction Equipment in connection with Changes to the Work shall constitute full compensation to the Contractor for the cost of rental, fuel, power, oil, lubrication, supplies, necessary attachments, repairs or maintenance of any kind, depreciation, storage, insurance, labor (exclusive of labor costs of the Construction Equipment operator), and any all other costs incurred by the Contractor incidental to the use of such Construction Equipment.

9.4.1.3.4 Mark-up on Costs of Changes to the Work. In determining the cost to the District and the extent of increase to the Contract Price resulting from a Change adding to the Work, the allowance for mark-ups on the
costs of the Change for all overhead (including home office and field overhead), general conditions costs and profit associated with the Change shall not exceed the percentage set forth in the Special Conditions, regardless of the number of Subcontractors, of any tier, performing any portion of any Change to the Work. If a Change to the Work reduces the Contract Price, no profit, general conditions or overhead costs shall be paid by the District to the Contractor for the reduced or deleted Work. In such event, the adjustment to the Contract Price shall be the actual cost reduction realized by the reduced or deleted Work multiplied by the percentage set forth in the Special Conditions for mark-ups on the cost of a Change adding to the scope of the Work.

9.4.1.3.5 Contractor Maintenance of Records. In the event that Contractor shall be directed to perform any Changes to the Work pursuant to Article 9.1 or 9.2, or should the Contractor encounter conditions which the Contractor, pursuant to Article 9.6, believes would obligate the District to adjust the Contract Price and/or the Contract Time, Contractor shall maintain detailed records on a daily basis. Such records shall include without limitation hourly records for labor and Construction Equipment and itemized records of materials and equipment used that day in connection with the performance of any Change to the Work. In the event that more than one Change to the Work is performed by the Contractor in a calendar day, Contractor shall maintain separate records of labor, Construction Equipment, materials and equipment for each such Change. In the event that any Subcontractor, of any tier, shall provide or perform any portion of any Change to the Work, Contractor shall require that each such Subcontractor maintain records in accordance with this Article. Each daily record maintained hereunder shall be signed by Contractor's Superintendent or Contractor's authorized representative; such signature shall be deemed Contractor's representation and warranty that all information contained therein is true, accurate, complete and relate only to the Change referenced therein. All records maintained by a Subcontractor, of any tier, relating to the costs of a Change to the Work shall be signed by such Subcontractor's authorized representative or Superintendent. All records maintained hereunder shall be subject to inspection, review and/or reproduction by the District, the Architect or the Project Inspector upon request. In the event that Contractor shall fail or refuse, for any reason, to maintain or make available for inspection, review and/or reproduction such records and the adjustment to the Contract Price on account of any Change to the Work is determined pursuant to this Article, the District's reasonable good faith determination of the extent of adjustment to the Contract Price on account of such Change shall be final, conclusive, dispositive and binding upon Contractor. Contractor's obligation to maintain records hereunder is in addition to, and not in lieu of, any other Contractor obligation under the Contract Documents with respect to Changes to the Work.
9.4.2 **Adjustment to Contract Time.** In the event of any Change(s) to the Work pursuant to this Article 9, the Contract Time shall be extended or reduced by Change Order for a period of time commensurate with the time reasonably necessary to perform such Change. In the event that any Change shall require an extension of the Contract Time, the Contractor shall not be subject to Liquidated Damages for such period of time. If completion of the Work is delayed by causes for which the District is responsible and the delay is unreasonable under the circumstances involved, and not within the contemplation of the Contractor and the District at the time of execution of the Agreement, the Contractor shall not be precluded from the recovery of damages arising therefrom.

9.4.3 **Addition or Deletion of Alternate Bid Item(s).** If the Bid for the Work includes proposal(s) for Alternate Bid Item(s), during Contractor’s performance of the Work, the District may elect, pursuant to this Article to add any such Alternate Bid Item(s) if the same did not form a basis for award of the Contract or delete any such Alternate Bid Item(s) if the same formed a basis for award of the Contract. If the District elects to add or delete any such Alternate Bid Item(s) pursuant to the foregoing, the cost or credit for such Alternate Bid Item(s) shall be as set forth in the Contractor’s Bid. 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.

9.5 **Change Orders.** If the District approves of a Change, a written Change Order prepared by the Architect on behalf of the District shall be forwarded to the Contractor describing the Change and setting forth the adjustment to the Contract Time and the Contract Price, if any, on account of such Change. All Change Orders shall be in full payment and final settlement of all claims 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 claim or item 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; once the Change Order has been prepared and forwarded to the Contractor for execution, without the prior approval of the District which may be granted or withheld in the sole and exclusive discretion of the District, the Contractor shall not modify or amend the form or content of such Change Order, or any portion thereof. The Contractor’s attempted or purported modification or amendment of any such Change Order, without the prior approval of the District which may be granted or withheld in the sole and exclusive discretion of the District, shall not be binding upon the District; any such unapproved modification or amendment to such Change Order shall be null, void and unenforceable. Unless otherwise expressly provided for in the Contract Documents or in the Change Order, any Change Order issued hereunder shall be binding upon the District only upon action of the District’s Board of Trustees approving and ratifying such Change Order. In the event of any amendment or modification made by the Contractor to a Change Order for which there is no prior approval by the District, in accordance with the provisions of this
Article 9.5, unless otherwise expressly stated in its approval and ratification of such Change Order, any action of the Board of Trustees to approve and ratify such Change Order shall be deemed to be limited to the Change Order as prepared by the Architect; such approval and ratification of such Change Order shall not be deemed the District's approval and ratification of any unapproved amendment or modification by the Contractor to such Change Order. Change Orders shall be issued on the form of Change Order and the content thereof, as attached to the Special Conditions.

9.6 **Contractor Notice of Changes.** If the Contractor should claim that any instruction, request, the Drawings, the Specifications, action, condition, omission, default, or other situation obligates the District to increase the Contract Price or to extend the Contract Time, the Contractor shall notify the District, Construction Manager, Project Inspector and the Architect, in writing, of such claim within ten (10) days from the date of its actual or constructive notice of the factual basis supporting the same. The District shall consider any such claim of the Contractor only if sufficient supporting documentation is submitted with the Contractor's notice to the District, Construction Manager, Project Inspector and the Architect. 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 such instruction, request, Drawings, Specifications, action, condition, omission, default or other situation. Accordingly, Contractor acknowledges that its failure, for any reason, to give written notice (with sufficient supporting documentation to permit the District's review and evaluation) within ten (10) days of its 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 Time or the Contract Price 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 any such instruction, request, Drawings, Specifications, action, condition, omission, default or other situation. In the event that the District determines that the Contract Price or the Contract Time are subject to adjustment based upon the events, circumstances and supporting documentation submitted with the Contractor's written notice under this Article 9.6, any such adjustment shall be determined in accordance with the provisions of Articles 9.4.1 and 9.4.2.

9.7 **Disputed Changes.** In the event of any dispute or disagreement between the Contractor and the District or the Architect regarding the characterization of any item as a Change to the Work or as to the appropriate adjustment of the Contract Price or the Contract Time on account thereof, the Contractor shall promptly proceed with the performance of such item of the Work, subject to a subsequent resolution of such dispute or disagreement in accordance with the terms of the Contract Documents. The Contractor's failure or refusal to so proceed with such Work may be deemed to be Contractor's default of a material obligation of the Contractor under the Contract Documents.

9.8 **Emergencies.** In an emergency affecting the safety of life, or of the Work, or of property, the Contractor, without special instruction or prior authorization from the
District or the Architect, is permitted to act at its discretion to prevent such threatened loss or injury. Any compensation claimed by the Contractor on account of such emergency work shall be submitted and determined in accordance with this Article 9.

9.9 **Minor Changes in the Work.** The Architect may order minor Changes in the Work not involving an adjustment in the Contract Price or the Contract Time and not inconsistent with the intent of the Contract Documents. Such Changes shall be effected by written order and shall be binding on the District and the Contractor. The Construction Manager or the Project Inspector may direct the Contractor to perform Changes provided that each such Change does not result in an increase of more than $500.00 to the Contract Price and no adjustment of the Contract Time. The Contractor shall carry out such orders promptly.

9.10 **Unauthorized Changes.** Any Work beyond the extent of Work shown on the Contract Documents, or any extra Work performed or provided by the Contractor without notice to the Architect, the Construction Manager and the Project Inspector in the manner and within the time set forth in Articles 9.2 or 9.6 shall be considered unauthorized and at the sole expense of the Contractor. Work so done will not be measured or paid for, no extension to the Contract Time will be granted on account thereof and any such Work may be ordered removed at the Contractor's sole cost and expense. The failure of the District to direct or order removal of such Work shall not constitute acceptance or approval of such Work nor relieve the Contractor from any liability on account thereof.

**ARTICLE 10: SEPARATE CONTRACTORS**

10.1 **District’s Right to Award Separate Contracts.** The District reserves the right to perform construction or operations related to the Project with the District’s own forces or to award separate contracts in connection with other portions of the Project or other construction or operations at or about the Site. If the Contractor claims that delay or additional cost is involved because of such action by the District, the Contractor shall seek an adjustment to the Contract Price or the Contract Time as provided for in the Contract Documents. Failure of the Contractor to request such an adjustment of the Contract Time or the Contract Price in strict conformity with the provisions of the Contract Documents applicable thereto shall be deemed a waiver of the same.

10.2 **District’s Coordination of Separate Contractors.** The District shall provide for coordination of the activities of the District’s own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the District in reviewing their respective Construction Schedules when directed to do so. The Contractor shall make any revisions to the Approved Construction Schedule for the Work hereunder deemed necessary after a joint review and mutual agreement. The Construction Schedules shall then constitute the Construction Schedules to be used by the Contractor, separate contractors and the District until subsequently revised.

10.3 **Mutual Responsibility.** The Contractor shall afford the District and separate contractors’ reasonable opportunity for storage of their materials and equipment and
performance of their activities at the Site and shall connect and coordinate the Contractor's Work, construction and operations with theirs as required by the Contract Documents.

10.4 Discrepancies or Defects. If part of the Contractor's Work depends for proper execution or results upon construction or operations by the District or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect and the Project Inspector any apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor to so report shall constitute an acknowledgment that the District's or separate contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then discoverable by the Contractor's reasonable diligence.

ARTICLE 11: TESTS AND INSPECTIONS

11.1 Tests; Inspections; Observations.

11.1.1 Contractor's Notice, On-site Inspections. 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 on-site observation, testing or inspection at least two (2) working days 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 two (2) working days 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.

11.1.1 Contractor's Notice, Off-site Inspections. 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 off-site observation, testing or inspection at least ten (10) working days 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 ten (10) working days prior to the date fixed for such inspection, test or observation.

11.1.2 Cost of Tests and Inspections. Except as set forth below, the District will pay for fees, costs and expenses to complete the initial tests/inspections of portions of the Work as required by law, code or regulation, provided that such tests/inspections are conducted and completed at a location within a one hundred (100) mile radius of the Site. The foregoing notwithstanding, if the portion(s) of the Work subject to tests/inspections is/are not ready for such test/inspection at the time indicated in the Contractor’s notice under Article 11.1.1 or if upon completion of such test/inspection, the portion(s) of the Work subject to such test/inspection do not meet or exceed the minimum requirements of such test/inspection, the Contractor shall be solely responsible for the payment of all fees, costs or expenses arising out of or related in any manner to subsequent tests/inspections of such portion(s) of the Work. Notwithstanding the District’s payment of fees, costs or expenses for conducting initial tests/inspections, if any actions or failures to act of the Contractor or person or entity providing or performing Work under the direction or control of the Contractor require tests/inspections to be conducted over a period of more than eight (8) hours per day by any single person or on weekends/holidays, the Contractor shall be solely responsible for the payment of fees, costs or expenses which result from test/inspection services which exceed eight (8) hours per day by any single person or on weekends/holidays. If any tests/inspections are conducted outside a one hundred (100) mile radius of the Site, the Contractor shall be solely responsible for all costs, fees or expenses to conduct and complete such tests/inspections conducted at such location, including without limitation, costs to complete such tests/inspections and travel, meal and related expenses.

11.1.3 Testing/Inspection Laboratory. The District shall select duly qualified person(s) or testing laboratory(ies) to conduct the tests and inspections to be paid for by the District and required by the Contract Documents. Tests and inspections required of the Work shall be as set forth in the Contract Documents and as required by applicable law, rule or regulation, including without limitation, Title 24 of the California Code of Regulations. Test/inspection standards shall be as set forth in the Contract Documents or established by applicable law, rule or regulation. Where inspection or testing is to be conducted by an independent laboratory or testing agency, materials or samples thereof shall be selected by the laboratory, testing agency, the Project Inspector, the Construction Manager or the Architect and not by the Contractor.

11.1.4 Additional Tests, Inspections and Approvals. If the Architect, the Construction Manager, the Project Inspector or public authorities having jurisdiction over the Work determine that portions of the Work require additional testing, inspection or approval, the Architect will, upon written authorization from the District, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the District, and the
Contractor shall give timely notice to the Architect, the Construction Manager and the Project Inspector of when and where tests and inspections are to be made so the Project Inspector and the Architect may observe such procedures. The District shall bear the costs of such additional tests, inspections or approvals, except to the extent that such additional tests, inspections or approvals reveal any failure of the Work to comply with the requirements of the Contract Documents, in which case the Contractor shall bear all costs made necessary by such failures, including without limitation, the costs of corrections, repeat tests, inspections or approvals and the costs of the Architect’s services or its consultants in connection therewith.

11.2 Delivery of Certificates. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Construction Manager.

11.3 Timeliness of Tests, Inspections and Approvals. Tests or inspections required and conducted pursuant to the Contract Documents shall be made or arranged by Contractor to avoid delay in the progress of the Work. Neither the Contract Time nor Contract Price shall be adjusted on account of the failure of the Contractor to timely arrange for the conduct of required tests/inspections and the Contractor shall be liable to the District for all consequences of such failures, including without limitation, the assessment of Liquidated Damages for delayed Substantial Completion of the Work resulting from such failure of the Contractor.

12 UNCOVERING AND CORRECTION OF WORK

12.1 Inspection of the Work.

12.1.1 Access to the Work. All Work and all materials and equipment forming a part of the Work or incorporated into the Work are subject to inspection by the District, the Construction Manager, the Architect and the Project Inspector for conformity with the Contract Documents. The Contractor shall, at its cost and without adjustment to the Contract Price or the Contract Time, furnish any facilities necessary for sufficient and safe access to the Work for purposes of inspection by the District, the Construction Manager, the Architect, the Project Inspector, DSA or any other public or quasi-public authority with jurisdiction over the Work or any portion thereof.

12.1.2 Limitations Upon Inspections. Inspections, tests, measurements, or other acts of the Architect, the Construction Manager and the Project Inspector hereunder are for the sole purpose of assisting them in determining that the Work, materials, equipment, progress of the Work, and quantities generally comply and conform with the requirements of the Contract Documents. These acts or functions shall not relieve the Contractor from performing the Work in full compliance with the Contract Documents. No inspection by the Architect or the Project Inspector shall constitute or imply acceptance of Work inspected. Inspection of the Work hereunder is in addition to, and not in lieu of, any other
testing, inspections or approvals of the Work required under the Contract Documents.

12.2 Uncovering of Work. If any portion of the Work is covered contrary to the request of the Architect, the Construction Manager, the Project Inspector or the requirements of the Contract Documents, it must, if required by the Architect or the Project Inspector, be uncovered for observation by the Architect, Construction Manager and the Project Inspector and be replaced at the Contractor's expense without adjustment of the Contract Time or the Contract Price.

12.3 Rejection of Work. Prior to the District's Final Acceptance of the Work, any Work or materials or equipment forming a part of the Work or incorporated into the Work which is defective or not in conformity with the Contract Documents may be rejected by the District, the Construction Manager the Architect or the Project Inspector and the Contractor shall correct such 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.

12.4 Correction of Work. The Contractor shall promptly correct any portion of the Work rejected by the District, the Construction Manager, the Architect or the Project Inspector for failing to conform to the requirements of the Contract Documents, or which is determined by them to be defective, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected Work, including additional testing and inspections and compensation for the Architect's services and expenses made necessary thereby. The Contractor shall bear all costs of correcting destroyed or damaged construction, whether completed or partially completed, of the District or separate contractors, caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents, or which is defective. If the Contractor fails or refuses to correct Work deemed defective or non-conforming pursuant to the foregoing, such failure or refusal shall be deemed the Contractor's default in performance of a material obligation of the Contractor hereunder. In such event, the Contractor's Performance Bond Surety shall be liable for the costs to correct such defective or non-conforming Work and/or securing the performance of an alternative contractor to complete such corrective Work.

12.5 Removal of Non-Conforming or Defective Work. The Contractor shall, at its sole cost and expense, remove from the Site all portions of the Work which are defective or are not in accordance with the requirements of the Contract Documents which are neither corrected by the Contractor nor accepted by the District.

12.6 Failure of Contractor to Correct Work. If the Contractor fails to commence to correct defective or non-conforming Work within 3 days of notice of such condition and promptly thereafter complete the same within a reasonable time, the District may correct it in accordance with the Contract Documents. If the Contractor does not proceed with correction of such defective or non-conforming Work within the time
fixed herein, the District may remove it and store the salvable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage after written notice, the District may sell such materials or equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including without limitation compensation for the Architect's services, attorney's fees and other expenses made necessary thereby. If such proceeds of sale do not cover costs which the Contractor should have borne, the Contract Price shall be reduced by the deficiency. If payments of the Contract Price then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor and the Surety shall promptly pay the difference to the District.

12.7 **Acceptance of Defective or Non-Conforming Work.** The District may, in its sole and exclusive discretion, elect to accept Work which is defective or which 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.

13 **WARRANTIES**

13.1 **Workmanship and Materials.** The Contractor warrants to the District that all materials and equipment furnished under the Contract Documents shall be new, of good quality and of the most suitable grade and quality for the purpose intended, unless otherwise specified in the Contract Documents. All Work shall be of good quality, free from faults and defects and in conformity with the requirements of the Contract Documents. If required by the Architect or the District, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment incorporated into the Work. Any Work, or portion thereof, not conforming to these requirements, including substitutions or alternatives not properly approved in accordance with the Contract Documents may be deemed defective. Where there is an approved substitution of, or alternative to, material or equipment specified in the Contract Documents, the Contractor warrants to the District that such installation, construction, material, or equipment will equally perform the function and have the quality of the originally specified material or equipment. The Contractor expressly warrants the merchantability, the fitness for use, and quality of all substitute or alternative items in addition to any warranty given by the manufacturer or supplier of such item.

13.2 **Warranty Work.** If, within one year after the date of Final Acceptance, or such other time frame set forth elsewhere in the Contract Documents, any of the Work is found to be defective or not in accordance with the requirements of the Contract Documents, or otherwise contrary to the warranties contained in the Contract Documents, the Contractor shall commence all necessary corrective action not more than seven (7) days after receipt of a written notice from the District to do so, and to thereafter diligently complete the same. In the event that Contractor shall fail or refuse to commence correction of any such item within said seven (7) day period or to diligently prosecute such corrective actions to completion, the District may, without
further notice to Contractor, cause such corrective Work to be performed and completed. In such event, Contractor and Contractor's Performance Bond Surety shall be responsible for all costs in connection with such corrective Work, including without limitation, general administrative overhead costs of the District in securing and overseeing such corrective Work. Nothing contained herein shall be construed to establish a period of limitation with respect to any obligation of the Contractor under the Contract Documents. The obligations of the Contractor hereunder shall be in addition to, and not in lieu of, any other obligations imposed by any special guarantee or warranty required by the Contract Documents, guarantees or warranties provided by any manufacturer of any item or equipment forming a part of, or incorporated into the Work, or otherwise recognized, prescribed or imposed by law. 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.

13.3 Guarantee. Upon completion of the Work, Contractor shall execute and deliver to the District the form of Guarantee included within the Contract Documents. The Contractor's execution and delivery of the form of Guarantee is an express condition precedent to any obligation of the District to disburse the Final Payment to the Contractor.

13.4 Survival of Warranties. The provisions of this Article 13 shall survive the Contractor's completion of Work under the Contract Documents, the District's Final Acceptance or the termination of the Contract.

14 SUSPENSION OF WORK

14.1 District's Right to Suspend Work. The District may, without cause, and without invalidating or terminating the Contract, order the Contractor, in writing, to suspend, delay or interrupt the Work in whole or in part for such period of time as the District may determine. The Contractor shall resume and complete the Work suspended by the District in accordance with the District's directive, whether issued at the time of the directive suspending the Work or subsequent thereto.

14.2 Adjustments to Contract Price and Contract Time. 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 such 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 Cost Breakdown 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.

15 TERMINATION

15.1 Termination for Cause.

15.1.1 District's Right to Terminate. The District may terminate the Contract upon the occurrence of any one or more of the following events of the Contractor's default: (i) if the Contractor refuses or fails to prosecute the Work with diligence as will insure Substantial Completion of the Work within the Contract Time, or if the Contractor fails to substantially Complete the Work within the Contract Time; (ii) if the Contractor becomes bankrupt or insolvent, or makes a general assignment for the benefit of creditors, or if the Contractor or a third party files a petition to reorganize or for protection under any bankruptcy or similar laws, or if a trustee or receiver is appointed for the Contractor or for any of the Contractor's property on account of the Contractor's insolvency, and the Contractor or its successor in interest does not provide adequate assurance of future performance in accordance with the Contract Documents within ten (10) days of receipt of a request for such assurance from the District; (iii) if the Contractor repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment; (iv) if the Contractor repeatedly fails to make prompt payments to any Subcontractor, of any tier, or Material Suppliers or others for labor, materials or equipment; (v) if the Contractor disregards laws, ordinances, rules, codes, regulations, orders applicable to the Work or similar requirements of any public entity having jurisdiction over the Work; (vi) if the Contractor disregards proper directives of the Architect, the Project Inspector or District under the Contract Documents; (vii) if the Contractor performs Work which deviates from the Contract Documents and neglects or refuses to correct such Work; or (viii) if the Contractor otherwise violates in any material way any provisions or requirements of the Contract Documents. Once the District determines that sufficient cause exists to justify the action, the District may terminate the Contract without prejudice to any other right or remedy the District may have, after giving the Contractor and the Surety at least seven (7) days advance written notice of the effective date of termination. The District shall have the sole discretion to permit the Contractor to remedy the cause for the termination without waiving the District's right to terminate the Contract, or otherwise waiving, restricting or limiting any other right or remedy of the District under the Contract Documents or at law.

15.1.2 District's Rights Upon Termination. In the event that the Contract is terminated pursuant to this Article 15.1, the District may take over the Work and prosecute it to completion, by contract or otherwise, and may exclude the
Contractor from the site. The District may take possession of the Work and of all of the Contractor’s tools, appliances, construction equipment, machinery, materials, and plant which may be on the site of the Work, and use the same to the full extent they could be used by the Contractor without liability to the Contractor. In exercising the District’s right to prosecute the completion of the Work, the District may also take possession of all materials and equipment stored at the site of the Work or for which the District has paid the Contractor but which are stored elsewhere, and finish the Work as the District deems expedient. In exercising the District’s right to prosecute the completion of the Work, the District shall have the right to exercise its sole discretion as to the manner, methods, and reasonableness of the costs of completing the Work and the District shall not be required to obtain the lowest figure for completion of the Work. In the event that the District takes bids for remedial Work or completion of the Work, the Contractor shall not be eligible for the award of such contract(s).

15.1.3 Completion by the Surety. In the event that the Contract is terminated pursuant to this Article 15.1, the District may demand that the Surety take over and complete the Work. The District may require that in so doing, the Surety not utilize the Contractor in performing and completing the Work. Upon the failure or refusal of the Surety to take over and begin completion of the Work within twenty (20) days after demand therefor, the District may take over the Work and prosecute it to completion as provided for above.

15.1.4 Assignment and Assumption of Subcontracts. The District shall, in its sole and exclusive discretion, have the option of requiring any Subcontractor or Material Supplier to perform in accordance with its Subcontract or Purchase Order with the Contractor and assign the Subcontract or Purchase Order to the District or such other person or entity selected by the District to complete the Work.

15.1.5 Costs of Completion. In the event of termination under this Article 15.1, the Contractor shall not be entitled to receive any further payment of the Contract Price until the Work is completed. If the unpaid balance of the Contract Price as of the date of termination exceeds the District’s direct and indirect costs and expenses for completing the Work, including without limitation, attorneys’ fees and compensation for additional professional and consultant services, such excess shall be used to pay the Contractor for the cost of the Work performed prior to the effective date of termination with a reasonable allowance for overhead and profit. If the District’s costs and expenses to complete the Work exceed the unpaid Contract Price, the Contractor and/or the Surety shall pay the difference to the District.

15.1.6 Contractor Responsibility for Damages. The Contractor and the Surety shall be liable for all damage sustained by the District resulting from, in any manner, the termination of Contract under this Article 15.1, including without limitation, attorneys’ fees, and for all costs necessary for repair and completion of the Work over and beyond the Contract Price.
15.1.7 **Conversion to Termination for Convenience.** In the event the Contract is terminated under this Article 15.1, and it is determined, for any reason, that the Contractor was not in default under the provisions hereof, the termination shall be deemed a Termination for Convenience of the District and thereupon, the rights and obligations of the District and the Contractor shall be determined in accordance with Article 15.2 hereof.

15.1.8 **District's Rights Cumulative.** In the event the Contract is terminated pursuant to this Article 15.1, the termination shall not affect or limit any rights or remedies of the District against the Contractor or the Surety. The rights and remedies of the District under this Article 15.1 are in addition to, and not in lieu of, any other rights and remedies provided by law or otherwise under the Contract Documents. Any retention or payment of monies to the Contractor by the District shall not be deemed to release the Contractor or the Surety from any liability hereunder.

15.2 **Termination for Convenience of the District.** The District may at any time, in its sole and exclusive discretion, by written notice to the Contractor, terminate the Contract in whole or in part when it is in the interest of, or for the convenience of, the District. In such case, the Contractor shall be entitled to payment for: (i) Work actually performed and in place as of the effective date of such termination for convenience of the District, with a reasonable allowance for profit and overhead on such Work, and (ii) reasonable termination expenses for reasonable protection of Work in place and suitable storage and protection of materials and equipment delivered to the site of the Work but not yet incorporated into the Work, provided that such payments exclusive of termination expenses shall not exceed the total Contract Price as reduced by payments previously made to the Contractor and as further reduced by the value of the Work as not yet completed. The Contractor shall not be entitled to profit and overhead on Work which was not performed as of the effective date of the termination for convenience of the District. The District may, in its sole discretion, elect to have subcontracts assigned pursuant to Article 15.1.4 above after exercising the right hereunder to terminate for the District’s convenience.

16 **MISCELLANEOUS**

16.1 **Governing Law.** This Contract shall be governed by and interpreted in accordance with the laws of the State of California.

16.2 **Marginal Headings; Interpretation.** The titles of the various Articles of these General Conditions and elsewhere in the Contract Documents are used for convenience of reference only and are not intended to, and shall in no way, enlarge or diminish the rights or obligations of the District or the Contractor and shall have no effect upon the construction or interpretation of the Contract Documents. The Contract Documents shall be construed as a whole in accordance with their fair meaning and not strictly for or against the District or the Contractor.

16.3 **Successors and Assigns.** Except as otherwise expressly provided in the Contract Documents, all terms, conditions and covenants of the Contract Documents shall be
binding upon, and shall inure to the benefit of the District and the Contractor and their respective heirs, representatives, successors-in-interest and assigns.

16.4 **Cumulative Rights and Remedies; No Waiver.** Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not in lieu of or otherwise a limitation or restriction of duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the District shall constitute a waiver of a right or remedy afforded it under the Contract Documents or at law nor shall such an action or failure to act constitute approval of or acquiescence in a breach hereunder, except as may be specifically agreed in writing.

16.5 **Severability.** In the event any provision of the Contract Documents shall be deemed illegal, invalid, unenforceable and/or void, by a court or any other governmental agency of competent jurisdiction, such provision shall be deemed to be severed and deleted from the Contract Documents, but all remaining provisions hereof, shall in all other respects, continue in full force and effect.

16.6 **No Assignment by Contractor.** The Contractor shall not sublet or assign the Contract, or any portion thereof, or any monies due thereunder, without the express prior written consent and approval of the District, which approval may be withheld in the sole and exclusive discretion of the District. The District's approval to such assignment shall be upon such terms and conditions as determined by the District in its sole and exclusive discretion.

16.7 **Gender and Number.** Whenever the context of the Contract Documents so require, the neuter gender shall include the feminine and masculine, the masculine gender shall include the feminine and neuter, the singular number shall include the plural and the plural number shall include the singular.

16.8 **Independent Contractor Status.** In performing its obligations under the Contract Documents, the Contractor is an independent contractor to the District and not an agent or employee of the District. Nothing contained herein shall be deemed or construed as creating a relationship of employer and employee between the District and the Contractor or any Subcontractors, employees of the Contractor or Subcontractors or their respective agents and representatives. Neither the Contractor, Subcontractors nor any employees of the Contractor or Subcontractors are entitled to any rights or privileges of District employees.

16.9 **Notices.** Except as otherwise expressly provided for in the Contract Documents, all notices which the District or the Contractor may be required, or may desire, to serve on the other, shall be effective only if delivered by personal delivery or by postage prepaid, First Class Certified Return Receipt Requested United States Mail, addressed to the District or the Contractor at their respective address set forth in the Contract Documents, or such other address(es) as either the District or the Contractor may designate from time to time by written notice to the other in conformity with the provisions hereof. In the event of personal delivery, such notices shall be deemed effective upon delivery, provided that such personal delivery
requires a signed receipt by the recipient acknowledging delivery of the same. In the event of mailed notices, such notice shall be deemed effective on the third working day after deposit in the mail.

16.10 Disputes; Continuation of Work. Notwithstanding any claim, dispute or other disagreement between the District and the Contractor regarding performance under the Contract Documents, the scope of Work thereunder, or any other matter arising out of or related to, in any manner, the Contract Documents, the Contractor shall proceed diligently with performance of the Work in accordance with the District’s written direction, pending any final determination or decision regarding any such claim, dispute or disagreement.

16.11 Claims Resolution.

16.11.1 Claims. Notwithstanding any other language in the Contract Documents, claims between the District and the Contractor shall be resolved in accordance with the procedures established at Public Contract Code § 9204. “Claims” are defined for this Article 16.11.1, pursuant to Public Contract Code § 9204, as a separate demand by the Contractor for one of the following: a time extension for relief from penalties for delay; payment of money or damages arising from Work done; or payment of an amount disputed by the District.

16.11.1.1 Claims Resolution Process. Upon receiving a Claim sent by registered or certified mail, the District must review and provide a written response within forty-five (45) days that identifies the disputed and undisputed portions of the Claim. The forty-five (45) day period to respond may be extended by mutual agreement. The Claim is deemed rejected in its entirety if the District does not issue a response. Any payment due on an undisputed portion of the Claim must be processed within 60 days after the District’s response. If a claimant disputes the District’s response or lack thereof, the claimant may demand to meet and confer for settlement of the issues in dispute. Any portion of a claim that remains in dispute after a meet and confer conference will be subject to nonbinding mediation process, as described in Public Contract Code § 9204. Undisputed and unpaid claims accrue interest at 7% per annum. A subcontractor or lower tier subcontractor may make a claim to the District through the Contractor, as specified in Public Contract Code § 9204. However, the procedures in Article 16.11 shall not supersede the requirements of the Contract Documents with respect to the Contractor’s notification to the District of such claim or extend the time for the giving of such notice as provided in the Contract Documents.

16.11.2 Government Code Claim Requirements. Pursuant to Government Code § 930.6, any claim, demand, dispute, disagreement or other matter in controversy asserted by the Contractor against the District for money or damages, including, without limitation, a demand for arbitration, except for those subject to resolution pursuant to Article 16.11.1, shall be deemed a “suit for
money or damages” and shall be subject to the provisions of Government Code §§ 945.4, 945.6 and 946. Notwithstanding the resolution of disputes pursuant to the arbitration provisions set forth in Article 16.11.3 a claim, demand, dispute, disagreement or other matter in controversy between the Contractor and the District seeking money or damages shall first be presented to the District and acted upon or deemed rejected by the District in accordance with California Government Code § 900 et seq., as a condition precedent to the Contractor’s commencement of arbitration proceedings. Any arbitration proceeding pursuant to Article 16.11.3 commenced by the Contractor without first complying with the foregoing provisions of the Government Code shall be stayed pending the Contractor’s compliance with the foregoing provisions of the Government Code.

16.11.3 Arbitration. Except as provided in Article 16.11.1, any other claims, disputes, disagreements or other matters in controversy between the District and the Contractor arising out of, or related, in any manner, to the Contract Documents, or the interpretation, clarification or enforcement thereof shall be resolved by arbitration conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association (“AAA”) in effect as of the date that a Demand for Arbitration is filed, except as expressly modified herein. The locale for any arbitration commenced hereunder shall be the regional office of the AAA closest to the Site. The award rendered by the Arbitrator(s) (“Arbitration Award”) shall be final and binding upon the District and the Contractor only if the Arbitration Award is supported by law and substantial evidence pursuant to California Code of Civil Procedure § 1296, including findings of fact and conclusions of law in conformity with California Code of Civil Procedure § 1296 and Rule R-43 of the AAA Construction Industry Arbitration Rules. The District and Contractor hereby expressly agree that the Court shall, subject to California Code of Civil Procedure § 1286.4 and 1296, vacate the Arbitration Award if, after review of the Arbitration Award, the Court determines either that the Arbitration Award is: (i) not supported by substantial evidence; (ii) not accompanied by findings of fact and conclusions of law; or (iii) based on an error of law. In connection with any arbitration proceeding commenced hereunder, the discovery rights and procedures provided for in California Code of Civil Procedure § 1283.05 shall be applicable, and the same shall be deemed incorporated herein by this reference. A Demand for Arbitration shall be filed and served within a reasonable time after the occurrence of the claim, dispute or other disagreement giving rise to the Demand for Arbitration, but in no event shall a Demand for Arbitration be filed or served after the date when the institution of legal or equitable proceedings based upon such claim, dispute or other disagreement would be barred by the applicable statute of limitations. In the event more than one Demand for Arbitration is made by either the District or the Contractor, all such controversies shall be consolidated into a single arbitration proceeding, unless otherwise agreed to by the District and the Contractor. The Contractor’s Surety, a Subcontractor or Material Supplier to the Contractor and other third parties may be permitted to join in and be bound by an arbitration commenced hereunder if required by the terms of their respective agreements with the Contractor, except to the extent that such joinder would
unduly delay or complicate the expeditious resolution of the claim, dispute or other disagreement between the District and the Contractor, in which case an appropriate severance order shall be issued by the Arbitrator(s). The expenses and fees of the Arbitrator(s) shall be divided equally among the parties to the arbitration. Each party to any arbitration commenced hereunder shall be responsible for and shall bear its own attorneys’ fees, witness fees and other cost and expense incurred in connection with such arbitration. The foregoing notwithstanding, the Arbitrator(s) may award arbitration costs, including Arbitrators' fees but excluding attorneys' fees, to the prevailing party. The confirmation, enforcement, vacation or correction of an arbitration award rendered hereunder shall be the Superior Court of the State of California for the county in which the Site is situated. The substantive and procedural rules for such post-award proceedings shall be as set forth in California Code of Civil Procedure § 1285 et seq.

16.11.4 **Inapplicability to Bid Bond.** The provisions of this Article 16.11 shall not be applicable to disputes, disagreements or enforcement of rights or obligations under the Bid Bond; all claims, disputes and actions to enforce rights or obligations under the Bid Bond shall be adjudicated only by judicial proceedings commenced in a court of competent jurisdiction.

16.12 **Capitalized Terms.** Except as otherwise expressly provided, capitalized terms used in the Contract Documents shall have the meaning and definition for such term as set forth in the Contract Documents.

16.13 **Attorney’s Fees.** Except as expressly provided for in the Contract Documents, or authorized by law, neither the District nor the Contractor shall recover from the other any attorney’s fees or other costs associated with or arising out of any legal, administrative or other proceedings filed or instituted in connection with or arising out of the Contract Documents or the performance of either the District or the Contractor thereunder.

16.14 **Waiver of Special/Consequential Damages.** Notwithstanding any right conferred by law or arising by operation of law, by executing the Agreement, the Contractor expressly waives and relinquishes any and all right or entitlement to assert or recover any damages, losses or liabilities from the District which are in the nature of special or consequential damages, losses or liabilities arising out of or related in any manner to the District’s breach or default of its obligations under the Contract Documents.

16.15 **Provisions Required by Law Deemed Inserted.** Each and every provision of law and clause required by law to be inserted in the Contract Documents is deemed to be inserted herein and the Contract Documents shall be read and enforced as though such provision or clause are included herein, and if through mistake, or otherwise, any such provision or clause is not inserted or if not correctly inserted, then upon application of either party, the Contract Documents shall forthwith be physically amended to make such insertion or correction.
16.16 Days. Unless otherwise expressly stated, references to “days” in the Contract Documents shall be deemed to be calendar days.

16.17 Prohibited Interests. No employee of the District, who is authorized in such capacity on behalf of the District to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contract or subcontract in connection with the Work shall become directly or indirectly financially interested in the Work or any part thereof.

16.18 Entire Agreement. The Contract Documents contain the entire agreement and understanding between the District and the Contractor concerning the subject matter hereof, and supersedes and replaces all prior negotiations, proposed agreements or amendments, whether written or oral. No amendment or modification to any provision of the Contract Documents shall be effective or enforceable except by an agreement in writing executed by the District and the Contractor.
SPECIAL CONDITIONS

28. Application of Special Conditions These Special Conditions are a part of the Contract Documents for the Work generally described as: Bid No. V19200775PWB, Modular Office at THE Leadership Academy.

29. Drawings and Specifications The District shall provide one (1) digital set of the Drawings and Specifications to the Contractor, pursuant to Article 2.1.3 of the General Conditions for Bid No. V19200775PWB, Modular Office at THE Leadership Academy.

30. Insurance

30.1 Insurance Requirements for Contractor Minimum coverage amounts for each policy of insurance required of the Contractor shall be as follows:

<table>
<thead>
<tr>
<th>Insurance Type</th>
<th>Coverage Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers Compensation Insurance</td>
<td>In accordance with applicable law</td>
</tr>
<tr>
<td>Employers Liability Insurance</td>
<td>$1,000,000.00</td>
</tr>
<tr>
<td>Commercial General Liability Insurance</td>
<td>(including coverage for bodily injury, death, property damage and motor vehicle liability)</td>
</tr>
<tr>
<td>Per Occurrence</td>
<td>$1,000,000.00</td>
</tr>
<tr>
<td>Aggregate</td>
<td>$2,000,000.00</td>
</tr>
<tr>
<td>Builder’s Risk</td>
<td>Full value of the Work; seismic coverage is not required</td>
</tr>
</tbody>
</table>

30.2 Insurance Requirements for Subcontractors Minimum coverage amounts for each policy of insurance to be obtained and maintained by each Subcontractor to the Contractor shall be as follows:

<table>
<thead>
<tr>
<th>Insurance Type</th>
<th>Coverage Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers Compensation Insurance</td>
<td>In accordance with applicable law</td>
</tr>
<tr>
<td>Employers Liability Insurance</td>
<td>$1,000,000.00</td>
</tr>
<tr>
<td>Commercial General Liability Insurance</td>
<td>(including coverage for bodily injury, death, property damage and motor vehicle liability)</td>
</tr>
<tr>
<td>Per Occurrence</td>
<td>$1,000,000.00</td>
</tr>
<tr>
<td>Aggregate</td>
<td>$2,000,000.00</td>
</tr>
</tbody>
</table>

31. Contract Time, Liquidated Damages

31.1 Contract Time the Contract Time for the Contractor’s Substantial Completion of the Work is One Hundred Twenty (120) calendar days after the date for commencement of the Work as set forth in the Notice to Proceed issued by or on behalf of the District to the Contractor.
31.2液定金损害

31.2.1提前提交初步施工计划、车间图纸和提交文件的延迟 如果承包商未能在双方约定的期限内提交初步施工计划，承包商应按照每延误一天五百美元（$500.00）的金额承担液定金损害。

31.2.2延迟实质性完成 如果承包商未能在合同时间内完成实质性完成，包括根据合同文件调整后的时间，承包商应按照每延误一天五百美元（$500.00）的金额承担液定金损害。

31.2.3延迟完成吹洗项目 如果承包商未能在初步完成后的规定时间内完成所有吹洗项目，承包商应按照每延误一天五百美元（$500.00）的金额承担液定金损害。

31.2.4区域能定金损害;表现保证保证 如果承包商由于延迟实质性完成和/或延迟完成吹洗项目而被评估液定金损害，区域能扣留这些评估额。如果液定金损害超过剩余合同价的余额，承包商和发行表现保证的保证人应共同和分别对这些金额负责。

4.3异常天气日根据总则7.3.9条的规定，每月将允许承包商和建设经理根据双方的每日日志在月末达成协议。在任何给定月份的“剩余雨日”（即“每月最大雨日”减去“该月实际雨日”）不携带到任何其他月份。

<table>
<thead>
<tr>
<th>9月</th>
<th>1日</th>
<th>10月</th>
<th>2日</th>
<th>11月</th>
<th>4日</th>
</tr>
</thead>
<tbody>
<tr>
<td>12月</td>
<td>6日</td>
<td>1月</td>
<td>7日</td>
<td>2月</td>
<td>7日</td>
</tr>
<tr>
<td>3月</td>
<td>6日</td>
<td>4月</td>
<td>4日</td>
<td>5月</td>
<td>2日</td>
</tr>
<tr>
<td>6月</td>
<td>1日</td>
<td>7月</td>
<td>1日</td>
<td>8月</td>
<td>1日</td>
</tr>
</tbody>
</table>

4.4通知延迟承包商应将所有预期延误通知建设经理，书面通知事件描述在总则第7和9条。
32. **District Provided Temporary Utilities** Pursuant to Article 4.3.4 of the General Conditions, during the Contractor's performance of the Work, the District will provide utility services and a point of connection for electrical power and domestic potable water. The connection and placement, relocation and removal of temporary distributions of the electrical power and domestic potable water utility service provided by the District will be by the Contractor at its cost and expense without adjustment of the Contract Price. The Contractor may use the temporary electrical power and domestic potable water service furnished by the District provided that: (a) the District may discontinue, limit or condition use of such services by a Contractor if the District reasonably determines that the Contractor has wasted such utilities, and (b) the District shall not be liable to the Contractor, nor shall the Contract Time or the Contract Price be increased if any District provided temporary utility service is discontinued or disrupted for any reason other than the District’s non-payment of undisputed utility charges.

33. **Mark-Ups on Changes to the Work** In the event of Changes to the Work, pursuant to Article 9 of the General Conditions, the mark-up for all overhead (including home and field office overhead), general conditions costs and profit, shall not exceed the percentage of allowable direct actual costs for performance of the Change as set forth below. For the portion of any Change performed by Subcontractors of any tier, the percentage mark-up on allowable actual direct labor and materials costs incurred by all Subcontractors of any tier shall be Ten Percent (10%). In addition, for the portion of any Change performed by a Subcontractor of any tier, the Contractor may add an amount equal to Five Percent (5%) of the allowable actual direct labor and materials costs of Subcontractors performing the Change. For the portion of any Change performed by the Contractor’s own forces, the mark-up on the allowable actual direct labor and materials costs of such portion of a Change shall be Ten Percent (10%).

34. **Form and Content of Change Orders** In accordance with the provisions of Article 9.5 of the General Conditions, if the District approves of a Change Order, the Change Order issued by the District and executed by the District, Architect and Contractor shall be in the form and content as set forth in Attachment A to these Special Conditions.

35. **Asbestos and Other Hazardous Materials Certification** Upon completion of the Work and as an additional express condition precedent to the District’s obligation to disburse the Final Payment to the Contractor, the Contractor's duly authorized representative shall deliver to the District the completed and executed form of Asbestos and Other Hazardous Materials Certification included as Attachment B to the Special Conditions; the signature of the Contractor's representative shall be notarized by a California Notary Public.

36. **Debris Recycling Statement** The District’s form of Debris Recycling Statement is attached to these Special Conditions as Attachment C. The Contractor shall complete, execute and submit the Debris Recycling Statement in accordance with applicable provisions of the Contract Documents, under General Conditions, Supervision and Construction Procedures, Section 4.3.9.
37. **Additional Definitions** In addition to terms defined elsewhere in the Contract Documents, the following terms used in the Contract Documents are defined as set forth herein.

37.1 **Owner** Unless otherwise expressly provided, references to the “Owner” shall be deemed references to the District, as that term is defined in the Contract Documents.

37.2 **Inspector; Inspector of Record ("IOR"); Owner's Inspector** Unless otherwise expressly provided, references to Inspector, Inspector of Record, IOR or Owner's Inspector shall be deemed references to the Project Inspector as that term is defined in the Contract Documents.

37.3 **Contract Sum** Unless otherwise expressly provided, the terms “Contract Price” and "Contract Sum" are synonymous.

37.4 **Campus** Unless otherwise expressly provided, the term “Campus” shall be deemed to refer to THE Leadership Academy as identified in the bid documents.

38. **Contracted Vendor Key Issuance Agreement** The District may determine that for ease of site/s accessibility for this project keys may be issued to the awarded contractor. The awarded contractor will be required to sign the Contracted Vendor Key Issuance Agreement and adhere to the contents of the agreement.

[END OF SECTION]
CHANGE ORDER FORM
(ATTACHMENT A TO SPECIAL CONDITIONS)

Project: Bid No. V19200775PWB, Modular Office at THE Leadership Academy
Change Order #: ____________________________

Date: ____________________________ Contract #: ____________________________

Contractor: ____________________________

Pursuant to the General Conditions, this Change Order Form shall be used for all Change Orders associated with the Work. No additions or deletions to this form shall be allowed, except with permission of the District.

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

DESCRIPTION OF CHANGE:

Contractor accepts the terms and conditions stated as full and final settlement of any and all claims arising from this Change Order. Contractor agrees to perform the above described changes in accordance with the terms set forth herein and in compliance with applicable sections of the Contract Documents. This Change Order is hereby agreed to, accepted and approved, all in accordance with the General Conditions of the Contract Documents. The adjustment of the Contract Price and the Contract Time for the changes noted in this Change Order (the “Changes”) represents the full and complete adjustment of the Contract Time and the Contract Price due the Contractor for providing and completing such Changes, including without limitation: (i) all costs (whether direct or indirect) for labor, equipment, materials, tools, supplies and/or services; (ii) all general and administrative overhead costs (including without limitation, home office, field office and Site general conditions costs) and profit; and (iii) all impacts, delays, disruptions, interferences, or hindrances in providing and completing the Changes. Contractor waives all rights, including without limitation those arising under Civil Code Section 1542, for any other adjustment of the Contract Price or the Contract Time on account of the Changes set forth in this Change Order or the Contractor’s performance and completion of the Changes.

NOT VALID UNTIL SIGNED BY THE OWNER, ARCHITECT, AND CONTRACTOR

The original Contract Sum was ................................................................................................ $ ________________

Net change by previously authorized Change Orders ........................................................................ $ ________________

The Contract Sum prior to this Change Order was ........................................................................ $ ________________

The Contract Sum will be changed by this Change Order in the amount of ........................................ $ ________________

The adjusted Contract Sum including this Change Order will be .................................................. $ ________________

The Contract Time will be [ ] increased [ ] decreased [ ] unchanged by ........................................... (_______) Days

The date of Substantial Completion as of the date of this Change Order therefore is: ............ / ______/ ______

ARCHITECT CONTRACTOR CONSTRUCTION MANAGER Vista Unified School District OWNER

By: ________________________________ By: ________________________________ By: ________________________________ By: Ami Shackelford

Date: ________________________________ Date: ________________________________ Date: ________________________________ Date: ________________________________
ASBESTOS AND OTHER HAZARDOUS MATERIALS CERTIFICATION
(ATTACHMENT B TO SPECIAL CONDITIONS)

This Asbestos and Other Hazardous Materials Certification form is part of the Contract made by and between the VISTA UNIFIED SCHOOL DISTRICT and __________________________ (“Contractor”) for the work of improvement commonly referred to as Bid No V19200775PWB, Modular Office at THE Leadership Academy, (hereinafter referred to as the “Project”).

To the best of my knowledge, information and belief, in completing the Work of the Project, no materials, equipment or other items furnished, installed or incorporated into the Project contains, or in itself be composed of, any asbestos, polychlorinated biphenyl (PCB), any material listed by the federal or state EPA or federal or state health agencies as a hazardous material, or defined as being hazardous under federal or state laws, rules or regulations.

The undersigned is duly authorized to complete, execute and submit this Asbestos and Other Hazardous Materials Certification on behalf of the Contractor. The undersigned has personal knowledge of the substantive representations set forth hereinabove or has made appropriate diligent inquiry to ascertain that the substantive representations set forth hereinabove are complete, true and accurate and do not omit material facts rendering such representations to be false or misleading.

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

Executed on this _______ day of _______, 20__ at ____________________.

(City and State)

__________________________________
Name of Contractor (Print or Type)

By: ________________________________
Signature

Subscribed and sworn before me
this ___ day of _____________, 20___

Print Name

Notary Public in and for the State of California

Title

My Commission Expires:
Please indicate estimated quantities by matter, the proposed processing method and the vendor selected. Weight tag required as verification.

<table>
<thead>
<tr>
<th>Material</th>
<th>Estimated Amount (Tons or Yards)</th>
<th>Recycled</th>
<th>Salvaged</th>
<th>Landfilled</th>
<th>Vendor or Facility Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brick/Masonry Tile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrugated Cardboard</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dirt/Clean Fill</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drywall</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Padding – Carpet Foam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building Materials (doors, windows, cabinets, fixtures)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scrap Metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixed Recyclable Debris Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Un-painted wood/Pallets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Waste/Yard Waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garbage–Painted Wood-Trash</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If no materials are targeted for recycling, reuse or salvage, please state why: ______________

The undersigned certifies that she/he is authorized to execute this Debris Recycling Statement on behalf of the above-identified Contractor. The undersigned further certifies that she/he has personal knowledge of the foregoing, or has made reasonable inquiry to ascertain, that the foregoing is true, complete and correct.

Submitted by: ________________________________  Date: ______________
GUARANTEE

District: VISTA UNIFIED SCHOOL DISTRICT
Project: Bid No. V19200775PWB, Modular Office at THE Leadership Academy

Contractor Name: _____________________________

The Contractor hereby warrants and guarantees to the District that all work, materials, equipment and workmanship provided, furnished or installed by or on behalf of Contractor in connection with the above-referenced Project (the “Work”) have been provided, furnished and installed in strict conformity with the Contract Documents for the Work, including without limitation, the Drawings and the Specifications. Contractor further warrants and guarantees that all work, materials, equipment and workmanship as provided, furnished and/or installed are fit for use as specified and fulfill all applicable requirements of the Contract Documents including without limitation, the Drawings and the Specifications. Contractor shall, at its sole cost and expense, repair, correct and/or replace any or all of the work, materials, equipment and/or workmanship of the Work, together with any other items which may be affected by any such repairs, corrections or replacement, that may be unfit for use as specified or defective within a period of one (1) year from the date of the District’s Final Acceptance of the Work, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of the Contractor’s failure and/or refusal to comply with the provisions of this Guarantee, within the period of time set forth in the Contract Documents after the District’s issuance of the Notice to the Contractor of any defect(s) in the Work, materials, equipment or workmanship, Contractor authorizes the District, without further notice to Contractor, to repair, correct and/or replace any such defective item at the expense of the Contractor. The Contractor shall reimburse the District for all costs, expenses or fees incurred by the District in providing or performing such repairs, corrections or replacements within ten (10) days of the District’s presentation of a demand to the Contractor for the same.

The provisions of this Guarantee and the provisions of the Contract Documents for the Work relating to the Contractor’s Guarantee(s) and warranty(ies) relating to the Work shall be binding upon the Contractor’s Performance Bond Surety and all successors or assigns of Contractor and/or Contractor’s Performance Bond Surety.

The provisions of this Guarantee are in addition to, and not in lieu of, any provisions of the Contract Documents for the Work relating to the Contractor’s guarantee(s) and warranty(ies) or any guarantee(s) or warranty(ies) provided by any material supplier or manufacturer of any equipment, materials or other items forming a part of, or incorporated into the Work, or any other guarantee or warranty obligation of the Contractor, prescribed, implied or imposed by law.

The undersigned individual executing this Guarantee on behalf of Contractor warrants and represents that he/she is duly authorized to execute this Guarantee on behalf of Contractor and to bind Contractor to each and every provision hereof.

Dated: ________________ By: ________________________________

(Signature)

(Typed or Printed name)

>Title)
Technical Specifications For:

Modular Office at THE Learning Academy
Vista Unified School District

ASDG Job Number: 19-051

Client: Vista Unified School District
1234 Arcadia Ave.
Vista, CA 92084

Architect: AlphaStudio Design Group
6152 Innovation Way
Carlsbad, CA 92009
760-431-2444

Electrical: Johnson Consulting Engineers, Inc.
12875 Brookprinter Place, Suite 300
Poway, CA 92064
858-679-4030

Civil: Pasco, Laret, Suiter, and Associates
27127 Calle Arroyo, Suite 1904
San Juan Capistrano, CA 92675
949-661-6695

www.alphastudio-design.com
Modular Office at THE Learning Academy
Vista Unified School District

ASDG Job Number: 19-051

Architect: Joshua Eckle
Electrical Engineer: Monica Hansen
Civil Engineer: William J. Suiter
# TABLE OF CONTENTS

**DIVISION 01 - GENERAL REQUIREMENTS**

- 01 1000 SUMMARY
- 01 2000 PRICE AND PAYMENT PROCEDURES
- 01 2100 ALLOWANCES
- 01 2300 ALTERNATES
- 01 2500 SUBSTITUTION PROCEDURES
- 01 3000 ADMINISTRATIVE REQUIREMENTS
- 01 3216 CONSTRUCTION PROGRESS SCHEDULE
- 01 3553 SECURITY PROCEDURES
- 01 5000 TEMPORARY FACILITIES AND CONTROLS
- 01 5100 TEMPORARY UTILITIES
- 01 5213 FIELD OFFICES AND SHEDS
- 01 5500 VEHICULAR ACCESS AND PARKING
- 01 6000 PRODUCT REQUIREMENTS
- 01 7000 EXECUTION AND CLOSEOUT REQUIREMENTS
- 01 7419 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
- 01 7800 CLOSEOUT SUBMITTALS
- 01 7900 DEMONSTRATION AND TRAINING

**DIVISION 02 - EXISTING CONDITIONS**

- 02 4100 DEMOLITION

**DIVISION 03 - CONCRETE**

- 03 0516 UNDERSLAB VAPOR BARRIER
- 03 1000 CONCRETE FORMING AND ACCESSORIES
- 03 2000 CONCRETE REINFORCING
- 03 3000 CAST-IN-PLACE CONCRETE

**DIVISION 07 - THERMAL AND MOISTURE PROTECTION**

- 07 9200 JOINT SEALANTS

**DIVISION 10 - SPECIALTIES**

- 10 1400 SIGNAGE
- 10 2116 SOLID PLASTIC TOILET COMPARTMENTS
- 10 2800 TOILET, BATH, AND LAUNDRY ACCESSORIES

**DIVISION 26 - POWER**

- 26 0100 GENERAL PROVISION
- 26 0519 POWER CONDUCTORS
- 26 0526 GROUNDING
- 26 0533 CONDUITS AND FITTINGS
- 26 0534 OUTLET AND JUNCTION BOXES
- 26 0543 UNDERGROUND PULL BOXES
- 26 2726 SWITCHES AND RECEPTACLES
- 26 9090 ELECTRICAL CLOSEOUT
**DIVISION 27 – VOICE/DATA**

- 27 0100  GENERAL PROVISIONS
- 27 1300  SECURITY SYSTEMS

**DIVISION 28 – ELECTRONIC SAFETY AND SECURITY**

- 28 0100  GENERAL PROVISIONS
- 28 1300  SECURITY SYSTEM
- 28 3000  FIRE ALARM SYSTEM

**DIVISION 31 - EARTHWORK**

- 31 1000  SITE CLEARING
- 31 2200  GRADING
- 31 2316  EXCAVATION
- 31 2323  FILL

**DIVISION 32 - EXTERIOR IMPROVEMENTS**

- 32 1216  ASPHALT PAVING
- 32 1313  CONCRETE PAVING
- 32 1726  TACTILE WARNING SURFACING
- 32 3113  CHAIN LINK FENCING AND GATES
PART 1 GENERAL

1.01 PROJECT
A. Project Name: Modular Office at THE
B. Owner's Name: Vista Unified School District.
C. Architect's Name: AlphaStudio Design Group.
D. The Project consists of the following:
   1. Installation of site utilities such as water, sewer, electrical, and fire alarm.
   2. Construction of modular foundation as indicated on modular drawings.
   3. Site preparation to receive 24'x40' modular building.
   4. Fencing and ancillary site features.
   5. Installation of interior improvements such as fire alarm and low voltage.
   6. Existing ADA upgrades as indicated on the construction drawings.

1.02 DESCRIPTION OF ALTERATIONS WORK
A. Scope of demolition and removal work is indicated on drawings.
B. Scope of alterations work is indicated on drawings.

1.03 OWNER OCCUPANCY
A. Owner intends to occupy the Project upon Substantial Completion.
B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
C. Schedule the Work to accommodate Owner occupancy.

1.04 CONTRACTOR USE OF SITE AND PREMISES
A. Construction Operations: Limited to areas noted on Drawings.
   1. Locate and conduct construction activities in ways that will limit disturbance to site.
B. Provide access to and from site as required by law and by Owner:
   1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
   2. Do not obstruct roadways, sidewalks, or other public ways without permit.
C. Existing building spaces may not be used for storage.

PART 2 PRODUCTS - NOT USED
PART 3 EXECUTION - NOT USED

END OF SECTION
SECTION 01 2000
PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Procedures for preparation and submittal of applications for progress payments.
B. Documentation of changes in Contract Sum and Contract Time.
C. Change procedures.
D. Correlation of Contractor submittals based on changes.
E. Procedures for preparation and submittal of application for final payment.

1.02 SCHEDULE OF VALUES
A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.
B. Substitute forms containing equivalent information may be considered in lieu of AIA G703. Contractor shall submit proposed form to Architect for review within 10 days after issuance of the notice to proceed for approval.
C. Forms filled out by hand will not be accepted.
D. Submit Schedule of Values in PDF format, electronically within 10 days after the notice to proceed.
E. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section. Identify site mobilization and bonds and insurance.
F. Revise schedule to list approved Change Orders, with each Application For Payment.
G. Provide line items for Owner's allowance and/or contingency where applicable.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS
A. Payment Period: Submit at intervals stipulated in the Agreement.
B. The contractor shall submit to the Architect, Inspector, and Owner a pencil draft of the payment application for review and comment a minimum of five business days prior to issuance.
C. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.
D. Substitute forms containing equivalent information may be considered in lieu of AIA G702 and G703. Contractor shall submit proposed form to Architect for review within 10 days after issuance of the notice to proceed for approval.
E. Forms filled out by hand will not be accepted.
F. For each item, provide a column for listing each of the following:
   1. Item Number.
   2. Description of work.
   4. Previous Applications.
   5. Work in Place under this Application.
   6. Approved Change Orders
   7. Approved Allowance Usage Requests (AUR's)
   8. Total Completed and Stored onsite to Date of Application.
   9. Percentage of Completion.
   11. Retainage.
G. Execute certification by signature of authorized officer.
H. Submit Application for Payment in electronic PDF format.
I. Include the following with the application (in electronic format where applicable):
   1. Construction progress schedule, revised and current as specified in Section 01 3000.
2. Partial release of liens from major subcontractors and vendors.
3. Project record documents for review by Inspector and Architect.

1.04 MODIFICATION PROCEDURES

A. When direction provided by the Architect or Owner appears to modify the contract scope, time, or price the following procedure shall be followed:
   1. The contractor shall notify the Architect within three business day of receiving direction that a potential change to the above may occur.
   2. The contractor shall provide to the Architect within ten business days of receiving direction, a Change Order Request (COR) detailing what the modifications to the contract scope, price, or time are as well as including all relevant substantiation of costs and supporting documentation. Change Order Requests shall be on the Contractor's own form and numbered sequentially.
   3. Within seven business days of receiving the Contractor's COR, the Architect shall respond in writing to the request.
   4. Once accepted, the COR shall be included in a Change Order for the Owner's approval. The Contractor can invoice for the COR once approved by the Board of Education.

B. Substantiation of Costs: Provide full information required for evaluation.
   1. On request, provide the following data:
      a. Quantities of products, labor, and equipment.
      b. Labor rates and classifications.
      c. Taxes, insurance, and bonds.
      d. Overhead and profit.
      e. Justification for any change in Contract Time.
      f. Credit for deletions from Contract, similarly documented.
   2. Support each claim for additional costs with additional information:
      a. Origin and date of claim.
      b. Dates and times work was performed, and by whom.
      c. Time records and wage rates paid.
      d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
   3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
      a. Time and Material work must be authorized by the Owner or the Architect prior to commencement of work.
      b. Time and Material verification must be reviewed and verified by the Inspector at the conclusion of each day or portion thereof.

C. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
   1. Change Orders shall be invoiced once the Owner has approved and the fully executed Change Order has been provided to the Contractor.

D. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.

E. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.

F. Promptly enter changes in Project Record Documents.

1.05 APPLICATION FOR FINAL PAYMENT

A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.

B. Application for Final Payment will not be considered until the following have been accomplished:
   1. All closeout procedures specified in Section 01 7000.
2. Provide completed record drawings including all supplemental instructions, request for information, and other relevant project information. These items shall be included as a permanent part of the record drawings.

PART 2 PRODUCTS - NOT USED
PART 3 EXECUTION - NOT USED

END OF SECTION
SECTION 01 2100
ALLOWANCES

PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Contingency allowance.

1.02 CONTINGENCY ALLOWANCE
   A. At closeout of Contract, funds remaining in Allowance will be credited to Owner by deductive Change Order.
   B. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in usage request authorizing expenditure of funds from this Contingency Allowance.
   C. The Contractor will prepare detailed breakdown of all costs associated with the work defined for the Allowance. These amounts will be based on final detailed payment receipts and back-up or estimates as required by Architect, and will include all direct costs of work performed under the defined work scope and will be charged against the Allowance through the Allowance Usage Request (AUR).
   D. Types of allowance scheduled herein for the Work include lump sum cash allowances. Include all allowances in Contract sum, and identify all allowances in Schedule of Values as separate line items.
   E. The Allowance is used only as directed by the Owner.
   F. The Allowance is used exclusively for the Owner’s purposes and for the defined scope of work.
   G. The Contractor shall include in the base bid contract amount all cost of coordination, supervision, bond costs, insurance and all indirect project costs associated with performing the work of the Allowance.
   H. Changes that exceed the amount of each allowance will be processed as a Change Order per Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION
PART 1 GENERAL

1.01 SECTION INCLUDES

A. Description of Alternates.

1.02 ACCEPTANCE OF ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.

B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION
SECTION 01 2500
SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS
A. Section 01 2300 - Alternates, for product alternatives affecting this section.
B. Section 01 3000 - Administrative Requirements: Submittal procedures, coordination.
C. Section 01 6000 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

1.03 DEFINITIONS
A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
   1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
   2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
      a. Substitution requests offering advantages solely to the Contractor shall be considered on a case by case basis.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS
A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
   1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
   2. Agrees to provide the same warranty for the substitution as for the specified product.
   3. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
   4. Waives claims for additional costs or time extension that may subsequently become apparent.
   5. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
   1. Note explicitly any non-compliant characteristics.
C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
   1. No specific form is required. Contractor's Substitution Request documentation must include the following:
      a. Project Information:
         1) Official project name and number, and any additional required identifiers established in Contract Documents.
         2) Owner's, Architect's, and Contractor's names.
      b. Substitution Request Information:
         1) Discrete and consecutive Substitution Request number, and descriptive subject/title.
         2) Indication of whether the substitution is for cause or convenience.
         3) Issue date.
4) Reference to particular Contract Document(s) specification section number, title, and article/paragraph(s).
5) Description of Substitution.
6) Reason why the specified item cannot be provided.
7) Differences between proposed substitution and specified item.
8) Description of how proposed substitution affects other parts of work.
c. Attached Comparative Data: Provide point-by-point, side-by-side comparison addressing essential attributes specified, as appropriate and relevant for the item:
   1) Physical characteristics.
   2) In-service performance.
   3) Expected durability.
   4) Visual effect.
   5) Sustainable design features.
   6) Warranties.
   7) Other salient features and requirements.
8) Include, as appropriate or requested, the following types of documentation:
   (a) Product Data:
   (b) Samples.
   (c) Certificates, test, reports or similar qualification data.
   (d) Drawings, when required to show impact on adjacent construction elements.
d. Impact of Substitution:
   1) Savings to Owner for accepting substitution.
   2) Change to Contract Time due to accepting substitution.

D. Limit each request to a single proposed substitution item.
   1. Submit an electronic document, combining the request form with supporting data into single document.

3.02 SUBSTITUTION PROCEDURES DURING CONSTRUCTION
A. Architect will consider requests for substitutions only within 15 days after date of Agreement.
B. Submit request for Substitution for Cause immediately upon discovery of need for substitution, but not later than 14 business days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
C. Submit request for Substitution for Convenience immediately upon discovery of its potential advantage to the project, but not later than 14 business days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
   1. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, or in other specific ways.
   2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
   3. Bear the costs engendered by proposed substitution of:
      a. Owner's compensation to the Architect for any required redesign, time spent processing and evaluating the request.
      b. Other construction by Owner.
      c. Other unanticipated project considerations.
D. Substitutions will not be considered under one or more of the following circumstances:
   1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
   2. Without a separate written request.

3.03 RESOLUTION
A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
B. Architect will notify Contractor in writing of decision to accept or reject request.
   1. Architect's decision following review of proposed substitution will be noted on the
      submitted form.

3.04 ACCEPTANCE
   A. Accepted substitutions change the work of the Project. They will be documented and
      incorporated into work of the project by Change Order, Construction Change Directive,
      Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of
      the Contract.

3.05 CLOSEOUT ACTIVITIES
   A. See Section 01 7800 - Closeout Submittals, for closeout submittals.
   B. Include completed Substitution Request Forms as part of the Project record. Include both
      approved and rejected Requests.

END OF SECTION
SECTION 01 3000
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES
   A. General administrative requirements.
   B. Electronic document submittal service.
   C. Preconstruction meeting.
   D. Progress meetings.
   E. Construction progress schedule.
   F. Submittals for review, information, and project closeout.
   G. Number of copies of submittals.
   H. Requests for Interpretation (RFI) procedures.
   I. Submittal procedures.

1.02 RELATED REQUIREMENTS
   A. Section 01 6000 - Product Requirements: General product requirements.
   B. Section 01 7000 - Execution and Closeout Requirements: Additional coordination requirements.
   C. Section 01 7800 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

1.03 GENERAL ADMINISTRATIVE REQUIREMENTS
   A. Conform to requirements of Section 01 7000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
   B. Make the following types of submittals to Architect:
      1. Requests for Interpretation (RFI).
      2. Requests for substitution.
      3. Shop drawings, product data, and samples.
      4. Design data.
      5. Manufacturer's instructions and field reports.
      6. Applications for payment and change order requests.
      7. Progress schedules.
      8. Coordination drawings.
      9. Correction Punch List and Final Correction Punch List for Substantial Completion.
     10. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING
   A. Architect will schedule a meeting after Notice of Award.
   B. Attendance Required:
      1. Owner.
      3. Contractor.
      4. Inspector.
   C. Agenda:
      1. Submission of list of subcontractors, schedule of values, and progress schedule.
      2. Submission of initial Submittal schedule.
      3. Designation of Contractor's personnel for the project.
4. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
5. Scheduling.

3.02 PROGRESS MEETINGS
A. Architect will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
B. Attendance Required:
   1. Contractor.
   2. Owner.
   3. Architect.
   4. Contractor's superintendent.
   5. Major subcontractors.
   6. Inspector.
C. Agenda:
   1. Review minutes of previous meetings.
   2. Review of work progress.
      a. Contractor shall provide a three week look ahead schedule projecting upcoming work activities.
   3. Field observations, problems, and decisions.
   4. Identification of problems that impede, or will impede, planned progress.
   5. Review of submittals schedule and status of submittals.
   7. Review of off-site fabrication and delivery schedules.
   8. Corrective measures to regain projected schedules.
   9. Coordination of projected progress.
   10. Maintenance of quality and work standards.
   11. Effect of proposed changes on progress schedule and coordination.
   12. Other business relating to work.

3.03 CONSTRUCTION PROGRESS SCHEDULE
A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.
B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
   1. Include written certification that major contractors have reviewed and accepted proposed schedule.
D. Within 10 days after joint review, submit complete schedule.
E. Submit updated schedule with each Application for Payment.

3.04 REQUESTS FOR INTERPRETATION(RFI)
A. Definition: A request seeking one of the following:
   1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in the Contract Documents.
   2. A resolution to an issue which has arisen due to field conditions and affects design intent.
B. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of the Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
   1. Prepare a separate RFI for each specific item.
a. Do not forward requests which solely require internal coordination between subcontractors.

C. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
   1. Include in each request Contractor's signature attesting to good faith effort to determine from the Contract Documents information requiring interpretation.
   2. Unacceptable Uses for RFIs: Do not use RFIs to request the following:
      a. Approval of submittals (use procedures specified elsewhere in this section).
      b. Approval of substitutions (see Section - 01 6000 - Product Requirements).
      d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
   3. Improper RFIs: Requests not prepared in conformance to requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
   4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, the Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
      a. The Owner reserves the right to assess the Contractor for the costs (on time-and-materials basis) incurred by the Architect, and any of its consultants, due to processing of such RFIs.

D. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
   1. Official Project name and number, and any additional required identifiers established in Contract Documents.
   2. Owner's, Architect's, and Contractor's names.
   3. Discrete and consecutive RFI number, and descriptive subject/title.
   4. Issue date, and requested reply date.
   5. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
   6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
   7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.

E. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.

F. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
   1. Indicate current status of every RFI. Update log promptly and on a regular basis.
   2. Note dates of when each request is made, and when a response is received.
   3. Highlight items requiring priority or expedited response.
   4. Highlight items for which a timely response has not been received to date.
   5. Identify and include improper or frivolous RFIs.

G. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
   1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
2. RFIs that require additional input from Architect's consultants may require additional review time.

H. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner and Architect.
   1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
   2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
   3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
   4. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

3.05 SUBMITTAL SCHEDULE
A. Submit to Architect for review a schedule for submittals in tabular format.
   1. Submit at the same time as the preliminary schedule specified in Section - 01 3216 - Construction Progress Schedule.
   2. Coordinate with Contractor's construction schedule and schedule of values.
   3. Format schedule to allow tracking of status of submittals throughout duration of construction.
   4. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
   5. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.
      a. For assemblies, equipment, systems comprised of multiple components and/or requiring detailed coordination with other work, allow for additional time to make corrections or revisions to initial submittals, and time for their review.

3.06 SUBMITTALS FOR REVIEW
A. When the following are specified in individual sections, submit them for review:
   1. Product data.
   2. Shop drawings.
   3. Samples for selection.
   4. Samples for verification.
B. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
C. Samples will be reviewed for aesthetic, color, or finish selection.
D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

3.07 SUBMITTALS FOR INFORMATION
A. When the following are specified in individual sections, submit them for information:
   1. Design data.
   2. Certificates.
   3. Test reports.
   4. Inspection reports.
   5. Manufacturer's instructions.
   6. Manufacturer's field reports.
   7. Other types indicated.
B. Submit for Architect's knowledge as contract administrator or for Owner.

3.08 SUBMITTALS FOR PROJECT CLOSEOUT
A. Submit Correction Punch List for Substantial Completion.
B. Submit Final Correction Punch List for Substantial Completion.
C. When the following are specified in individual sections, submit them at project closeout in conformance to requirements of Section 01 7800 - Closeout Submittals:
   1. Project record documents.
   2. Operation and maintenance data.
   3. Warranties.
   5. Other types as indicated.
D. Submit for Owner's benefit during and after project completion.

3.09 NUMBER OF COPIES OF SUBMITTALS
A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
   1. After review, produce duplicates.
   2. Retained samples will not be returned to Contractor unless specifically so stated.

3.10 SUBMITTAL PROCEDURES
A. General Requirements:
   1. Use a separate transmittal for each item.
   2. Transmit using approved form.
      a. Use Contractor's form, subject to prior approval by Architect.
   3. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
   4. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
   5. Apply Contractor's stamp, signed or initialed certifying that review, approval, 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.
      a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
   6. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
      a. Send submittals in electronic format via email to Architect.
   7. Schedule submittals to expedite the Project, and coordinate submission of related items.
      a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
      b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
      c. For sequential reviews involving approval from authorities having jurisdiction (AHJ), in addition to Architect's approval, allow an additional 30 days minimum.
   8. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
   10. When revised for resubmission, identify all changes made since previous submission.
   11. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
   12. Submittals not requested will not be recognized or processed.
B. Product Data Procedures:
   1. Submit only information required by individual specification sections.
   2. Collect required information into a single submittal.
   3. Do not submit (Material) Safety Data Sheets for materials or products.

C. Shop Drawing Procedures:
   1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related work.
   2. Do not reproduce the Contract Documents to create shop drawings.
   3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.

D. Samples Procedures:
   1. Transmit related items together as single package.
   2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.

3.11 SUBMITTAL REVIEW

A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.

B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.

C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
   1. Notations may be made directly on submitted items and/or listed on appended Submittal Review cover sheet.

D. Architect's and consultants' actions on items submitted for review:
   1. Authorizing purchasing, fabrication, delivery, and installation:
      a. "No Exceptions Taken", or language with same legal meaning.
      b. "Make Corrections Noted, Resubmittal Not Required", or language with same legal meaning.
         1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
   2. Not Authorizing fabrication, delivery, and installation:
      a. "Revise and Resubmit".
         1) Resubmit revised item, with review notations acknowledged and incorporated.
         2) Non-responsive resubmittals may be rejected.
      b. "Rejected".
         1) Submit item complying with requirements of Contract Documents.

E. Architect's and consultants' actions on items submitted for information:
   1. Items for which no action was taken:
      a. "Received" - to notify the Contractor that the submittal has been received for record only.
   2. Items for which action was taken:
      a. "Reviewed" - no further action is required from Contractor.

END OF SECTION
PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Preliminary schedule.
   B. Construction progress schedule, bar chart type.

1.02 REFERENCE STANDARDS
   B. M-H (CPM) - CPM in Construction Management - Project Management with CPM; O'Brien; 2006.

1.03 SUBMITTALS
   A. Within 10 days after date established in Notice to Proceed, submit preliminary schedule.
   B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
   C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
   D. Within 10 days after joint review, submit complete schedule.
   E. Submit updated schedule with each Application for Payment or monthly.
   F. Submit in PDF format.

1.04 QUALITY ASSURANCE
   A. Scheduler: Contractor's personnel or specialist Consultant specializing in CPM scheduling with one years minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

1.05 SCHEDULE FORMAT
   A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
   B. Scale and Spacing: To allow for notations and revisions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRELIMINARY SCHEDULE
   A. Prepare preliminary schedule in the form of a horizontal bar chart.

3.02 CONTENT
   A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
   B. Identify each item by specification section number.
   C. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
   D. Coordinate content with schedule of values specified in Section 01 2000 - Price and Payment Procedures.
   E. Provide legend for symbols and abbreviations used.

3.03 BAR CHARTS
   A. Include a separate bar for each major portion of Work or operation.
   B. Identify the first work day of each week.
3.04 NETWORK ANALYSIS
A. Prepare network analysis diagrams and supporting mathematical analyses using the Critical Path Method.
B. Illustrate order and interdependence of activities and sequence of work; how start of a given activity depends on completion of preceding activities, and how completion of the activity may restrain start of subsequent activities.
C. Mathematical Analysis: Tabulate each activity of detailed network diagrams, using calendar dates, and identify for each activity:
   1. Preceding and following event numbers.
   2. Activity description.
   3. Estimated duration of activity, in maximum 15 day intervals.
   4. Earliest start date.
   5. Earliest finish date.
   6. Actual start date.
   7. Actual finish date.
   8. Latest start date.
   9. Latest finish date.
 10. Total and free float; float time shall accrue to Owner and to Owner’s benefit.
 11. Monetary value of activity, keyed to Schedule of Values.
 12. Percentage of activity completed.
D. Required Reports: List activities in sorts or groups:
   1. By preceding work item or event number from lowest to highest.
   2. By amount of float, then in order of early start.

3.05 REVIEW AND EVALUATION OF SCHEDULE
A. Evaluate project status to determine work behind schedule and work ahead of schedule.
B. After review, revise as necessary as result of review, and resubmit within 10 days.

3.06 UPDATING SCHEDULE
A. Maintain schedules to record actual start and finish dates of completed activities.
B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
C. Annotate diagrams to graphically depict current status of Work.
D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
E. Indicate changes required to maintain Date of Substantial Completion.
F. Submit reports required to support recommended changes.
G. Provide narrative report to define problem areas, anticipated delays, and impact on the schedule. Report corrective action taken or proposed and its effect.

3.07 DISTRIBUTION OF SCHEDULE
A. Distribute copies of updated schedules to Contractor's project site file, to subcontractors, suppliers, Architect, Owner, and other concerned parties.
B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

END OF SECTION
1.01 SECTION INCLUDES
A. Security measures including entry control, personnel identification, and miscellaneous restrictions.

1.02 RELATED REQUIREMENTS
A. Section 01 1000 - Summary: use of premises and occupancy.
B. Section 01 5000 - Temporary Facilities and Controls: Temporary lighting.

1.03 SECURITY PROGRAM
A. Protect Work, existing premises and Owner's operations from theft, vandalism, and unauthorized entry.
B. Initiate program at project mobilization.
C. Maintain program throughout construction period until Owner acceptance precludes the need for Contractor security.

1.04 ENTRY CONTROL
A. Restrict entrance of persons and vehicles into Project site.
B. Allow entrance only to authorized persons with proper identification.
C. Maintain log of workers and visitors, make available to Owner on request.
D. Owner will control entrance of persons and vehicles related to Owner's operations.

1.05 PERSONNEL IDENTIFICATION
A. Provide identification badge to each person authorized to enter premises.
B. Badge To Include: Personal photograph, name, assigned number and employer.
C. Maintain a list of accredited persons, submit copy to Owner on request.
D. Require return of badges at expiration of their employment on the Work.

1.06 RESTRICTIONS
A. Do no work on Sundays unless previously authorized by Owner.

PART 2 PRODUCTS - NOT USED
PART 3 EXECUTION - NOT USED

END OF SECTION
PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary utilities.
B. Temporary telecommunications services.
C. Temporary sanitary facilities.
D. Temporary Controls: Barriers, enclosures, and fencing.
E. Security requirements.
F. Vehicular access and parking.
G. Waste removal facilities and services.
H. Project identification sign.
I. Field offices.

1.02 RELATED REQUIREMENTS

A. Section 01 5100 - Temporary Utilities.
B. Section 01 5213 - Field Offices and Sheds.
C. Section 01 5500 - Vehicular Access and Parking.

1.03 TEMPORARY UTILITIES - SEE SECTION 01 5100

A. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.

1.04 TELECOMMUNICATIONS SERVICES

A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.
B. Telecommunications services shall include:

1.05 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
B. Maintain daily in clean and sanitary condition.

1.06 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
C. Provide protection for plants designated to remain. Replace damaged plants.
D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.07 FENCING

A. Provide 6 foot (1.8 m) high fence around construction site; equip with vehicular and pedestrian gates with locks.
B. Provide screen on all temporary construction fence panes to limit the visibility of the construction site from the public.
1.08 INTERIOR ENCLOSURES
   A. Provide temporary partitions and ceilings as indicated to separate work areas from
      Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas,
      and to prevent damage to existing materials and equipment.
   B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and
      sealed edges at intersections with existing surfaces.

1.09 SECURITY - SEE SECTION 01 3553
   A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from
      unauthorized entry, vandalism, or theft.

1.10 VEHICULAR ACCESS AND PARKING - SEE SECTION 01 5500
   A. Coordinate access and haul routes with governing authorities and Owner.
   B. Provide and maintain access to fire hydrants, free of obstructions.
   C. Provide means of removing mud from vehicle wheels before entering streets.
   D. Provide temporary parking areas to accommodate construction personnel. When site space is
      not adequate, provide additional off-site parking.

1.11 WASTE REMOVAL
   A. See Section 01 7419 - Construction Waste Management and Disposal, for additional
      requirements.
   B. Provide waste removal facilities and services as required to maintain the site in clean and
      orderly condition.
   C. Provide containers with lids. Remove trash from site periodically.
   D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable
      non-combustible containers; locate containers holding flammable material outside the structure
      unless otherwise approved by the authorities having jurisdiction.
   E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers
      with lids.

1.12 PROJECT IDENTIFICATION
   A. Provide project identification sign of design and construction indicated on drawings.
   B. Erect on site at location indicated.
   C. No other signs are allowed without Owner permission except those required by law.

1.13 FIELD OFFICES - SEE SECTION 01 5213
   A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped
      with sturdy furniture, drawing rack, and drawing display table.
   B. Provide space for Project meetings, with table and chairs to accommodate 8 persons.
   C. Locate offices a minimum distance of 30 feet (10 m) from existing and new structures.

1.14 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS
   A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial
      Completion inspection.
   B. Clean and repair damage caused by installation or use of temporary work.
   C. Restore existing facilities used during construction to original condition.

PART 2 PRODUCTS - NOT USED
PART 3 EXECUTION - NOT USED

END OF SECTION
SECTION 01 5100
TEMPORARY UTILITIES

PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Temporary Utilities: Provision of electricity and water.

1.02 RELATED REQUIREMENTS
   A. Section 01 5000 - Temporary Facilities and Controls:

1.03 TEMPORARY ELECTRICITY
   A. Cost: By Contractor.
   B. Provide power service required from utility source.
   C. Provide temporary electric feeder from existing building electrical service at location as directed.

1.04 TEMPORARY WATER SERVICE
   A. Cost of Water Used: By Contractor.
   B. Provide and maintain suitable quality water service for construction operations at time of project mobilization.

PART 2 PRODUCTS - NOT USED
PART 3 EXECUTION - NOT USED

END OF SECTION
SECTION 01 5213
FIELD OFFICES AND SHEDS

PART 1 GENERAL
1.01 SECTION INCLUDES
   A. Temporary field offices for use of Contractor.
   B. Maintenance and removal.

1.02 RELATED REQUIREMENTS
   A. Section 01 1000 - Summary: use of premises and responsibility for providing field offices.
   B. Section 01 5000 - Temporary Facilities and Controls:
   C. Section 01 5500: Parking and access to field offices.

PART 2 PRODUCTS
2.01 CONSTRUCTION
   A. Portable or mobile buildings, or buildings constructed with floors raised above ground, securely
      fixed to foundations, with steps and landings at entrance doors.
   B. Construction: Structurally sound, secure, weather tight enclosures for office. Maintain during
      progress of Work; remove when no longer needed.
   C. Temperature Transmission Resistance of Floors, Walls, and Ceilings: Compatible with
      occupancy requirements.
   D. Exterior Materials: Weather resistant, finished in one color.
   E. Interior Materials in Offices: Sheet type materials for walls and ceilings, prefinished or painted;
      resilient floors and bases.
   F. Lighting for Offices: 50 fc (538 lx) at desk top height, exterior lighting at entrance doors.
   G. Fire Extinguishers: Appropriate type fire extinguisher at each office.

2.02 ENVIRONMENTAL CONTROL
   A. Heating, Cooling, and Ventilating: Automatic equipment to maintain comfort conditions.

2.03 CONTRACTOR OFFICE AND FACILITIES
   A. Size: For Contractor’s needs and to provide space for project meetings.
   B. Furnishings in Meeting Area: Conference table and chairs to seat at least eight persons; racks
      and files for Contract Documents, submittals, and project record documents.
   C. Other Furnishings: Contractor's option.
   D. Equipment: Six adjustable band protective helmets for visitors, one 10 inch (250 mm) outdoor
      weather thermometer.

PART 3 EXECUTION
3.01 PREPARATION
   A. Fill and grade sites for temporary structures to provide drainage away from buildings.

3.02 INSTALLATION
   A. Install office spaces ready for occupancy 15 days after date fixed in Notice to Proceed.

3.03 MAINTENANCE AND CLEANING
   A. Weekly janitorial services for offices; periodic cleaning and maintenance for offices.
   B. Maintain approach walks free of mud, water, and snow.
3.04 REMOVAL
   A. At completion of Work remove buildings, foundations, utility services, and debris. Restore areas.

END OF SECTION
PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Parking.
   B. Existing pavements and parking areas.
   C. Flag persons.
   D. Maintenance.
   E. Removal, repair.
   F. Mud from site vehicles.

1.02 RELATED REQUIREMENTS
   A. Section 01 1000 - Summary: For access to site, work sequence, and occupancy.

PART 2 PRODUCTS

2.01 MATERIALS
   A. Temporary Construction: Contractor's option.

PART 3 EXECUTION

3.01 PREPARATION
   A. Clear areas, provide surface and storm drainage of road, parking, area premises, and adjacent areas.

3.02 PARKING
   A. Use of designated areas of existing parking facilities by construction personnel is permitted.
   B. Arrange for temporary parking areas to accommodate use of construction personnel.
   C. When site space is not adequate, provide additional off-site parking.
   D. Locate as approved by Owner.

3.03 FLAG PERSONS
   A. Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.

3.04 MAINTENANCE
   A. Maintain traffic and parking areas in a sound condition free of excavated material, construction equipment, products, mud, snow, and ice.
   B. Maintain existing paved areas used for construction; promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.

3.05 REMOVAL, REPAIR
   A. Repair existing facilities damaged by use, to original condition.
   B. Repair damage caused by installation.

3.06 MUD FROM SITE VEHICLES
   A. Provide means of removing mud from vehicle wheels before entering streets.

END OF SECTION
SECTION 01 6000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES
A. General product requirements.
B. Re-use of existing products.
C. Transportation, handling, storage and protection.
D. Product option requirements.
E. Substitution limitations.
F. Procedures for Owner-supplied products.
G. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS
A. Section 01 1000 - Summary: Lists of products to be removed from existing building.
B. Section 01 2500 - Substitution Procedures: Substitutions made during and after the Bidding/Negotiation Phase.

1.03 SUBMITTALS
A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
   1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS
A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the Contract Documents.
B. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.
C. Specific Products to be Reused: The reuse of certain materials and equipment already existing on the project site is not prohibited, unless noted otherwise.
   1. If reuse of other existing materials or equipment is desired, submit substitution request.

2.02 NEW PRODUCTS
A. Provide new products unless specifically required or permitted by the Contract Documents.
B. Where all other criteria are met, Contractor shall give preference to products that:
   1. If used on interior, have lower emissions, as defined in Section 01 6116.
   2. If wet-applied, have lower VOC content, as defined in Section 01 6116.
   3. Have a published GreenScreen Chemical Hazard Analysis.

2.03 PRODUCT OPTIONS
A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.04 MAINTENANCE MATERIALS
A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.

B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION
3.01 SUBSTITUTION LIMITATIONS
A. See Section 01 2500 - Substitution Procedures.
B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
C. A request for substitution constitutes a representation that the submitter:
   1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
   2. Agrees to provide the same warranty for the substitution as for the specified product.
   3. Agrees to coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
   4. Waives claims for additional costs or time extension that may subsequently become apparent.

3.02 OWNER-SUPPLIED PRODUCTS
A. Owner's Responsibilities:
   1. Arrange and pay for product delivery to site.
   2. On delivery, inspect products jointly with Contractor.
   3. Submit claims for transportation damage and replace damaged, defective, or deficient items.
   4. Arrange for manufacturers' warranties, inspections, and service.

B. Contractor's Responsibilities:
   1. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
   2. Handle, store, install and finish products.
   3. Repair or replace items damaged after receipt.

3.03 TRANSPORTATION AND HANDLING
A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.

B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

D. Transport and handle products in accordance with manufacturer's instructions.

E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.

H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.
3.04 STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.

B. Store and protect products in accordance with manufacturers' instructions.

C. Store with seals and labels intact and legible.

D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

E. For exterior storage of fabricated products, place on sloped supports above ground.

F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

G. Comply with manufacturer's warranty conditions, if any.

H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

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

J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION
SECTION 01 7000
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL
1.01 SECTION INCLUDES
A. Examination, preparation, and general installation procedures.
B. Requirements for alterations work, including selective demolition.
C. Cutting and patching.
D. Surveying for laying out the work.
E. Cleaning and protection.
F. Starting of systems and equipment.
G. Demonstration and instruction of Owner personnel.
H. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
I. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS
A. Section 01 1000 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
B. Section 01 5000 - Temporary Facilities and Controls: Temporary exterior enclosures.
C. Section 01 5000 - Temporary Facilities and Controls: Temporary interior partitions.
D. Section 01 7900 - Demonstration and Training: Demonstration of products and systems to be commissioned and where indicated in specific specification sections.
E. Section 07 8400 - Firestopping.

1.03 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
   1. On request, submit documentation verifying accuracy of survey work.
   2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in compliance with Contract Documents.
   3. Submit surveys and survey logs for the project record.
C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
   1. Structural integrity of any element of Project.
   2. Integrity of weather exposed or moisture resistant element.
   3. Efficiency, maintenance, or safety of any operational element.
   5. Work of Owner or separate Contractor.
D. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.04 QUALIFICATIONS
A. For demolition work, employ a firm specializing in the type of work required.
   1. Minimum of 5 years of documented experience.
B. For surveying work, employ a land surveyor registered in the State in which the Project is located and acceptable to Architect. Submit evidence of surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities.
C. For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.
1.05 PROJECT CONDITIONS
A. Use of explosives is not permitted, unless approved prior by Owner and Architect.
B. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
C. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
D. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
E. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
F. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
   1. Minimize amount of bare soil exposed at one time.
   2. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.
G. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
   1. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.
H. Pest and Rodent Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.
I. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.06 COORDINATION
A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
B. Notify affected utility companies and comply with their requirements.
C. Verify that utility requirements and characteristics of new 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.
D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
F. Coordinate completion and clean-up of work of separate sections.
G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner’s activities.

PART 2 PRODUCTS
2.01 PATCHING MATERIALS
A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
Part 3  Execution

3.01 Examination

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
C. Examine and verify specific conditions described in individual specification sections.
D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 Preparation

A. Clean substrate surfaces prior to applying next material or substance.
B. Seal cracks or openings of substrate prior to applying next material or substance.
C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 Laying Out the Work

A. Verify locations of survey control points prior to starting work.
B. Promptly notify Architect of any discrepancies discovered.
C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
D. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
E. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.
F. Utilize recognized engineering survey practices.
G. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
   1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
   2. Grid or axis for structures.
   3. Building foundation, column locations, ground floor elevations.
H. Periodically verify layouts by same means.
I. Maintain a complete and accurate log of control and survey work as it progresses.

3.04 General Installation Requirements

A. Install products as specified in individual sections, in accordance with manufacturer’s instructions and recommendations, and so as to avoid waste due to necessity for replacement.
B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.05 ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
   1. Verify that construction and utility arrangements are as indicated.
   2. Report discrepancies to Architect before disturbing existing installation.
   3. Beginning of alterations work constitutes acceptance of existing conditions.

B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
   1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000.
   2. Provide sound retardant partitions between areas of alteration work and areas occupied by Owner during construction.

C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
   1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
   2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.

D. Remove existing work as indicated and as required to accomplish new work.
   1. Remove items indicated on drawings.
   2. Relocate items indicated on drawings.
   3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
   4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
   5. The contractor is responsible to perform all demolition work necessary to allow execution of all requirements of the new construction.
      a. Elements not specifically noted for demolition shall be removed by the contractor in order to facilitate all requirements of the new construction.

E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
   1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
   2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
   3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
      a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
      b. Provide temporary connections as required to maintain existing systems in service.
      c. Provide Owner with 72 hour minimum notification before existing systems taken off line.
   4. Verify that abandoned services serve only abandoned facilities.
   5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub
and tag with identification; patch holes left by removal using materials specified for new construction.

F. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
3. Repair adjacent construction and finishes damaged during removal work.

G. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
3. Where a change of plane of 1/4 inch (6 mm) or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.

H. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.

I. Refinish existing surfaces as indicated:
1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.

J. Clean existing systems and equipment.

K. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.

L. Do not begin new construction in alterations areas before demolition is complete.

M. Comply with all other applicable requirements of this section.

3.06 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.

B. See Alterations article above for additional requirements.

C. Perform whatever cutting and patching is necessary to:
1. Complete the work.
2. Fit products together to integrate with other work.
3. Provide openings for penetration of mechanical, electrical, and other services.
4. Match work that has been cut to adjacent work.
5. Repair areas adjacent to cuts to required condition.
6. Repair new work damaged by subsequent work.
7. Remove samples of installed work for testing when requested.
8. Remove and replace defective and non-complying work.

D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

G. Restore work with new products in accordance with requirements of Contract Documents.

H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 8400, to full thickness of the penetrated element.

J. Patching:
   1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
   2. Match color, texture, and appearance.
   3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.07 PROGRESS CLEANING
   A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
   B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
   C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
   D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.08 PROTECTION OF INSTALLED WORK
   A. Protect installed work from damage by construction operations.
   B. Provide special protection where specified in individual specification sections.
   C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
   D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
   E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
   F. Protect work from spilled liquids. If work is exposed to spilled liquids, immediately remove protective coverings, dry out work, and replace protective coverings.
   G. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
   H. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.09 SYSTEM STARTUP
   A. Coordinate schedule for start-up of various equipment and systems.
   B. Notify Architect and Owner seven days prior to start-up of each item.
   C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
   D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
   E. Verify that wiring and support components for equipment are complete and tested.
   F. Execute start-up under supervision of applicable Contractor personnel and manufacturer’s representative in accordance with manufacturers’ instructions.
   G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
H. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.10 DEMONSTRATION AND INSTRUCTION

A. See Section 01 7900 - Demonstration and Training.
B. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of Substantial Completion.
C. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
D. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

3.11 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.12 FINAL CLEANING

A. Final interior cleaning prior to architect's Punch walk and for Owner occupancy shall consist of full and thorough cleaning using appropriate non-marring cleaners for all areas of the building, all accessible equipment and all visible building components. All protective coverings and coatings shall be removed along with adhesive residues. All concrete and tile floors shall be mopped and left free of water or cleaner residue. Glass and painted surfaces shall be cleaned free of fingerprints, smudges and non-code-required labels and stickers. Machine scrub ceramic flooring. Clean all thresholds. Clean all millwork. Clean horizontal surfaces. Dust and wipe down walls. Clean all mirrors, restrooms, storage rooms, concession, custodial, ticket room, and lobby. Clean all furniture. Clean all fixtures. Visible air shaft louvers, grilles and registers dusted.
B. Provide adequate manpower to complete work in multiple buildings concurrently as required. Review cleaning and maintenance instructions for installed material prior to cleaning.
C. Furnish all labor, material and equipment to complete all final cleaning of the work as described in the contract documents.
D. Sweep paved areas broom clean and Powerwash all exterior concrete sidewalks, curbs, asphalt, parking lots. Remove stains, spills and other foreign deposits.
E. Fire cabinets cleaned inside and out.
F. Complete/detailed vacuum and spot removal of all wall-coverings throughout the building.
G. Clean all closets including janitor closets, mop sinks, plumbing fixtures and floor sinks.
H. Wax all VCT and sheet vinyl. Use proper products per specification and manufacturer requirements.
I. All ceramic tiles wiped clean using special cleaning materials for best reflection.
J. All toilet partitions and accessories wiped clean.
K. All stainless steel kitchen cabinets, countertops and appliances wiped clean.
L. Clean and polish transparent materials, including mirrors and glass in doors and windows including frames.
M. Restore reflection surfaces to their original reflection condition.
N. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances.
O. Clean plumbing fixtures to a sanitary condition.
P. All shades, storefront, rolling shutters and coiling doors wiped down inside and out.
Q. General roof clean-up.
R. Clean tops, sides and bottoms (if accessible) of equipment.
S. Remove labels that are not permanent. Do not remove permanent labels (UL, WH, etc.)
T. Wipe clean any exposed duct, pipe and conduit.
U. Exterior cleaning shall include washing all windows, exposed metal and stone surfaces, removing any stains from exterior plaster, wash down of roof equipment wells and cleaning roof mounted equipment and all rain gutters shall be cleared of any obstructions.
V. One (1) pre-punch clean prior to Architect's punch walk and one (1) final clean prior to Owner occupancy.
W. Clean all windows and mullions interior and exterior. Remove drywall texture where required.
X. Clean all restrooms complete including all plumbing fixtures, electrical fixtures, toilet partitions and accessories. Remove any and all temporary protection and labels not required to remain. Clean and shine hardware. Clean all mirrors. Clean all floor and wall tile.
Y. Sweep and mop all floors.
Z. Vacuum all carpeted areas and wipe base. Spot clean carpet as needed.
AA. Clean all casework and cabinetry inside and out.
AB. Clean all doors, jambs and hardware. Remove drywall texture where required.
AC. Clean all exit signs
AD. Clean all plumbing fixtures, lighting fixtures and any other wall or ceiling mounted fixtures/devices.
AE. Clean interior of wheelchair lift.
AF. Remove temporary floor protection.
AG. Dust walls and wall coverings.
AH. Clean all vinyl tack panel. This includes heavy cleaning to remove stains.
AI. Clean all countertops.
AJ. Clean all interior and exterior light fixtures.
AK. Clean exposed piping as required.
AL. Provide additional touch up cleaning as required prior to owner occupancy. Contractor shall include final touch-up of stained plaster at Building exteriors due to weather, soil staining, or any other staining seen on Buildings.
AM. Clean all other permanent items shown in the plans.
AN. Power wash all exterior hard surfaces around buildings that contain work on the project.
AO. Multiple move-ons as required for the phased schedule to achieve final cleaning scope of work.

3.13 CLOSEOUT PROCEDURES
A. Make submittals that are required by governing or other authorities.
B. Notify Architect when work is considered complete and ready for Architect’s Punch List.
C. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete (including all Punch List items) in accordance with Contract Documents and ready for Architect's Substantial Completion review.
D. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.
E. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

3.14 MAINTENANCE
A. Provide service and maintenance of components indicated in specification sections.
B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.

C. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

END OF SECTION
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

A. Owner requires that this project generate the least amount of trash and waste possible.

B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.

C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.

D. Contractor shall submit periodic Waste Disposal Reports; all landfill disposal, incineration, recycling, salvage, and reuse must be reported regardless of to whom the cost or savings accrues; use the same units of measure on all reports.

E. Methods of trash/waste disposal that are not acceptable are:
   1. Burning on the project site.
   2. Burying on the project site.
   3. Dumping or burying on other property, public or private.
   4. Other illegal dumping or burying.

F. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 DEFINITIONS

A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.

B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.

C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.

D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.

E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.

F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.

G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.

H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.

I. Return: To give back reusable items or unused products to vendors for credit.

J. Reuse: To reuse a construction waste material in some manner on the project site.

K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.

L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.

M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.

N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.

P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.
   1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
   2. Submit Report on a form acceptable to Owner.
   3. Landfill Disposal: Include the following information:
      a. Identification of material.
      b. Amount, in tons or cubic yards (cubic meters), of trash/waste material from the project disposed of in landfills.
      c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
      d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
   4. Incinerator Disposal: Include the following information:
      a. Identification of material.
      b. Amount, in tons or cubic yards (cubic meters), of trash/waste material from the project delivered to incinerators.
      c. State the identity of incinerators, total amount of fees paid to incinerator, and total disposal cost.
      d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
   5. Recycled and Salvaged Materials: Include the following information for each:
      a. Identification of material, including those retrieved by installer for use on other projects.
      b. Amount, in tons or cubic yards (cubic meters), date removed from the project site, and receiving party.
      c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
      d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
      e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.
   6. Material Reused on Project: Include the following information for each:
      a. Identification of material and how it was used in the project.
      b. Amount, in tons or cubic yards (cubic meters).
      c. Include weight tickets as evidence of quantity.
   7. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

PART 3 EXECUTION

2.01 WASTE MANAGEMENT PROCEDURES

A. See Section 01 3000 for additional requirements for project meetings, reports, submittal procedures, and project documentation.

B. See Section 01 5000 for additional requirements related to trash/waste collection and removal facilities and services.

C. See Section 01 6000 for waste prevention requirements related to delivery, storage, and handling.
D. See Section 01 7000 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

2.02 WASTE MANAGEMENT PLAN IMPLEMENTATION

A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.

B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Architect.

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

D. Meetings: Discuss trash/waste management goals and issues at project meetings.
   1. Prebid meeting.
   2. Preconstruction meeting.
   3. Regular job-site meetings.

E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
   1. Provide containers as required.
   2. Provide adequate space for pick-up and delivery and convenience to subcontractors.
   3. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.

F. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.

G. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.

H. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.

I. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

END OF SECTION
PART 1 GENERAL

1.01 SECTION INCLUDES

A. Project Record Documents.
B. Operation and Maintenance Data.
C. Warranties and bonds.

1.02 RELATED REQUIREMENTS

A. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
B. Individual Product Sections: Specific requirements for operation and maintenance data.
C. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

A. Project Record Documents: Submit documents to Architect prior to submission of final Application of Payment.
B. Operation and Maintenance Data:
   1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
   2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
   3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned, with Architect comments. Revise content of all document sets as required prior to final submission.
   4. Submit two sets of revised final documents in final form within 10 days after final inspection.
C. Warranties and Bonds:
   1. For equipment or component parts of equipment put into service during construction with Owner’s permission, submit documents within 10 days after acceptance.
   2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
   3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
      a. Approved Change Order shall be made a permanent part of the record drawings.
      b. Allowance Usage Requests shall be made a permanent part of the record drawings.
   5. Reviewed shop drawings, product data, and samples.
   6. Manufacturer’s instruction for assembly, installation, and adjusting.
   7. Requests for Information (RFI)
      a. RFI’s shall be made a permanent part of the record drawings.
   8. Architect’s Supplementary Instructions (ASI)
      a. ASI’s shall be made a permanent part of the record drawings.
9. Approved Construction Change Directives (CCD)
   a. Approved CCD's shall be made a permanent part of the record drawings.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.
   1. Record drawings shall be reviewed by Architect, Inspector, and Owner at the time of Application for Payment. If Record drawings are deemed incomplete, delays in payment may occur.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
   1. Measured depths of foundations in relation to finish first floor datum.
   2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
   3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   4. Field changes of dimension and detail.
   5. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA
A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.

D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES
A. For Each Product, Applied Material, and Finish:

B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.

C. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS
A. For Each Item of Equipment and Each System:
   1. Description of unit or system, and component parts.
   2. Identify function, normal operating characteristics, and limiting conditions.
   3. Include performance curves, with engineering data and tests.
   4. Complete nomenclature and model number of replaceable parts.

B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
C. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

D. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

E. Provide servicing and lubrication schedule, and list of lubricants required.

F. Include manufacturer's printed operation and maintenance instructions.

G. Include sequence of operation by controls manufacturer.

H. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

I. Additional Requirements: As specified in individual product specification sections.

3.05 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.

B. Where systems involve more than one specification section, provide separate tabbed divider for each system.

C. Binders: Commercial quality, 8-1/2 by 11 inch (216 by 280 mm) three D side ring binders with durable plastic covers; 2 inch (50 mm) maximum ring size. When multiple binders are used, correlate data into related consistent groupings.

D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.

E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.

F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.

G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.

H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.

I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

J. Arrangement of Contents: Organize each volume in parts as follows:
   1. Project Directory.
   2. Table of Contents, of all volumes, and of this volume.
   3. Operation and Maintenance Data: Arranged by system, then by product category.
      a. Source data.
      b. Product data, shop drawings, and other submittals.
      c. Operation and maintenance data.
      d. Field quality control data.
      e. Photocopies of warranties and bonds.

3.06 WARRANTIES AND BONDS

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.

B. Verify that documents are in proper form, contain full information, and are notarized.
C. Co-execute submittals when required.
D. Retain warranties and bonds until time specified for submittal.
E. Manual: Bind in commercial quality 8-1/2 by 11 inch (216 by 279 mm) three D side ring binders with durable plastic covers.
F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

END OF SECTION
SECTION 01 7900
DEMONSTRATION AND TRAINING

PART 1 GENERAL

1.01 SUMMARY

A. Demonstration of products and systems where indicated in specific specification sections.
B. Training of Owner personnel in operation and maintenance is required for:
   1. All software-operated systems.
   2. HVAC systems and equipment.
   3. Plumbing equipment.
   4. Electrical systems and equipment.
   5. Conveying systems.
   6. Landscape irrigation.
   7. Items specified in individual product Sections.
C. Training of Owner personnel in care, cleaning, maintenance, and repair is required for:
   1. Roofing, waterproofing, and other weather-exposed or moisture protection products.
   2. Finishes, including flooring, wall finishes, ceiling finishes.
   3. Fixtures and fittings.
   4. Items specified in individual product Sections.

1.02 RELATED REQUIREMENTS

A. Section 01 7800 - Closeout Submittals: Operation and maintenance manuals.
B. Section 01 9113 - General Commissioning Requirements: Additional requirements applicable to demonstration and training.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Training Plan: Owner will designate personnel to be trained; tailor training to needs and skill-level of attendees.
   1. Submit not less than two weeks prior to start of training.
   2. Revise and resubmit until acceptable.
   3. Provide an overall schedule showing all training sessions.
   4. Include at least the following for each training session:
      a. Identification, date, time, and duration.
      b. Description of products and/or systems to be covered.
      c. Name of firm and person conducting training; include qualifications.
      d. Intended audience, such as job description.
      e. Objectives of training and suggested methods of ensuring adequate training.
      f. Methods to be used, such as classroom lecture, live demonstrations, hands-on, etc.
      g. Media to be used, such as slides, hand-outs, etc.
      h. Training equipment required, such as projector, projection screen, etc., to be provided by Contractor.
C. Training Manuals: Provide training manual for each attendee; allow for minimum of two attendees per training session.
   1. Include applicable portion of O&M manuals.
   2. Include copies of all hand-outs, slides, overheads, video presentations, etc., that are not included in O&M manuals.
   3. Provide one extra copy of each training manual to be included with operation and maintenance data.
D. Video Recordings: Submit digital video recording of each demonstration and training session for Owner's subsequent use.
   1. Format: Per Owner's Request
   2. Label each disc and container with session identification and date.
1.04 QUALITY ASSURANCE
   A. Instructor Qualifications: Familiar with design, operation, maintenance and troubleshooting of the relevant products and systems.
      1. Provide as instructors the most qualified trainer of those contractors and/or installers who actually supplied and installed the systems and equipment.
      2. Where a single person is not familiar with all aspects, provide specialists with necessary qualifications.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 DEMONSTRATION - GENERAL
   A. Demonstrations conducted during system start-up do not qualify as demonstrations for the purposes of this section, unless approved in advance by Owner.
   B. Demonstration may be combined with Owner personnel training if applicable.
   C. Operating Equipment and Systems: Demonstrate operation in all modes, including start-up, shut-down, seasonal changeover, emergency conditions, and troubleshooting, and maintenance procedures, including scheduled and preventive maintenance.
   D. Non-Operating Products: Demonstrate cleaning, scheduled and preventive maintenance, and repair procedures.

3.02 TRAINING - GENERAL
   A. Conduct training on-site unless otherwise indicated.
   B. Training schedule will be subject to availability of Owner's personnel to be trained; re-schedule training sessions as required by Owner; once schedule has been approved by Owner failure to conduct sessions according to schedule will be cause for Owner to charge Contractor for personnel "show-up" time.
   C. Review of Facility Policy on Operation and Maintenance Data: During training discuss:
      1. The location of the O&M manuals and procedures for use and preservation; backup copies.
      2. Typical contents and organization of all manuals, including explanatory information, system narratives, and product specific information.
      3. Typical uses of the O&M manuals.
   D. Product- and System-Specific Training:
      1. Review the applicable O&M manuals.
      2. For systems, provide an overview of system operation, design parameters and constraints, and operational strategies.
      3. Review instructions for proper operation in all modes, including start-up, shut-down, seasonal changeover and emergency procedures, and for maintenance, including preventative maintenance.
      4. Provide hands-on training on all operational modes possible and preventive maintenance.
      5. Emphasize safe and proper operating requirements; discuss relevant health and safety issues and emergency procedures.
      6. Discuss common troubleshooting problems and solutions.
      7. Discuss any peculiarities of equipment installation or operation.
      8. Discuss warranties and guarantees, including procedures necessary to avoid voiding coverage.
      9. Review recommended tools and spare parts inventory suggestions of manufacturers.
     10. Review spare parts and tools required to be furnished by Contractor.
     11. Review spare parts suppliers and sources and procurement procedures.
   E. Be prepared to answer questions raised by training attendees; if unable to answer during training session, provide written response within three days.

END OF SECTION
PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Selective demolition of built site elements.
   B. Selective demolition of building elements for alteration purposes.

1.02 RELATED REQUIREMENTS
   A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
   B. Section 01 1000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
   C. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
   D. Section 01 6000 - Product Requirements: Handling and storage of items removed for salvage and relocation.
   E. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
   F. Section 31 2323 - Fill: Filling holes, pits, and excavations generated as a result of removal operations.

1.03 SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Site Plan: Showing:
      1. Vegetation to be protected.
      2. Areas for temporary construction and field offices.
   C. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.04 QUALITY ASSURANCE
   A. Demolition Firm Qualifications: Company specializing in the type of work required.
      1. Minimum of 5 years of documented experience.

PART 3 EXECUTION

2.01 SCOPE
   A. Remove paving and curbs as required to accomplish new work.
   B. Remove other items indicated, for salvage, relocation, and recycling.

2.02 GENERAL PROCEDURES AND PROJECT CONDITIONS
   A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
      1. Obtain required permits.
      2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
      3. Provide, erect, and maintain temporary barriers and security devices.
      4. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
      5. Do not close or obstruct roadways or sidewalks without permit.
      6. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
7. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.

B. Do not begin removal until receipt of notification to proceed from Owner.

C. Protect existing structures and other elements that are not to be removed.
   1. Provide bracing and shoring.
   2. Prevent movement or settlement of adjacent structures.
   3. Stop work immediately if adjacent structures appear to be in danger.

D. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.

2.03 EXISTING UTILITIES

A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.

B. Protect existing utilities to remain from damage.

C. Do not disrupt public utilities without permit from authority having jurisdiction.

D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.

E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.

F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.

G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

2.04 SELECTIVE DEMOLITION FOR ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
   1. Verify that construction and utility arrangements are as indicated.
   2. Report discrepancies to Architect before disturbing existing installation.
   3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

B. Remove existing work as indicated and as required to accomplish new work.
   1. Remove items indicated on drawings.

C. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, Telecommunications, and ______): Remove existing systems and equipment as indicated.
   1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
   2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
   3. Verify that abandoned services serve only abandoned facilities before removal.
   4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.

D. Protect existing work to remain.
   1. Prevent movement of structure; provide shoring and bracing if necessary.
   2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
   3. Repair adjacent construction and finishes damaged during removal work.
   4. Patch as specified for patching new work.

2.05 DEBRIS AND WASTE REMOVAL

A. Remove debris, junk, and trash from site.
B. Leave site in clean condition, ready for subsequent work.
C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION
SECTION 03 0516
UNDERSLAB VAPOR BARRIER

PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Sheet vapor barrier under concrete slabs on grade.

1.02 RELATED REQUIREMENTS
   A. Section 03 1000 - Concrete Forming and Accessories: Forms and accessories for formwork.
   B. Section 03 2000 - Concrete Reinforcing.
   C. Section 03 3000 - Cast-in-Place Concrete: Preparation of subgrade, granular fill, placement of concrete.

1.03 REFERENCE STANDARDS
   A. ASTM E1643 - Standard Practice for Selection, Design, Installation and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs; 2011.
   B. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 2011.

1.04 SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Product Data: Submit manufacturers' data on manufactured products.
   C. Manufacturer's Installation Instructions: Indicate installation procedures and interface required with adjacent construction.

PART 2 PRODUCTS

2.01 MATERIALS
   A. Underslab Vapor Barrier:
      1. Water Vapor Permeance: Not more than 0.010 perms (0.6 ng/(s m2 Pa)), maximum.
      2. Thickness: 15 mils (0.4 mm).
      3. Basis of Design:
         a. Stego Industries LLC; Stego Wrap Vapor Barrier (15-mil):
            www.stegoindustries.com/#sle.
   B. Accessory Products: Vapor barrier manufacturer's recommended tape, adhesive, mastic, etc., for sealing seams and penetrations in vapor barrier.

PART 3 EXECUTION

3.01 INSTALLATION
   A. Install vapor barrier in accordance with manufacturer's instructions and ASTM E1643.
   B. Install vapor barrier under interior slabs on grade; lap sheet over footings and seal to foundation walls.
   C. Lap joints minimum 6 inches (150 mm).
   D. Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions.
   E. No penetration of vapor barrier is allowed except for reinforcing steel and permanent utilities.
   F. Repair damaged vapor retarder before covering with other materials.

END OF SECTION
PART 1 GENERAL

1.01 SECTION INCLUDES
A. Formwork for cast-in-place concrete, with shoring, bracing and anchorage.
B. Form accessories.
C. Form stripping.

1.02 RELATED REQUIREMENTS
A. Section 03 2000 - Concrete Reinforcing.
B. Section 03 3000 - Cast-in-Place Concrete.

1.03 REFERENCE STANDARDS
B. ACI 301 - Specifications for Structural Concrete; 2010 (Errata 2012).

1.04 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data: Provide data on void form materials and installation requirements.
C. Shop Drawings: Indicate pertinent dimensions, materials, bracing, and arrangement of joints and ties.

PART 2 PRODUCTS

2.01 FORMWORK - GENERAL
A. Provide concrete forms, accessories, shoring, and bracing as required to accomplish cast-in-place concrete work.
B. Design and construct concrete that complies with design with respect to shape, lines, and dimensions.
C. Chamfer outside corners of beams, joists, columns, and walls.
D. Comply with applicable state and local codes with respect to design, fabrication, erection, and removal of formwork.

2.02 FORMWORK ACCESSORIES
A. Form Ties: Removable type, galvanized metal, fixed length, cone type, with waterproofing washer, free of defects that could leave holes larger than 1 inch (25 mm) in concrete surface.
B. Form Release Agent: Capable of releasing forms from hardened concrete without staining or discoloring concrete or forming bugholes and other surface defects, compatible with concrete and form materials, and not requiring removal for satisfactory bonding of coatings to be applied.

PART 3 EXECUTION

3.01 EXAMINATION
A. Verify lines, levels and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

3.02 EARTH FORMS
A. Earth forms are not permitted.

3.03 ERECTION - FORMWORK
A. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI 301.
B. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to overstressing by construction loads.

3.04 APPLICATION - FORM RELEASE AGENT
A. Apply form release agent on formwork in accordance with manufacturer's recommendations.

3.05 FORMWORK TOLERANCES
A. Construct formwork to maintain tolerances required by ACI 117, unless otherwise indicated.

3.06 FIELD QUALITY CONTROL
A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 - Quality Requirements.

3.07 FORM REMOVAL
A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.
B. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.

END OF SECTION
SECTION 03 2000
CONCRETE REINFORCING

<<<< UPDATE NOTES

PART 1  GENERAL

2.01  SECTION INCLUDES
A.  Reinforcing steel for cast-in-place concrete.
B.  Supports and accessories for steel reinforcement.

2.02  RELATED REQUIREMENTS
A.  Section 03 1000 - Concrete Forming and Accessories.
B.  Section 03 3000 - Cast-in-Place Concrete.

2.03  REFERENCE STANDARDS
A.  ACI 301 - Specifications for Structural Concrete; 2010 (Errata 2012).

2.04  SUBMITTALS
A.  See Section 01 3000 - Administrative Requirements, for submittal procedures.
B.  Shop Drawings: Comply with requirements of ACI SP-66. Include bar schedules, shapes of bent bars, spacing of bars, and location of splices.
C.  Manufacturer's Certificate: Certify that reinforcing steel and accessories supplied for this project meet or exceed specified requirements.

2.05  QUALITY ASSURANCE
A.  Perform work of this section in accordance with ACI 301.

PART 2  PRODUCTS

3.01  REINFORCEMENT
A.  Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi) (420 MPa).
   1.  Deformed billet-steel bars.
   2.  Unfinished.
B.  Reinforcement Accessories:

3.02  RE-BAR SPLICING:
A.  All splices shall be lapped as follows, unless noted otherwise on drawings:
   1.  For #5 bars: 48" minimum
   2.  For #4 bars: 30" minimum

3.03  FABRICATION
A.  Fabricate concrete reinforcing in accordance with CRSI (DA4) - Manual of Standard Practice.

PART 3  EXECUTION

4.01  PLACEMENT
A.  Place, support and secure reinforcement against displacement. Do not deviate from required position.
B.  Do not displace or damage vapor barrier.
C.  Accommodate placement of formed openings.
D. Comply with applicable code for concrete cover over reinforcement.

END OF SECTION
SECTION 03 3000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Concrete foundation walls.
B. Concrete foundations and anchor bolts for pre-engineered building.
C. Concrete curing.

1.02 RELATED REQUIREMENTS
A. Section 03 1000 - Concrete Forming and Accessories: Forms and accessories for formwork.
B. Section 03 2000 - Concrete Reinforcing.
C. Section 03 3511 - Concrete Floor Finishes: Densifiers, hardeners, applied coatings, and polishing.
D. Section 07 9200 - Joint Sealants: Products and installation for sealants and joint fillers for saw cut joints and isolation joints in slabs.

1.03 REFERENCE STANDARDS
B. ACI 301 - Specifications for Structural Concrete; 2010 (Errata 2012).
C. ACI 302.1R - Guide for Concrete Floor and Slab Construction; 2004 (Errata 2007).
E. ACI 308R - Guide to Curing Concrete; 2001 (Reapproved 2008).
F. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; 2014 (Errata 2016).
L. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2015.
M. ASTM E1643 - Standard Practice for Selection, Design, Installation and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs; 2011.
N. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 2011.

1.04 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
   1. For curing compounds, provide data on method of removal in the event of incompatibility with floor covering adhesives.
C. Mix Design: Submit proposed concrete mix design.
1. Indicate proposed mix design complies with requirements of ACI 301, Section 4 - Concrete Mixtures.
2. Indicate proposed mix design complies with requirements of ACI 318, Chapter 5 - Concrete Quality, Mixing and Placing.

D. Samples: Submit samples of underslab vapor retarder to be used.
E. Test Reports: Submit report for each test or series of tests specified.

1.05 QUALITY ASSURANCE
A. Perform work of this section in accordance with ACI 301 and ACI 318.

1.06 WARRANTY
A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

PART 2 PRODUCTS

2.01 FORMWORK
A. Comply with requirements of Section 03 1000.

2.02 REINFORCEMENT MATERIALS
A. Comply with requirements of Section 03 2000.

2.03 CONCRETE MATERIALS
A. Cement: ASTM C150/C150M, Type I - Normal Portland type.
   1. Acquire cement for entire project from same source.
B. Fine and Coarse Aggregates: ASTM C33/C33M.
   1. Acquire aggregates for entire project from same source.
C. Fly Ash: ASTM C618, Class C or F.
D. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.

2.04 ACCESSORY MATERIALS
A. Underslab Vapor Retarder: Sheet material complying with ASTM E1745, Class A; stated by manufacturer as suitable for installation in contact with soil or granular fill under concrete slabs. The use of single ply polyethylene is prohibited.
   1. Installation: Comply with ASTM E1643.
   2. Accessory Products: Vapor retarder manufacturer's recommended tape, adhesive, mastic, prefabricated boots, etc., for sealing seams and penetrations.

2.05 CONCRETE MIX DESIGN
A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
B. Normal Weight Concrete:
   1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: As indicated on drawings.
   2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
   3. Water-Cement Ratio: Maximum 60 percent by weight.
   4. Total Air Content: 4 percent, determined in accordance with ASTM C173/C173M.
   5. Maximum Slump: 4 inches (100 mm).

PART 3 EXECUTION

3.01 EXAMINATION
A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION
A. Interior Slabs on Grade: Install vapor retarder under interior slabs on grade. Lap joints minimum 6 inches (150 mm). Seal joints, seams and penetrations watertight with
manufacturer’s recommended products and follow manufacturer’s written instructions. Repair damaged vapor retarder before covering.

3.03 PLACING CONCRETE
A. Place concrete in accordance with ACI 304R.
B. Notify Architect not less than 24 hours prior to commencement of placement operations.
C. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
D. Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.
E. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.
F. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.04 SLAB JOINTING
A. Locate joints as indicated on drawings.
B. Anchor joint fillers and devices to prevent movement during concrete placement.
C. Isolation Joints: Use preformed joint filler with removable top section for joint sealant, total height equal to thickness of slab, set flush with top of slab.

3.05 FLOOR FLATNESS AND LEVELNESS TOLERANCES
A. Maximum Variation of Surface Flatness:
   1. Exposed Concrete Floors: 1/16 inch (1.5 mm) in 10 feet (3 m).
   2. Under Seamless Resilient Flooring: 1/16 inch (1.5 mm) in 10 feet (3 m).
   3. Under Carpeting: 1/16 inch (1.5 mm) in 10 feet (3 m).
B. Correct the slab surface if tolerances are less than specified.
C. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.06 CONCRETE FINISHING
A. Repair surface defects, including tie holes, immediately after removing formwork.
B. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch (6 mm) or more in height.
C. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:
   1. Surfaces to Receive Thick Floor Coverings: "Wood float" as described in ACI 302.1R; thick floor coverings include quarry tile, ceramic tile, and Portland cement terrazzo with full bed setting system.
   2. Surfaces to Receive Thin Floor Coverings: "Steel trowel" as described in ACI 302.1R; thin floor coverings include carpeting, resilient flooring, seamless flooring, resinous matrix terrazzo, thin set quarry tile, and thin set ceramic tile.
   3. Decorative Exposed Surfaces: Trowel as described in ACI 302.1R; use steel-reinforced plastic trowel blades instead of steel blades to avoid black-burnish marks; decorative exposed surfaces include surfaces to be stained or dyed, pigmented concrete, surfaces to receive liquid hardeners, surfaces to receive dry-shake hardeners, surfaces to be polished, and all other exposed slab surfaces.
D. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at 1:100 nominal.

3.07 CURING AND PROTECTION
A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

3.08 PROTECTION
A. Do not permit traffic over unprotected concrete floor surface until fully cured.

END OF SECTION
PART 1 GENERAL
1.01 SECTION INCLUDES
   A. Joint backings and accessories.

1.02 REFERENCE STANDARDS

1.03 SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
      1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
      2. List of backing materials approved for use with the specific product.
      3. Substrates that product is known to satisfactorily adhere to and which it is compatible.
      4. Substrates the product should not be used on.
      5. Certification by manufacturer indicating that product complies with specification requirements.
   C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.

1.04 WARRANTY
   A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
   B. Correct defective work within a 1 year period after Date of Substantial Completion.
   C. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS
2.01 JOINT SEALANT APPLICATIONS
   A. Scope:
      1. Exterior Joints: Seal open joints, whether or not the joint is indicated on drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
         a. Wall expansion and control joints.
         b. Joints between door, window, and other frames and adjacent construction.
         c. Joints between different exposed materials.
         d. Openings below ledge angles in masonry.
         e. Other joints indicated below.
         f. Expansion joints in concrete paving.
      2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
         a. Joints between door, window, and other frames and adjacent construction.
         b. Other joints indicated below.
      3. Do not seal the following types of joints.
         a. Intentional weepholes in masonry.
         b. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
         c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
         d. Joints where installation of sealant is specified in another section.
e. Joints between suspended panel ceilings/grid and walls.

B. Type S - Exterior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.
C. Type S - Interior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.

2.02 JOINT SEALANTS - GENERAL
A. Sealants and Primers: Provide products with levels of volatile organic compound (VOC) content as indicated in Section 01 6116.
B. Colors: Architect to select from manufacturer's full range of colors.

2.03 ACCESSORIES
A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.

PART 3 EXECUTION

3.01 EXAMINATION
A. Verify that joints are ready to receive work.
B. Verify that backing materials are compatible with sealants.
C. Verify that backer rods are of the correct size.

3.02 PREPARATION
A. Remove loose materials and foreign matter that could impair adhesion of sealant.
B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.
E. Concrete Floor Joints That Will Be Exposed in Completed Work: Test joint filler in inconspicuous area to verify that it does not stain or discolor slab.

3.03 INSTALLATION
A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
B. Perform installation in accordance with ASTM C1193.
C. Install bond breaker backing tape where backer rod cannot be used.
D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
E. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
F. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.
3.04 POST-OCCUPANCY

A. Post-Occupancy Inspection: Perform visual inspection of entire length of project sealant joints at a time that joints have opened to their greatest width; i.e. at low temperature in thermal cycle. Report failures immediately and repair.

END OF SECTION
SECTION 10 1400
SIGNAGE

PART 1  GENERAL

1.01  SECTION INCLUDES
   A. Room and door signs.

1.02  REFERENCE STANDARDS
   D. Title 24, Part 2. C.C.R., 2016 California Building Code, Chapter 11B.

1.03  SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.
   C. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.
      1. When room numbers to appear on signs differ from those on drawings, include the drawing room number on schedule.
      2. Submit for approval by Owner through Architect prior to fabrication.
   D. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips.
   E. Manufacturer's Qualification Statement.

1.04  QUALITY ASSURANCE
   A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.05  DELIVERY, STORAGE, AND HANDLING
   A. Package signs as required to prevent damage before installation.
   B. Package room and door signs in sequential order of installation, labeled by floor or building.
   C. Store tape adhesive at normal room temperature.

1.06  FIELD CONDITIONS
   A. Do not install tape adhesive when ambient temperature is lower than recommended by manufacturer.
   B. Maintain this minimum temperature during and after installation of signs.

PART 2  PRODUCTS

2.01  SIGNAGE APPLICATIONS
   A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1 ________, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
   B. Room and Door Signs: Provide a sign for every doorway included within the contract work, whether it has a door or not, not including corridors, lobbies, and similar open areas.
      1. Sign Type: Flat signs with cast acrylic panel media as specified.
      2. Provide "tactile" signage, with letters raised minimum 1/32 inch (0.8 mm) and Grade II braille.
2.02 SIGN TYPES

A. Flat Signs: Signage media without frame.
   1. Edges: Square.
   2. Corners: Radiused.

B. Acrylic Room and Accessibility Signs:
   1. Cast acrylic sheet: Manufacturer’s standard 1/8 inch thickness and as follows:
      a. Color as selected by architect from manufacturer's full range.
      b. Acrylic matte clear sheets with overall thickness of 1/8 inch.
      c. Raised copy, graphic symbols and text to be routed from acrylic applique, and chemically welded to sign panel to produce raised copy 1/32 inch. Grade 2 braille is to be applied via the "Raster" bead method.
   2. Unframed panel signs: Fabricate signs with edges mechanically and smoothly finished to comply with the following requirements:
      a. Edge: Square cut (or eased).
      b. Corner: Radiused to 1".
   3. Graphic content and style: Provide sign copy that complies with requirements indicated below and in the sign schedule and drawings for size, spacing, content, mounting height and location, material, finishes and colors of signage.
      a. Pictograms and other artwork to be reversed-applied vinyl or silk-screened process in colors as indicated (or raised image via machine-routed raised copy).
   4. Raised Characters shall comply with CBC Section 11B-703.2
      a. Depth shall be 1/32 inch (.8mm) minimum above their background and be sans serif uppercase and be duplicated in Braille.
      b. Height shall be 5/8 inch (15.9mm) minimum and 2 inches (51 mm) maximum based on the height of the uppercase letter "I" per CBC Section 11B-703.2.5.
      c. Finish and contrast: Characters and their background shall have a non-glare finish. Character shall contrast with their background or dark characters on a light background per CBC Section 11B-703.5.1.
      d. Proportions shall be selected from fonts where the width of the uppercase letter "O" is 60% minimum and 110% maximum of the height of the uppercase letter "I". Stroke thickness of the uppercase letter "I" shall be 15% maximum of the height of the character per CBC Sections 11B-703.4 and 11B-703.6.
      e. Character spacing between individual tactile characters shall comply with CBC Section 11B-703.2.7 and 11B-703.2.8.
      f. Text shall be in a horizontal format per CBC Section 11B-703.2.9.
   5. Mounting:
      a. Mounting height: A tactile shall be located at 48" minimum to the baseline of the lowest Braille cells and 60" maximum to the baseline of the highest line of raised characters above the finish floor or ground surface.
      b. Mounting location: A tactile sign shall be located on the approach side, as one enters or exits rooms or a space, and be reached within 0" of the required clear floor space per CBC section and figure 11B-703.4.2 as follows:
         1) A clear floor space of 18"x18" minimum, centered on the tactile characters, shall be provided beyond the arc of any door between the closed position and 45 degree open position.
         2) On the wall at the latch side of a single door.
         3) On the inactive leaf of a double door with one active leaf.
         4) On the wall at the right side of a double door with two active leaves.
         5) On the nearest adjacent wall where there is no wall space at the latch side of a single door or no space at the right side of a double door with two active leaves.
   6. Colored coatings for acrylic sheets:
a. For background colors, provide Pantone Matching System colored coatings, including inks and paints, that are recommended by acrylic manufacturer for optimum adherence to surface and that are non-fading for application intended.
b. For raised copy colors (machine routed copy) provide manufacturer’s full range of solid through color applique colors.

7. Braille symbols:
a. Shall be contracted (Grade 2) and shall comply with CBC Sections 11B-703.3 and 11B-703.4. Braille dots shall have a domed and rounded shape and shall comply with CBC Table and Figure 11B-703.3.1.

8. International Symbol of Accessibility (ISA):
a. The international symbol of accessibility shall be the standard used to identify facilities that are accessible to and usable by physically disabled persons per CBC Section 11B-703.7.
b. The symbol shall consist of a white figure on a blue background. The blue shall be equal to Color No. 15090 in Federal Standard 595B.

9. Visual characters shall comply with CBC Section 11B-703.5 and shall be a minimum of 40” above finish floor or ground.

10. Pictograms shall comply with CBC Section 11B-703.6.

11. Variable message signs shall comply with CBC Section 11B-703.8.

C. Dimensional Letter Signs:
1. Character Material: Cast Metal
2. Character Finish: Baked enamel finish, architect to select from manufacturer’s full range of colors.
3. Character Case: Uppercase only.
4. Character Font: Helvetica, Arial, or other sans serif font.
5. Mounting: As indicated on drawings, wall, or tack mounted. Attached to structure per manufacturer’s recommendations with tamper resistant fasteners.
7. Height: 24” maximum height or as indicated on drawings.
8. Width: 2” minimum or as indicated on drawings.

D. Color and Font: Unless otherwise indicated:
1. Character Font: Helvetica, Arial, or other sans serif font.
2. Character Case: Upper case only.
3. Background Color: As selected by Architect.

2.03 ACCESSORIES
A. Tape Adhesive: Double sided tape, permanent adhesive.

PART 3 EXECUTION

3.01 EXAMINATION
A. Verify that substrate surfaces are ready to receive work.

3.02 INSTALLATION
A. Install in accordance with manufacturer’s instructions.
B. Attach wall and door mounted panel signs to surfaces using the methods indicated below:
   1. Vinyl tape mounting: Use double sided foam tape, of the thickness indicated, to mount signs to smooth, non-porous surfaces, such as glass or similar material. Do not use this method for vinyl covered or rough surfaces.
   2. Silicone adhesive mounting: Use liquid silicone adhesive recommended by the sign manufacturer to attach signs to irregular, porous or vinyl covered surfaces. Use double sided vinyl tape where recommended by the sign manufacturer to hold the sign in place until the adhesive has fully cured.
C. Install neatly, with horizontal edges level.
D. Mounting

1. Height: A tactile sign shall be located 48" minimum to the baseline of the lowest Braille cells and 60" maximum to the baseline of the highest line of raised characters above the finish floor or ground surface.

2. Location: A tactile sign shall be located on the approach side, as one enters or exits a room or space, and be reached with 0" of the required clear floor space per CBC Section and Figure 11B-703.4.2 as follows:
   a. a clear floor space of 18"x18" minimum, centered on the tactile characters, shall be provided beyond the arc of any door swings between the closed position and 45 degree open position.
   b. in the wall at the latch side of a single door.
   c. on the inactive leaf of a double door with two active leaves.
   d. on the inactive leaf of a double door with one active leaf.
   e. on the nearest adjacent wall where there is no wall space at the latch side of a single door or no space as the right side of a double door with two active leaves.

E. Locate signs in accordance with approved shop drawings and ADAAG requirements. Install so that sign location is clear of door swing when reading sign.

F. Protect from damage until Substantial Completion; repair or replace damaged items.

END OF SECTION
SECTION 10 2116
SOLID PLASTIC TOILET COMPARTMENTS

PART 1 GENERAL

1.01 SUMMARY
A. Section Includes:
   1. Solid plastic toilet compartments.

1.02 SYSTEM DESCRIPTION
A. Compartment Configurations:
   1. Toilet partitions: Floor-to-ceiling.

1.03 WARRANTIES
A. Provide manufacturer’s 25 year warranty against breakage, corrosion, and delamination under normal conditions.

PART 2 PRODUCTS

2.01 MANUFACTURERS
A. Contract Documents are based on products by Scranton Products. www.scrantonproducts.com
B. Substitutions: See Section 01 6000 - Product Requirements.

2.02 MATERIALS
A. Doors, Panels and Pilasters:
   1. High density polyethylene (HDPE), fabricated from polymer resins compounded under high pressure, forming single thickness panel.
   2. Waterproof and nonabsorbent, with self-lubricating surface, resistant to marks by pens, pencils, markers, and other writing instruments.
   3. 1 inch thick with edges rounded to 1/4 inch radius.
   4. Color: To be selected from manufacturer’s full color range.
B. Aluminum Extrusions: ASTM B221, 6463-T5 alloy and temper.
C. Stainless Steel: ASTM A167, Type 304.

2.03 HARDWARE
A. Hinges:
   1. 8 inches long, fabricated from heavy-duty extruded aluminum with bright dip anodized finish, wrap-around flanges, adjustable on 30-degree increments, through bolted to doors and pilasters with stainless steel, Torx head sex bolts.
B. Door Strike and Keeper:
   1. 6 inches long, fabricate from heavy-duty extruded aluminum with bright dip anodized finish, with wrap-around flanges secured to pilasters with stainless steel tamper resistant Torx head sex bolts.
   2. Bumper: Extruded black vinyl.
C. Latch and Housing:
   1. Heavy-duty extruded aluminum.
   2. Latch housing: Bright dip anodized finish.
   3. Slide bolt and button: Black anodized finish.
D. Coat Hook/Bumper:
   1. Combination type, chrome plated Zamak.
   2. Equip outswing handicapped doors with second door pull and door stop.
E. Door Pulls: Chrome plated Zamak.

2.04 COMPONENTS
A. Doors and Dividing Panels: 55 inches high, mounted 14 inches above finished floor, with aluminum heat-sinc fastened to bottom edges.
B. Pilasters: Height as required for floor to ceiling installation, fastened to pilaster sleeves with stainless steel tamper resistant Torx head sex bolt, with stainless steel angle attachment to floor and ceiling.

C. Pilaster Sleeves: 4 inches high, 20 gage stainless steel, secured to pilaster with stainless steel tamper resistant Torx head sex bolt.

D. Wall Brackets: 54 inches long, heavy-duty aluminum, bright dip anodized finish, fastened to pilasters and panels with stainless steel tamper resistant Torx head sex bolts.

E. Overhead Braces: Provide overhead braces as required to increase overall stability of partitions.

2.05 ACCESSIBLE TOILET COMPARTMENTS

A. Wheelchair accessible compartment shall comply with CBC section 11B-604.8.1.

B. Toe clearance for at least one side partition of a wheelchair accessible compartment shall comply with CBC section and figure 11B-604.8.1.4. It shall be 9" high minimum above finish floor and 6" deep minimum beyond the compartment side face of the partition, exclusive of partition support members. It shall be 12" high minimum above finished floor for children's use. Partition components at toe clearance shall be smooth without sharp edges or abrasive surfaces. Toe clearance at the side partition is not required in a compartment greater than 66" wide.

C. An ambulatory accessible compartment shall be provided where there are six or more toilet compartments, or where the combination of urinals and water closets total six or more per CBC section 11B-213.3.1. Such compartment shall comply with CBC section 11B-604.8.2.

D. Door and door hardware for accessible compartments shall be self-closing and shall comply with CBC section 11B-404 except the pull side clearance for ambulatory accessible compartments shall be minimum 44" clear, rather than 60". CBC figure 11B-604.8.2.

E. A door pull complying with CBC section 11B-404.2.7 shall be placed on both sides of the door near the latch.

F. Doors shall not swing into clear floor space or clearance required for any fixture.

END OF SECTION
SECTION 10 2800
TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Commercial toilet accessories.
B. Accessories for toilet rooms.
C. Electric hand dryers.
D. Grab bars.

PART 2 PRODUCTS

2.01 MANUFACTURERS
A. Products listed are made by Bobrick Washroom Equipment: www.bobrick.com unless noted otherwise.
B. Electric Hand/Hair Dryers:
   1. American Dryer, Inc; Extreme Air ADA:
C. Vandal Resistant Toilet Paper Dispensers (Non-ADA Stalls):
   1. Vandal Stop Products
D. Provide products of each category type by single manufacturer.

2.02 MATERIALS
A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
   1. Grind welded joints smooth.
   2. Fabricate units made of metal sheet of seamless sheets, with flat surfaces.
B. Keys: Provide minimum 2 keys for each accessory to Owner.
C. Stainless Steel Sheet: ASTM A666, Type 304.
D. Stainless Steel Tubing: ASTM A269/A269M, Grade TP304 or TP316.
F. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.
G. Fasteners, Screws, and Bolts: Hot dip galvanized; tamper-proof; security type.

2.03 FINISHES
A. Stainless Steel: Satin finish, unless otherwise noted.

2.04 COMMERCIAL TOILET ACCESSORIES
A. General Requirements:
   1. Elements of sanitary facilities shall be mounted at locations in compliance with CBC sections 11B-602 through 11B-612.
   2. Grab bars in toilet facilities and bathing facilities shall comply with CBC section 11B-609.
   3. Grab bars and any wall or other surface adjacent to grab bars shall be free of sharp or abrasive elements and shall have rounded edges. The space around the grab bars shall be as follows:
      a. 1-1/2" between grab bar and wall.
      b. 1-1/2" minimum between the grab bar and projecting objects below and at ends.
      c. 12" minimum between the grab bar and the projecting objects above.
   4. Toilet paper and feminine napkin dispensers located on the grab bar side of an accessible toilet room or stall shall not be located closer than 1-1/2" clear of the tangent point of the grab bar. The grab bar cannot project more than 3" into the required clear floor space.
The accessory shall not be located closer than 1-1/2" clear of the tangent point of the grab bar.

B. Toilet Paper Dispenser: Multi-roll toilet tissue dispenser, surface-mounted, stainless steel unit with pivot hinge, tumbler lock.
   1. Located at all accessible restroom stalls and single occupancy restrooms.
   2. Product: B-2888 manufactured by Bobrick.

   1. Located at all standard restroom stalls.
   2. Product: VSP-JRDx1 manufactured by Vandal Stop Products.

D. Electric Dryers: Traditional fan-in-case type, with downward nozzle.
   2. Style: Traditional horizontal, rectangular case, fixed nozzle.
   4. Hand drying unit shall be provided as cold only, with no heating element.
   5. Cover: White plastic.
      a. Tamper-resistant screw attachment of cover to mounting plate.
   6. Warranty: 5 years.
   7. Electric Hand Dryer Products:

E. Soap Dispenser: Liquid soap dispenser, wall-mounted, surface, with stainless steel cover and vertical stainless steel tank and working parts; push type soap valve, check valve, and window gage refill indicator, tumbler lock.
   1. Minimum Capacity: 40 ounces (1.2 liters).
   2. Product: B-2112 manufactured by Bobrick.

F. Mirrors: Stainless steel framed, 1/4 inch (6 mm) thick annealed float glass; ASTM C1036.
   1. Size: 18 x 36 inches.
   2. Frame: 0.05 inch (1.3 mm) angle shapes, with mitered and welded and ground corners, and tamperproof hanging system; satin finish.
   3. Backing: Full-mirror sized, minimum 0.03 inch (0.8 mm) galvanized steel sheet and nonabsorptive filler material.

G. Seat Cover Dispenser: Stainless steel, surface-mounted, reloading by concealed opening at base, tumbler lock.
   2. Product: B-221 manufactured by Bobrick.

H. Grab Bars: Stainless steel, 1-1/2 inches (38 mm) outside diameter, minimum 0.05 inch (1.3 mm) wall thickness, nonslip grasping surface finish, concealed flange mounting; 1-1/2 inches (38 mm) clearance between wall and inside of grab bar.
   1. Length and configuration: As indicated on drawings.
   2. Product: B-5806 manufactured by Bobrick.

I. Sanitary Napkin Disposal Unit: Stainless steel, recessed, self-closing door, locking bottom panel with full-length stainless steel piano-type hinge, removable receptacle.
   1. Located at Women's Restrooms.
   2. Product: B-353 manufactured by Bobrick.

END OF SECTION
SECTION 26 0100
ELECTRICAL GENERAL PROVISIONS

ARTICLE 1 SUMMARY

1.1 This Division of the specification outlines the provisions of the contract work to be performed under this Division.

1.2 This Section applies to and forms a part of each section of specifications in Division 26 and all work performed under Division 26, 27 and 28.

1.3 In addition, work in this Division is governed by the provisions of the bidding requirements, contract forms, general conditions and all sections under general requirements.

1.4 These specifications contain statements which may be more definitive or more restrictive than those contained in the General Conditions. Where these statements occur, they shall take precedence over the General Conditions.

1.5 Where the words ‘provide’ or ‘provision’ are used, it shall be definitely interpreted as ‘furnishing and installing complete in operating condition’. Where the words ‘as indicated’ or ‘as shown’ are used, it shall mean as shown on contract drawings.

1.6 Where items are specified in the singular, this Division shall provide the quantity as shown on drawings plus any spares or extras mentioned on drawings or specifications. All specified and supplied equipment shall be new.

ARTICLE 2 CONTRACTOR QUALIFICATIONS

2.1 The Contractor shall have a current California C-10 Electrical Contractor’s license and all individuals working on this project shall have passed the Department of Industrial Relations Division of apprenticeship Standards – “Electrician Certification Program.”

ARTICLE 3 CODES, PERMITS AND FEES

3.1 Comply with all applicable laws, ordinances, rules, regulations, codes, or rulings of governmental units having jurisdiction as well as standards of NFPA and serving utility requirements.

3.2 Obtain permits, fees, inspections, meter and the like, associated with work in each section of this Division.

3.3 Installation procedures, methods and conditions shall comply with the latest requirements of the Federal Occupational Safety and Health Act (OSHA).

ARTICLE 4 EXAMINATION OF PREMISES

4.1 Examine the construction drawings and premises prior to bidding. No allowances will be made for not being knowledgeable of existing conditions.
ARTICLE 5  STANDARDS

5.1 The following standard publications of the latest editions enforced, and supplements thereto shall form a part of these specifications. All electrical work must, as a minimum, be in accordance with these standards.

5.1.1 2019 California Electrical Code (CEC), Part 3 Title 24 CCR.
5.1.2 National Fire Protection Association.
5.1.3 Underwriters' Laboratories, Inc. (UL).
5.1.4 Certified Ballast Manufacturers' Association (CBM).
5.1.5 National Electrical Manufacturers' Association (NEMA).
5.1.6 Institution of Electrical & Electronics Engineers (IEEE).
5.1.7 American Society for Testing & Materials (ASTM).
5.1.8 National Board of Fire Underwriters (NBFU).
5.1.9 National Board of Standards (NBS).
5.1.10 American National Standards Institute (ANSI).
5.1.11 Insulated Power Cable Engineers Association (IPECS).
5.1.12 Electrical Testing Laboratories (ETL).
5.1.14 2019 California Building Code (CBC), Part 2, Title 24 CCR.
5.1.15 2019 California Fire Code (CFC), Part 9, Title 24, CCR.
5.1.16 2019 NFPA 72 with California State Amendments
5.1.17 National Electrical Testing Association (NETA), 2010 or most current

ARTICLE 6  DEFINITIONS

6.1 Concealed: Hidden from sight, as in trenches, chases, hollow construction, or above furred spaces, hung ceilings - acoustical or plastic type, or exposed to view only in tunnels, attics, shafts, crawl spaces, unfinished spaces, or other areas solely for maintenance and repair.

6.2 Exposed, Non-Concealed, Unfinished Space: A room or space that is ordinarily accessible only to building maintenance personnel, a room noted on the 'finish schedule' with exposed and unpainted construction for walls, floors, or ceilings or specifically mentioned as 'unfinished'.

6.3 Finish Space: Any space ordinarily visible, including exterior areas.

ARTICLE 7  WORK AND MATERIALS

7.1 Unless otherwise specified, all materials must be new and of the best quality. Materials previously incorporated into other projects, salvaged, or refurbished are not considered new. Perform all labor in a thorough and workmanlike manner.

7.2 All materials provided under the contract must bear the UL label where normally available. Note that this requirement may be repeated under equipment specifications. In general, such devices as will void the label should be provided in separate enclosures and wired to the labeled unit in proper manner.

ARTICLE 8  SHOP DRAWINGS AND SUBMITTALS

8.1 Submit shop drawings and all data in accordance with Division 1 of these specifications and as noted below for all equipment provided under this Division.

8.2 Shop drawings submittals demonstrate to the Architect that the Contractor understands the design concept. The Contractor demonstrates their understanding by indicating
which equipment and material they intend to furnish and install and by detailing the fabrication and installation methods of material and equipment he intends to use. If deviations, discrepancies, or conflicts between submittals and specifications are discovered either prior to or after submittals are processed, notify the Architect immediately.

8.3 Manufacturer's data and dimension sheets shall be submitted giving all pertinent physical and engineering data including weights, cross sections and maintenance instructions. Standard items of equipment such as receptacles, switches, plates, etc., which are cataloged items, shall be listed by manufacturer.

8.4 Index all submittals and reference them to these specifications. All submittal items shall be assembled and submitted, one for each specification section. (Multiple specification sections may be grouped together in one common submittal binder, as long as each individual section is clearly identified.) Partial or incomplete submittal sections will not be reviewed.

ARTICLE 9  EQUIPMENT PURCHASES

9.1 Arrange for purchase and delivery of all materials and equipment within 20 days after approval of submittals. All materials and equipment must be ordered in ample quantities for delivery at the proper time. If items are not on the project in time to expedite completion, the Owner may purchase said equipment and materials and deduct the cost from the contract sum.

9.2 Provide all materials of similar class or service by one manufacturer.

ARTICLE 10  COOPERATIVE WORK

10.1 Correct without charge any work requiring alteration due to lack of proper supervision or failure to make proper provision in time. Correct without charge any damage to adjacent work caused by the alteration.

10.2 Cooperative work includes: General supervision and responsibility for proper location and size of work related to this Division, but provided under the other sections of these specifications, and installation of sleeves, inserts, and anchor bolts for work under each section in this Division.

ARTICLE 11  VERIFICATION OF DIMENSIONS

11.1 Scaled and figured dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions, etc., and be responsible for properly fitting equipment and materials together and to the structure in spaces provided.

11.2 Drawings are essentially diagrammatic, and many offsets, bends, pull boxes, special fittings, and exact locations are not indicated. Carefully study drawings and premises in order to determine best methods, exact location, routes, building obstructions, etc. and install apparatus and equipment in manner and locations to avoid obstructions, preserve headroom, keep openings and passageways clear, and maintain proper clearances.

ARTICLE 12  CLOSING-IN OF UNINSPECTED WORK
12.1 Cover no work until inspected, tested, and approved by the Architect. Where work is covered before inspection and test, uncover it and when inspected, tested, and approved, restore all work to original proper condition at no additional cost to Owner.

ARTICLE 13 EXCAVATION AND BACKFILL

13.1 All excavation and backfill shall be in accordance with Division 1 of these specifications and as noted below.

13.2 Perform all necessary excavation, shoring, and backfilling required for the proper laying of all conduits inside the building and premises, and outside as may be necessary.

13.3 Excavate all trenches open cut, keep trench banks as nearly vertical as practicable, and sheet and brace trenches where required for stability and safety. Excavate trenches true to line and make bottoms no wider than necessary to provide ample work room. Grade trench bottoms accurately. Machine grade only to the top line of the conduits, doing the remainder by hand. Do not cut any trench near or under footings without first consulting the Architect. All trenches shall be done in accordance with OSHA standards and regulations.

13.4 Backfilling shall be done with each layer compacted before another layer is added. No stones or coarse lumps shall be laid directly on a conduit or conduits.

13.5 Trenches shall be filled with the specified material. Sod, if any, shall be removed in cut sections and replaced in same manners.

13.6 Provide pumps and drainage of all open trenches for purposes of installing electrical duct and wiring.

13.7 Perform all backfilling in accordance with the requirements of and under the direction of the Geotechnical Engineer.

13.8 Where new underground trenching is required on sites or in any area where existing underground utilities exist, the Contractor shall provide an independent professional utility locating service to locate exact vertical and horizontal locations of all existing utilities. Where existing utilities are found the Contractor shall hand dig those areas to avoid disruption. The Contractor shall be responsible for immediate repairs to existing underground utilities damaged during construction. The Contractor shall repair all existing asphalt, concrete and landscape surfaces damaged or removed during construction to match their original conditions. Where trenching extends through public streets or roadways, the Contractor shall notify underground service alert in addition to the independent locating service 48 hours before start of construction to determine location of existing utilities by calling (800) 422-4133.

ARTICLE 14 CONCRETE

14.1 Where used for structures to be provided under the contract such as bases, etc., concrete work, and associated reinforcing shall be as specified under Division 3 of these specifications.

14.2 See other sections for additional requirements for underground vaults, cable ducts, etc.

ARTICLE 15 ACCESSIBILITY
15.1 Install all control devices or other specialties requiring reading, adjustment, inspection, repairs, removal, or replacement conveniently and accessibly throughout the finished building.

15.2 All required access doors or panels in walls and ceilings are to be furnished and installed as part of the work under this Section. Refer to Division 1 of these specifications and as noted below.

15.3 Where located in fire rated assemblies, provide doors which match the rating of the assembly and are approved by the jurisdictional authority.

15.4 Refer to ‘finish schedule’ for types of walls and ceilings in each area and the architectural drawings for rated wall construction.

15.5 Coordinate work of the various sections to locate specialties requiring accessibility with others to avoid unnecessary duplication of access doors.

ARTICLE 16 FLAShING

16.1 Flash and counter flash all conduits penetrating roofing membrane as shown on Architectural drawings. All work shall be in accordance with Division 7 of these specifications.

ARTICLE 17 IDENTIFICATION OF EQUIPMENT

17.1 All electrical equipment shall be labeled, tagged, stamped, or otherwise identified in accordance with the following schedules:

17.1.1 General:

17.1.1.1 In general, the installed laminated nameplates as hereinafter called for shall also clearly indicate its use, areas served, circuit identification, voltage and any other useful data.

17.1.1.2 All auxiliary systems, including communications, shall be labeled to indicate function.

17.1.2 Lighting and Local Panelboards:

17.1.2.1 Panel identification shall be with white and black micarta nameplates. Letters shall be no less than 3/8" high.

17.1.2.2 Circuit directory shall be two column typewritten card set under glass or glass equivalent. Each circuit shall be identified by the room number and/or number of unit and other pertinent data as required.

17.1.3 Distribution Switchboards and Feeders Sections:

17.1.3.1 Identification shall be with 1" x 4" laminated white micarta nameplates with black lettering on each major component, each with name and/or number of unit and other pertinent data as required. Letters shall be no less than 3/8" high.

17.1.3.2 Circuit breakers and switches shall be identified by number and name with 3/8" x 1-1/2" laminated micarta nameplates with 3/16" high letters mounted adjacent to or on circuit breaker or switch.
17.1.4 Disconnect Switches, Motor Starters and Transformers:

17.1.4.1 Identification shall be with white micarta laminated labels and 3/8" high black lettering.

17.1.5 All communication system terminal boxes including T.V., telephone/intercom, security, fire alarm, clock, and computer networking shall be provided with white micarta laminated labels and 3/8" high black lettering.

ARTICLE 18 CONSTRUCTION FACILITIES

18.1 Furnish and maintain from the beginning to the completion all lawful and necessary guards, railings, fences, canopies, lights, warning signs, etc. Take all necessary precautions required by City, State Laws, and OSHA to avoid injury or damage to any persons and property.

18.2 Temporary power and lighting for construction purposes shall be provided under this Section. All work shall be in accordance with Division 1 of these specifications.

ARTICLE 19 GUARANTEE

19.1 Guarantee all material, equipment and workmanship for all sections under this Division in writing to be free from defect of material and workmanship for one year from date of final acceptance, as outlined in the general conditions. Replace without charge any material or equipment proven defective during this period. The guarantee shall include performance of equipment under all site conditions, conditions of load, installing any additional items of control and/or protective devices, as required.

ARTICLE 20 PATENTS

20.1 Refer to the General Conditions for Contractor's responsibilities regarding patents.

ARTICLE 21 EQUIPMENT ROUGH-IN

21.1 Rough-in all equipment, fixtures, etc. as designed on the drawings and as specified herein. The drawings indicate only the approximate location of rough-ins. Mounting heights of all switches, receptacles, wall mounted fixtures and such equipment must be coordinated with the Architectural Designs. The Contractor shall obtain all rough-in information before progressing with any work for rough-in connections. Minor changes in the contract drawings shall be anticipated and provided for under this Division of the specifications to comply with rough-in requirements.

ARTICLE 22 OWNER FURNISHED AND OTHER EQUIPMENT

22.1 Rough-in and make final connections to all Owner furnished equipment shown on the drawings and specified, and all equipment furnished under other sections of the specifications.

ARTICLE 23 EQUIPMENT FINAL CONNECTIONS

23.1 Provide all final connections for the following:

23.1.1 All equipment furnished under this Division.
23.1.2 Electrical equipment furnished under other sections of the specification.

23.1.3 Owner furnished equipment as specified under this Division.

ARTICLE 24 INSERTS, ANCHORS, AND MOUNTING SLEEVES

24.1 Inserts and anchors must be:

24.1.1 Furnished and installed for support of work under this Division.

24.1.2 Mounting of equipment that is of such size as to be free standing and that equipment which cannot conveniently be located on walls, such as motor starters, etc., shall be rigidly supported on a framework of galvanized steel angle of Unistrut or B-line systems with all unfinished edges painted.

24.1.3 Furnish and install all sleeves as required for the installation of all work under all Sections of this Division and for all communication systems including any communication systems described in this Section which are bid to the General Contractor. Sleeves through floors, roof, and walls shall be as described in "Conduit and Fittings" Section 26 05 33.

ARTICLE 25 SEISMIC ANCHORING

25.1 All switchgear and other free-standing electrical equipment or enclosures shall be anchored to the floor and braced at the top of the equipment to the structure. The Contractor shall submit drawings signed by the Contractor's registered structural engineer indicating method of compliance prior installation.

25.2 All sound systems, communication, signal or data networking equipment or enclosures shall be anchored to the structure. The Contractor shall submit drawings signed by the Contractor's registered structural engineer indicating method of compliance prior installation.

ARTICLE 26 RUST PROOFING

26.1 Rust proofing must be applied to all ferrous metals and shall be in accordance with Section 05500 of these specifications and as noted below.

26.1.1 Hot-dipped galvanized shall be applied and after forming of angle-iron, bolts, anchors, etc.

26.1.2 Hot-dipped galvanized coating shall be applied after fabrication for junction boxes and pull boxes cast in concrete.

ARTICLE 27 GENERAL WIRING

27.1 Where located adjacent in walls, outlet boxes shall not be placed back to back, nor shall extension rings be used in place of double boxes, all to limit sound transmission between rooms. Provide short horizontal nipple between adjacent outlet boxes, which shall have depth sufficient to maintain wall coverage in rear by masonry wall.

27.2 In those instances where outlet boxes, recessed terminal boxes, or recessed equipment enclosures are installed in a fire rated assembly, provide "Flamesafe FSD 1077" fire stopping pads or approved equal, over the outlet or box.
27.3 Complete rough-in requirements of all equipment to be wired under the contract are not indicated. Coordinate with respective trades furnishing equipment or with the Architect as the case may be for complete and accurate requirements to result in a neat, workmanlike installation.

ARTICLE 28 SEPARATE CONDUIT SYSTEMS

28.1 Each electrical and signal system shall be contained in a separate conduit system as shown on the drawings and as specified herein. This includes each power system, each lighting system, each signal system of whatever nature, telephone, standby system, sound system, control system, fire alarm system, etc.

28.2 Further, each item of building equipment must have its own run of power wiring. Control wiring may be included in properly sized conduit for equipment feeders of #6 AWG and smaller, having separate conduit for larger sizes.

ARTICLE 29 CLEANUP

29.1 In addition to cleanup specified under other sections, thoroughly clean all parts of the equipment. Where exposed parts are to be painted, thoroughly clean off any spattered construction materials and remove all oil and grease spots. Wipe the surface carefully and scrape out all cracks and corners.

29.2 Use steel brushes on exposed metal work to carefully remove rust, etc., and leave smooth and clean.

29.3 During the progress of the work, keep the premises clean and free of debris.

ARTICLE 30 PAINTING

30.1 Paint all unfinished metal as required in accordance with Division 1 of these specifications. (Galvanized and factory painted equipment shall be considered as having a sub-base finish.)

ARTICLE 31 GENERAL DEMOLITION REQUIREMENTS

31.1 Remove existing work and items which are required to be removed in such manner that minimum damage and disturbance is caused to adjacent and connection work scheduled to remain. Repair or replace existing work schedule.

31.2 Include preparation of existing areas to receive new materials and removal of materials and equipment to alter or repair the existing building as indicated and as specified.

31.3 Perform demolition exercising proper care to prevent injury to the public, workmen and adjoining property.

31.4 Perform the removal, cutting, drilling of existing work with extreme care and use small tools in order not to jeopardize the structural integrity of the building.

31.5 Rebuild to existing condition or better, existing work which has to be removed to allow the installation of new work as required.

31.6 Remove, protect and reinstall existing items as indicated. Replace materials scheduled for reuse which are damaged by the Contractor to the extent that they cannot be reused, with equal quality material, and installation.
31.7 Do not reuse in this project materials and items removed from existing site or building, except with specific written approval by the Architect in each case, unless such removed material or item is specifically indicated or specified to be reused.

31.8 Remove materials and equipment indicated to be salvaged for reinstallation and store to prevent damage and reinstall as the work progresses. Do not reuse in this project, other materials and equipment removed from existing site or building, except with specific written approval by the Architect in each case.

31.9 Patch areas requiring patching, including damage caused by removing, relocating or adding fixtures and equipment, damages caused by demolition at adjacent materials.

31.10 Do not stockpile debris in the existing building, without the approval of the Architect. Remove debris as it accumulates from removal operations to a legal disposal area.

31.11 Contractor to assume existing oil filled and dry transformers, oil switches, ballasts, lamps, wooden poles, cross arms, computers, computer monitors, and conductor insulation containing materials considered hazardous. Comply with local, state and federal regulations, laws, and ordinances concerning removal, handling and protection against exposure or environmental pollution. Contractor shall be responsible for removal of the above hazardous materials where encountered. Include all costs for such removal as part of this contract.

31.12 All fluorescent, compact fluorescent, high intensity discharge, metal halide, mercury vapor, high and low-pressure sodium, and neon lamps are to be disposed of as required by the California Waste Rule Regulations as described in the California Code of Regulations, Title 22, Division 4.5 and Chapter 23.

31.13 **Communication System:** Where new communication systems, (including telephone, intercom, clock, security, fire alarm, data, multimedia, CATV or lighting controls) are installed to replace existing systems, unless where otherwise directed the existing systems shall remain fully operational until the new system has been installed and tested. Demolition of the existing systems shall include removal of all equipment and associated wiring and exposed conduits and providing new blank covers for all abandoned device locations.

31.14 **Salvage Power Equipment:** The Contractor shall carefully remove all existing switchboards, panelboards, transformers, and confirm in writing which items the Owner wishes to keep. These items shall be transported to the Owner’s maintenance facilities by the Contractor. All remaining items shall be disposed of by the Contractor.

31.15 **Salvage Lighting Equipment:** The Contractor shall confirm in writing which items the Owner wishes to keep. These items shall be transported to the Owner’s maintenance facilities by the Contractor. All remaining items shall be disposed of by the Contractor.

31.16 **Salvage Communication Equipment:** The Contractor shall carefully remove all communication devices (telephone, intercom, clock, security, fire alarm, data, multimedia, CATV or lighting controls) and box each type of devices separately. The Contractor shall deliver all items to the Owner’s maintenance facility.
32.1 Prior to completion of project, compile a complete equipment maintenance manual for all equipment supplied under sections of this Division, in accordance with Division 1 of these specifications and as described below.

32.2 Equipment Lists and Maintenance Manuals:

32.2.1 Prior to completion of job, Contractor shall compile a complete equipment list and maintenance manuals. The equipment list shall include the following items for every piece of material equipment supplied under this Section of the specifications:

32.2.1.1 Name, model, and manufacturer.
32.2.1.2 Complete parts drawings and lists.
32.2.1.3 Local supply for parts and replacement and telephone number.
32.2.1.4 All tags, inspection slips, instruction packages, etc., removed from equipment as shipped from the factory, properly identified as to the piece of equipment it was taken from.

32.3 Maintenance manuals shall be furnished for each applicable section of the specifications and shall be suitably bound with hard covers and shall include all available manufacturers' operating and maintenance instructions, together with "as-built" drawings to properly operate and maintain the equipment. The equipment lists and maintenance manuals shall be submitted in duplicate to the Architect for approval not less than 10 days prior to the completion of the job. The maintenance manuals shall also include the name, address, and phone numbers of all subcontractors involved in any of the work specified herein. Four copies of the maintenance manuals bound in single volumes shall be provided.

ARTICLE 33 RECORD DRAWINGS

33.1 The Division 26 Contractor shall maintain record drawings as specified in accordance with Division 1 of these specifications, and as noted below.

33.2 Drawings shall show locations of all concealed underground conduit runs, giving the number and size of conduit and wires. Underground ducts shall be shown with cross section elevations and shall be dimensioned in relation to permanent structures to indicate their exact location. Drawing changes shall not be identified only with referencing CORs and RFIs, the drawings shall reflect all of the actual additions or changes made. All as-built drawing information shall be prepared by the contractor in AutoCAD, updating the contract computer files as needed to reflect actual installed conditions for all site plans, lighting, power, communication, networking, audio visual, security or fire alarms systems included in the scope of work for this project.

33.3 One set of these record drawings shall be delivered to the Architect. The engineer will review documents for completeness and will not be responsible for editing contractor computer files.

ARTICLE 34 CHANGES AND EXTRA WORK

34.1 When changes in work are requested, the Division 26 Contractor shall provide unit prices for the work involved in accordance with Division 1 of these specifications, and the following:
34.1.1 The material Costs shall **not exceed** the latest edition of the “Trade Service” end column “C” price list. The materials prices may be higher only where the Contractor can produce invoices to substantiate higher material costs. The Contractor shall submit a print out copy of the trade service sheets with the change order to substantiate these values.

34.1.2 The labor Costs shall **not exceed** the latest edition of the “NECA Manual of Labor Units” **normal column**.

34.2 When credits in work are requested, the Division 26 Contractor shall provide unit prices for the work involved in accordance with Division 1 of these specifications, and the following:

34.2.1 The Material Costs shall **not be less than 80% of** the latest edition of the “Trade Service” end column price list. The materials prices may be lower only where the Contractor can produce invoices to substantiate lower material costs. Restocking fees may also be included in this amount where applicable.

34.2.2 The Labor Costs shall **not be less than 80% of** the latest edition of the “NECA Manual of Labor Units” **normal column**.

34.3 Conduit pricing for conduits of all types sized 3" or smaller.

When changes in the scope of work require the Contractor to estimate conduit installations, they shall **NOT include labor values (only material cost may be included)** for any of the below items. The labor values for conduit installation represented in the NECA manual are inflated to a point where additional labor for the below items can not be justified.

34.3.1 Couplings.

34.3.2 Set Screw or Compression Fittings, locknuts, Bushings and washers.

34.3.3 Conduit straps and associated screws or nails.

34.3.4 LB fittings or other specialty fittings or specialty mounting hardware may be included where needed.

34.4 Wire pricing for all types and sizes.

When changes in the scope of work require the Contractor to estimate wire installations, they shall **NOT include labor values (only material cost may be included)** for any of the below items. The labor values for wire installation represented in the NECA manual are inflated to a point where additional labor for the below items can not be justified.

34.4.1 Locknuts, Bushings, tape, wire markers.

34.5 When changes in the scope of work require other equipment installations such as lighting fixtures, panelboards, switchboards, wiring devices, communications equipment etc. the Contractor shall **NOT include labor values (only material cost may be included)** for any of the below items. The labor values for these equipment items represented in the NECA manual are inflated to a point where additional labor for the below items can not be justified.

34.5.1 Associated screws, nails, bolts, anchors or supports.
34.5.2 Locknuts, washers, tape.

34.6 The total labor hours for extra work will be required to be calculated as follows:

34.6.1 Change orders with 1 to 30 total labor hours

- General Laborer: 10% of total labor hours
- Journeyman: 10% of total labor hours
- Foreman: 80% of total labor hours

34.6.2 Change orders with 31 to 100 total labor hours

- General Laborer: 20% of total labor hours
- Journeyman: 40% of total labor hours
- Foreman: 40% of total labor hours

34.6.3 Change orders with over 100 total labor hours

- General Laborer: 30% of total labor hours
- Journeyman: 50% of total labor hours
- Foreman: 20% of total labor hours

34.7 When change orders are issued which allow the work to be completed in the normal sequence of construction, the labor rates shall be based on the most current “Prevailing Wage” – straight time total hourly rate. When change orders require the Contractor to work out of sequence the “Prevailing Wage”– daily overtime hourly rate shall apply. Special condition situations shall be reviewed on an individual basis for alternate hourly rate schedules.

34.8 Costs will not be permitted for additional supervision on site or office time for processing any change order other than the 10% overhead allowance as described in Division 1. Cost for special equipment required to install items for an individual change order are permitted and must be individually identified. Lump Sum cost for small tools or any other cost not specifically required for the change order are not permitted.

34.9 Contractor estimates shall be formatted to clearly identify each of the following:

34.9.1 Line item description of each type of material or labor item.

34.9.2 Description of quantity for each item.

34.9.3 Description of (material cost per / quantity).

34.9.4 Description of (labor cost per / quantity).

34.9.5 Description of total labor hour breakdown per Foreman, Journeyman or General Laborer as described above.

ARTICLE 35 ELECTRONIC FILES

35.1 The Contractor shall make a written request directly to Johnson Consulting Engineers for electronic drawing files. As a part of the written request, please include the following information:

35.1.1 Clearly indicate each drawing sheet needed (i.e., E1.1, E2.1, etc.).
35.1.2 Identify the name, phone number, mailing address and e-mail address of the person to receive the files.

35.1.3 Provide written confirmation and agreement with the requirements described for payment of computer files, as described below.

35.2 Detail or riser diagram sheets, or any other drawings other than floor plans or site plans, will not be made available to the Contractor.

35.3 Files will only be provided in the AutoCAD format in which they were created.

35.4 Requests for files will be processed as soon as possible; a minimum of 7 working days should be the normal processing time. The Contractor shall be completely responsible for requesting the files in time for their use.

END OF SECTION
SECTION 26 0519
POWER CONDUCTORS

PART 1 – GENERAL

1.1 Furnish and install wire and cable for branch circuits and feeders specified herein and as shown on the electrical drawings.

1.2 Submittals: Submit manufacturers’ data for the following items:
   1.2.1 All cables and terminations

1.3 Common submittal mistakes which will result in the submittals being rejected:
   1.3.1 Not including all items listed in the above itemized description.
   1.3.2 Including catalog cut sheets which have several items on a page, and not clearly identifying by highlighting, underlining, or clouding the items to be reviewed, or crossing out the items which are not applicable.
   1.3.3 Not including actual manufacturer’s catalog information of proposed products.
   1.3.4 Do not include multiple manufacturers for similar products and do not indicate “or approved equal” statements, or “to be determined later” statements. The products being submitted must be the products installed.

PART 2 – PRODUCTS

2.1 Wire and cable Rated 120 volt to 600 volt.
   2.1.1 All wire and cable shall be new, 600 volt insulated copper, of types specified below for each application. All wire and cable shall bear the UL label and shall be brought to the job in unbroken packages. Wire insulation shall be the color as specified herein and shall be type THWN-2. Insulated conductors shall be installed in all exterior exposed raceways. Conductors for branch circuit lighting, receptacle, power and miscellaneous systems shall be a minimum of No. 12 AWG. Increase conductor size to No. 10 AWG for 120 volt circuits greater than 100 feet from the panel to the load and for 277 volt circuits greater than 200 feet from the panel to the load. Circuit home-runs indicated to be larger than No. 12 must be increased the entire length of the circuit, including equipment grounding conductor. Wire sizes No. 14 through No. 10 shall be solid. No. 8 and larger shall be stranded.
   2.1.2 Aluminum conductors will be permitted (only where specifically identified on the drawings. See “600 Volt Feeder Schedule”) in sizes 2/0 or larger. Conductor shall be listed by Underwriters Laboratories (UL) and suitable for operation at 600 volts or less, at a maximum operating temperature of 90°C maximum in wet or dry locations. Conductors shall be marked “SUN-RES”. Aluminum alloy conductors shall be compact stranded conductors of STABILLOY® (AA-8030) as manufactured by Alcan Cable or Listed equal. AA-8000 Series aluminum alloy conductor material shall be recognized by The Aluminum Association.
   2.1.3 MC type armored cable reference Section 26 05 33.
2.2 Wire and cable for systems below 120 volts.

2.2.1 All low voltage and communications systems cables routed underground shall be provided with a moisture resistant outer jacket, West Penn “Aquaseal” or equal, unless otherwise specified.

PART 3 - EXECUTION

3.1 Wire and cable shall be pulled into conduits without strain using powdered soapstone, mineralac, or other approved lubricant. In no case shall wire be repulled if same has been pulled out of a conduit run for any purpose. No conductor shall be pulled into conduit until conduit system is complete, including junction boxes, pull boxes, etc.

3.2 All connections of wires shall be made as noted below:

3.2.1 Connections to outlets and switches: Wire formed around binding post of screw.

3.2.2 No. 10 wire and smaller: Circuit wiring connections to lighting fixtures and other hard wired equipment shall be made with pressure type solderless connectors, Buchanan, Scotchlock, Wing Nut, or approved equal. Alternate “WAGO” #773 series or “IDEAL” #32, 33, 34 and 39 series push wire style connectors are also acceptable.

3.3 All wiring shall be continuous without splicing unless where specifically noted on the drawings or where permitted below.

3.3.1 No. 10 wire and smaller above grade: Quantities as needed, connection made with pressure type solderless connectors, Scotchlock or equal.

3.3.2 No. 10 wire and smaller below grade: Quantities as needed, connection made with ‘Raychem’ long barrel compression terminals with crimping tool and quantity of crimps as recommended by manufacturer, provide ‘Raychem’ WCSM-S series in-line heat shrink, sealant coated splice kit. Alternate products must be UL listed for direct burial/submersible and rated to (1000V).

3.3.3 No. 8 wire and larger above grade: Quantities only where indicated, ‘Raychem’ long barrel compression terminals with crimping tool and quantity of crimps as recommended by manufacturer, provide ‘Raychem’ WCSM-S series in-line heat shrink, sealant coated splice kit. Alternate products must be UL listed for direct burial/submersible and rated to (1000V).

3.3.4 No. 8 wire and larger below grade: Quantities only where indicated, ‘Raychem’ long barrel compression terminals with crimping tool and quantity of crimps as recommended by manufacturer, provide ‘Raychem’ WCSM-S series in-line heat shrink, sealant coated splice kit. Alternate products must be UL listed for direct burial/submersible and rated to (1000V).

3.4 All wiring throughout shall be color coded as follows:

<table>
<thead>
<tr>
<th></th>
<th>480 volt system</th>
<th>208 or 240 volt system</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Phase</td>
<td>Brown</td>
<td>Black</td>
</tr>
<tr>
<td>B Phase</td>
<td>Orange</td>
<td>Red</td>
</tr>
<tr>
<td>C Phase</td>
<td>Yellow</td>
<td>Blue</td>
</tr>
<tr>
<td>Neutral</td>
<td>Grey</td>
<td>White</td>
</tr>
</tbody>
</table>
3.5 Wiring must be color coded throughout its entire length, except feeders may have color coded plastic tape at both ends and any other accessible point.

3.6 All control wiring in a circuit shall be color coded, each phase leg having a separate color, and with all segments of the control circuit, whether in apparatus or conduit, utilizing the same color coding.

3.7 At all terminations of control wiring, the wiring shall have a numbered T&B or Brady plastic wire marker.

3.8 Cables when installed are to be properly trained in junction boxes, etc., and in such a manner as to prevent any forces on the cable which might damage the cable.

3.9 All conductors to be installed into a common raceway, shall be pulled into the raceway at the same time.

3.10 All conductors shall be installed in such a manner as to not exceed the manufacturers' recommended pulling tension and bending radius. The equipment used for pulling must be specifically designed for the purpose. Motorized vehicles such as pickup trucks, are not acceptable.

END OF SECTION
SECTION 26 0526
GROUNDING

PART 1 – GENERAL

1.1 Furnish and install grounding and grounding conductors and electrodes as specified herein and as shown on the drawings.

1.2 Submit catalog data for all components.

1.3 **Common submittal mistakes which will result in the submittals being rejected:**

   1.3.1 Not including all items listed in the above itemized description.

   1.3.2 Including catalog cut sheets which have several items on a page, and not clearly identifying by highlighting, underlining or clouding the items to be reviewed, or crossing out the items which are not applicable.

   1.3.3 Not including actual manufacturer’s catalog information of proposed products.

   1.3.4 Do not include multiple manufacturers for similar products and do not indicate “or approved equal” statements, or “to be determined later” statements. The products being submitted must be the products installed.

PART 2 – EXECUTION

2.1 Grounding

   2.1.1 All panelboard cabinets, equipment, enclosures, and complete conduit system shall be grounded securely in accordance with pertinent sections of CEC Article 250. Conductors shall be copper. All electrically operated equipment shall be bonded to the grounded conduit system. All non-current carrying conductive surfaces that are likely to become energized and subject to personal contact shall be grounded by one or more of the methods detailed in CEC Article 250. All ground connections shall have clean contact surfaces. Install all grounding conductors in conduit and make connections readily accessible for inspection.

   2.1.2 Provide an insulated equipment grounding conductor in all branch circuit and feeder raceway systems, sized in accordance with CEC 250-1122.

   2.1.3 Provide an additional individual insulated grounding conductor for each circuit which contains an isolated ground receptacle or surge suppression receptacle.

   2.1.4 Grounding of metal raceways shall be assured by means of provisions of grounding bushings on feeder conduit terminations at the panelboard, and by means of insulated continuous stranded copper grounding wire extended from the ground bus in the panelboard to the conduit grounding bushings.

   2.1.5 Except for connections which access for periodic testing is required, make grounding connections which are buried or otherwise inaccessible by exothermite type process.

   2.1.6 The following ohmic values shall be test certified for each item listed. A written report signed and witnessed by the project IOR shall be provided to the engineer.
If the ohmic value listed cannot be obtained additional grounding shall be installed to reach the value listed.

2.1.6.1 Service. ............... 10 ohms.
2.1.6.2 Step down transformers and non-current carrying metal parts .......................... 25 ohms.
2.1.6.3 Manholes, handholes, etc. .......................... 10 ohms.

END OF SECTION
SECTION 26 0533
CONDUIT AND FITTINGS

PART 1 – GENERAL

1.1 Furnish and install conduit and fittings as shown on the drawings and as specified herein.

1.2 Submit Manufacturer’s data on the following:
   1.2.1 Conduit.
   1.2.2 Fittings
   1.2.3 Fire stopping Material.
   1.2.4 Surface Raceways.
   1.2.5 Type MC or MC-PCS cable, provide construction details and UL “E” number.

1.3 **Common submittal mistakes which will result in the submittals being rejected:**
   1.3.1 Not including all items listed in the above itemized description.
   1.3.2 Including catalog cut sheets which have several items on a page, and not clearly identifying by highlighting, underlining or clouding the items to be reviewed, or crossing out the items which are not applicable.
   1.3.3 Not including actual manufacturer’s catalog information of proposed products.
   1.3.4 Do not include multiple manufacturers for similar products and do not indicate “or approved equal” statements, or “to be determined later” statements. The products being submitted must be the products installed.

PART 2 – PRODUCTS

2.1 Rigid steel conduit, intermediate metal conduit (IMC), electrical metallic tubing (EMT) and flexible metallic conduit shall be steel, hot dipped galvanized after fabrication.

2.2 PVC conduit shall be Carlon or approved equal.

2.3 Liquid tight flexible metal conduit shall be Anaconda Sealtite type UA or approved equal. Fittings shall be Appleton, Crouse-Hinds, Steel City, T&B, or equivalent.

2.4 MC type armored cable, when utilized, shall be provided with the following:
   2.4.1 Comply with UL 1479 and CEC 330
   2.4.2 90ºC, copper, THHN conductors.
   2.4.3 Minimum #12 insulated grounding conductor.
   2.4.4 Conductors sized No. 10 and smaller shall be solid, No. 8 and larger shall be stranded.
   2.4.5 Oversized (150%) neutrals or separate neutrals shall be provided.
2.4.6 Increase phase conductors to No. 10 AWG for 120 volt circuits greater than 100 feet from panel to load and for 277 volt circuits greater than 200 feet from panel to load. Where required increase conductor sizes for entire length of circuit.

2.4.7 Interlocked armored aluminum sheath.

2.4.8 AC or BX type armored cable shall not be substituted in lieu of MC type cable.

2.4.9 Color code cable according to cable type and configuration.

2.4.10 Acceptable manufacturers are AFC and Alflex.

2.5 MC-PCS luminary armored cable, when utilized, shall be provided with the following:

2.5.1 Comply with UL 1479 and CEC 330

2.5.2 90ºC, copper, THHN conductors.

2.5.3 Minimum #12 insulated grounding conductor.

2.5.4 Lighting phase conductors sized No. 10 and smaller shall be solid, lighting control conductors shall be sized no. 16 solid.

2.5.5 Interlocked armored aluminum sheath.

2.5.6 AC or BX type armored cable shall not be substituted in lieu of MC type cable.

2.5.7 Color code phase cable according to cable type and configuration. color code control conductors purple/gray.

2.5.8 Acceptable manufacturers are AFC and Alflex.

2.6 Fire stopping material shall provide an effective seal against fire, heat, smoke and fire gases. Fire stopping material shall be tested to comply with ASTME 814 and UL 1479. The submittal for this product shall include the UL listed system number and installation requirements for each type of penetration seal required for this project.

2.7 Each length of conduit shall be stamped with the name or trademark of the manufacturer and shall bear the UL label.

2.8 All plastic conduit shall be rigid, schedule 40, heavy wall PVC. All PVC conduit shall be UL listed. Underground utility company conduits shall comply with local utility co. requirements.

2.9 Plastic conduit shall be stored on a flat surface, and protected from the direct rays of the sun.

2.10 Where branch circuit or communication raceways cannot be concealed in ceilings or walls and are required to be exposed in interior spaces, provide nonmetallic surface raceway system sized per the manufacturer capacity requirements. A full complement of nonmetallic fittings must be available and matching device boxes and cover plates must be provided. The color of the raceway system, components and boxes shall be (white). Where data networking cabling is to be installed, all raceway fittings shall meet Category 5 radius requirements. Where specific raceway types have been noted on the drawings they shall be as follows:
2.10.1 System 'SR'  
Hubbell  WALLTRAK 1 series  
Wiremold  ECLIPSE PN05series  
Panduit  LD5 series  
Hellerman-Tyton  TSR2 series

2.10.2 System 'SR2'  
Hubbell  WALTRAK 22  
Wiremold  2300D Series  
Panduit  D2P10  
Hellerman-Tyton  TSR3 series

2.10.3 System 'SR3'  
Hubbell  BASETRAK series  
Wiremold  5400 - series  
Panduit  70 series  
Hellerman-Tyton  MCR Infostream* series

Provide with offset boxes, inline boxes may only be used where specifically shown on the drawings.

PART 3 – FITTINGS

3.1 All metallic fittings, including those for EMT, flexible conduit, or malleable iron. Die cast fittings of any other material are not permitted.

3.2 Locknuts shall be steel or malleable iron with sharp clean cut threads.

3.3 Entrance seals shall be O.Z. type FSK or equivalent.

3.4 Bushings and locknuts: Where conduits enter boxes, panels, cabinets, etc., they shall be rigidly clamped to the box by locknuts on the outside, and a lock nut and plastic bushing on the inside of the box. All conduits shall enter the box squarely.

3.5 Furnish and install insulated bushings as per CEC article No. 300 - 4 (F) on all conduits. The use of insulated bushings does not exclude the use of double locknuts to fasten conduit to the box.

3.6 Transition from plastic to steel conduits shall be with PVC female threaded adaptors.

3.7 Couplings and connectors for rigid steel or IMC conduit must be threaded, or compression type (set screw fittings are not permitted).

3.8 Couplings and connectors for EMT shall be compression, watertight. Set screw connectors are not acceptable, except for systems below 120 volts.

3.9 MC or MC-PCS type armored cable shall be provided with listed clamp type die cast zinc set screw connectors. Anti-short bushings shall be provided at all cable ends.

3.10 Connectors for flexible metal conduit shall be steel or malleable iron with screw provided to clinch the conduit into the adapter body. For sizes up to ¾” a screw-in, “Jake type,” fitting may be used.

3.11 Install approved expansion fittings, or liquid tight flex conduit with a minimum 6” slack for conduits passing through all expansion and seismic joints.

PART 4 - EXECUTION
4.1 All branch circuits shall be installed concealed in walls or above ceilings or in concrete floor slabs. PVC conduits installed in concrete floor slabs shall transition to PVC coated rigid steel where conduits penetrate above finished grade or finished floor.

4.2 Conduit sizes for various numbers and sizes of wire shall be as required by the CEC, but not smaller than ½” for power wiring and ¾” for communications and fire alarm systems unless otherwise noted. Conduit in slab or below grade shall be ¾” minimum trade size, unless otherwise identified.

4.3 Conduit size shall be such that the required number and sizes of wires can be easily pulled in and the Contractor shall be responsible for the selection of the conduit sizes to facilitate the ease of pulling. Conduit sizes shown on the drawings are minimum sizes in accordance with appropriate tables in the CEC. If because of bends or elbows a larger conduit size is required, the Contractor shall so furnish without further cost to the Owner.

4.4 The Contractor shall be entirely responsible for the proper protection of this work from the other trades on the job. When conduit becomes bent or holes are punched through same, or outlets moved after being roughed-in, the Contractor shall replace same, without additional cost to the Owner.

4.5 Rigid steel conduit or IMC shall be used as follows:

4.5.1 Exposed exterior locations.

4.5.2 Exposed interior locations below eight feet above floor, except in electrical rooms and closets.

4.5.3 In hazardous or classified areas as required by CEC.

4.6 EMT conduit shall be used for areas as follows:

4.6.1 All interior communications, signal, and data networking systems.

4.6.2 All interior power wiring systems where not required to be in rigid steel, IMC or flexible conduit.

4.7 Flexible conduit shall be used for areas as follows:

4.7.1 To connect motors, transformers, and other equipment subjected to vibration or where specifically detailed on the drawings.

4.7.2 Flexible conduit shall not be used to replace EMT in other locations where the conduit will be exposed.

4.7.3 Flexible metal conduit shall be ferrous. Installation shall be such that considerable slack is realized. The conduit shall contain separate code sized grounding conductor.

4.7.4 Liquid tight flexible conduit shall be used in conformance with CEC in lengths not to exceed 4’. For equipment connections, route the conduit at 90 degrees to the adjacent path for point of connection. The conduit shall contain separate code sized grounding conductor. Use liquid tight flexible conduit for all equipment connections exposed in possible wet, corrosive or oil contaminated areas, e.g., shops and outside areas.

4.8 MC armored cable may be used as follows:
4.8.1 All branch circuit wiring for lighting and power circuits where permitted and installed in compliance with UL 1569 and CEC 330.

4.9 MC-PCS luminary armored cable may be used as follows:

4.9.1 All Lighting branch circuit wiring for lighting circuits where permitted and installed in compliance with UL 1569 and CEC 300-22(c), 330. This cable permits conductors of control circuits to be placed in a cable with lighting power circuits or class 1 circuits.

4.9.2 It shall not be considered an acceptable option to install lighting control class 1 circuits as an open wire installation.

4.10 MC and MC-PCS armored cable shall not be used for the following areas:

4.10.1 Any exterior, underground or buried in concrete circuits.

4.10.2 Any circuits feeding HVAC equipment or pumps or any circuit with 30 AMPs or greater overcurrent protection.

4.10.3 Any exposed interior locations except in electrical, communication or mechanical equipment rooms.

4.10.4 Any exposed interior damp/wet locations, kitchens, science classrooms, shop areas, or concealed in science classroom casework, unless provided with approved PVC jacket.

4.10.5 Any hazardous rated area.

4.11 Plastic conduit shall be used for all exterior underground, in slab, and below slab on grade conduit installations. Install bell ends at all conduit terminations in manholes and pull boxes. Where plastic conduit transitions from below grade to above grade, no plastic conduit shall extend above finished exterior grade, or above interior finished floor level.

4.12 Plastic conduit joints shall be made up in accordance with the manufacturer's recommendations for the particular conduit and coupling selected. Conduit joint couplings shall be made watertight. Plastic conduit joints shall be made up by brushing a plastic solvent cement on the inside of a plastic fitting and on the outside of the conduit ends. The conduit and fitting shall then be slipped together with a quick one-quarter turn twist to set the joint tightly.

4.13 All underground conduit depths shall be as detailed on the drawings or a minimum of 30" below finished grade (when not specifically detailed otherwise), for all exterior underground conduits. Where concrete slurry or concrete encasement is provided, include “Red” color dye in mixture.

4.14 All underground conduits for power systems (600v and higher), shall be concrete encased and a minimum of 48" below grade or as detailed on the drawings. Where concrete slurry or concrete encasement is provided, include “Red” color dye in mixture.

4.15 Conduit shall be continuous from outlet to outlet, cabinet or junction box, and shall be so arranged that wire may be pulled in with the minimum practical number of junction boxes.

4.16 All conduits shall be concealed wherever possible. All conduit runs may be exposed in mechanical equipment rooms, electrical equipment rooms, electrical closets, and in
existing or unfinished spaces. No conduit shall be run exposed in finished areas without
the specific approval of the Architect.

4.17 All raceways which are not buried or embedded in concrete shall be supported by straps,
clamps, or hangers to provide a rigid installation. Exposed conduit shall be run in straight
lines at right angles to or parallel with walls, beams, or columns. In no case shall conduit
be supported or fastened to other pipes or installed to prevent the ready removal of other
trades piping. Wire shall not be used to support conduit.

4.18 It shall be the responsibility of the Contractor to consult the other trades before installing
conduit and boxes. Any conflict between the location of conduit and boxes, piping, duct
work, or structural steel supports, shall be adjusted before installation. In general, large
pipe mains, waste, drain, and steam lines shall be given priority.

4.19 Conduits above lay-in grid type ceilings shall be installed in such a manner that they do
not interfere with the "lift-out" feature of the ceiling system. Conduit runs shall be
installed to maintain the following minimum spacing wherever practical.

4.19.1 Water and waste piping not less than 3".

4.19.2 Steam and steam condensate lines not less than 12".

4.19.3 Radiation and reheat lines not less than 6".

4.20 Provide all necessary sleeves and chases required where conduits pass through floors or
walls as part of the work of this section. Core drilling will only be permitted where
approved by the Architect.

4.21 All empty conduits and surface mounted raceways shall be provided with a ¼"
polypropylene plastic pull cord and threaded plastic or metal plugs over the ends. Fasten
plastic "Dymo" tape label to exposed spare conduit to identify "power" or
"communication" system, and to where it goes.

4.22 The ends of all conduits shall be securely plugged, and all boxes temporarily covered to
prevent foreign material from entering the conduits during construction. All conduit shall
be thoroughly swabbed out with a dry swab to remove moisture and debris before
conductors are drawn into place.

4.23 Bending: Changes in direction shall be made by bends in the conduit. These shall be
made smooth and even without flattening the pipe or flaking the finish. Bends shall be of
as long a radius as possible, and in no case smaller than CEC requirements.

4.23.1 For power conduits for conductors (600v and below), provide minimum 36" radius
(vertical) and 72" radius (horizontal) bends.

4.23.2 For power conduits for conductors (greater than 600v), provide minimum 72"
radius (vertical) and 72" radius (horizontal) bends.

4.24 Supports: Conduit shall be supported at intervals as required by the California Electrical
Code. Where conduits are run individually, they shall be supported by approved conduit
straps or beam clamps. Straps shall be secured by means of toggle bolts on hollow
masonry, machine screws or bolts on metal surfaces, and wood screws on wood
construction. [No perforated straps or wire hangers of any kind will be permitted.
Where individual conduits are routed, or above ceilings, they shall be supported by
hanger rods and hangers.] Conduits installed exposed in damp locations shall be
provided with clamp backs under each conduit clamp, to prevent accumulation of moisture around the conduits.

4.25 Where a number of conduits are to be run exposed and parallel, one with another, they shall be grouped and supported by trapeze hangers. Hanger rods shall be fastened to structural steel members with suitable beam clamps or to concrete inserts set flush with surface. A reinforced rod shall be installed through the opening provided in the concrete inserts. Beam clamps shall be suitable for structural members and conditions. Rods shall be galvanized steel 3/8" diameter minimum. Each conduit shall be clamped to the trapeze hanger with conduit clamps.

4.26 All concrete inserts and pipe clamps shall be galvanized. All steel bolts, nuts, washers, and screws shall be galvanized or cadmium plated. Individual hangers, trapeze hangers and rods shall be prime-coated.

4.27 Openings through fire rated floors/walls and/or smoke walls through which conduits pass shall be sealed by Fire stopping material to comply with Division 1 to seal off flame, heat, smoke and fire gases. Sleeves shall be provided for power or communication system cables which are not installed in conduits, and shall be sealed inside and out to comply with manufacturers UL system design details. Where multiple conduits and/or cable tray systems pass thru fire-rated walls at one location, the Contractor shall submit copies of the manufacturers UL system design details proposed for use on this project. All Fire stopping material shall have an hourly fire-rating equal to or higher than the fire rating of the floor or wall through which the conduit, cables, or cable trays pass.

4.28 Provide cap or other sealing type fitting on all spare conduits. Conduits stubbed into buildings from underground where cable only extends to equipment, the conduit/cable end shall be sealed to prevent moisture from entering the room or space.

4.29 All conduits which are part of a paralleled feeder or branch circuit shall be installed underground.

4.30 All conduits which are required as a part of systems specified in Divisions 27 or 28, or any other low voltage communication systems, shall be furnished and installed by the Division 26 Contractor.

4.30.1 The Contractor shall coordinate all conduit requirements with each system supplier prior to bid to determine special conduit system requirements.

4.30.2 The Contractor shall provide a pull rope in all conduits for these systems.

4.30.3 The Contractor shall provide conduit sleeves for all open cable installations thru rated walls or block walls. Provide conduit from each building main termination cabinet or backboard to the nearest accessible ceiling for access into all electrical or communications rooms.

4.31 In addition to the above requirements, the following requirements shall apply to all data networking conduits:

4.31.1 Flexible metal conduit may only be used where required at building seismic and/or expansion joints.

4.31.2 All underground conduits shall be provided with minimum 24" radius elbows (vertical) and 60" (horizontal).
4.31.3 No length of conduit above grade shall be installed to exceed 150 feet between pull boxes, or points of connection, unless where specifically detailed on the drawings.

4.31.4 No length of conduit shall be installed to exceed two 90 degree bends between pull boxes, or points of connection, unless where specifically detailed on the drawings.

4.32 Where surface raceways are installed in interior spaces, the Contractor shall take care to route in straight lines at right angles to or parallel with walls, beams, or columns. All raceways and device boxes shall be securely screwed to the finish surface with zinc screw "Auger" anchors Stk #ZSA1K by Gray Bar Electric or equal. Tape adhesive application will not be permitted.

4.33 The Contractor who installs surface raceway systems shall provide and install complete with wire retention clips, one for every (8) vertical feet or (5) horizontal feet or portion thereof. This Contractor shall also provide each raceway channel with pull strings.

4.34 It shall be the responsibility of the Contractor installing the raceway to coordinate the installation of raceway device plates and inserts with the communications or data contractors.

4.35 MC or MC-PCS cable shall be cut using a specific metallic sheath armor stripping tool. The use of hacksaws, dikes or any other tools not specifically designed to remove the armor sheath will not be permitted.

4.36 MC or MC-PCS cables installed in attic spaces or above lay-in ceilings shall be installed to be protected from physical damage. The cable shall be mounted along the sides or bottom of joists, rafters or studs.

4.37 Support wires used for supporting ceilings, lighting fixtures or other equipment items shall not be used to support MC or MC-PCS cables. Conduits, duct work, piping or any other equipment shall not be used to support or mount MC cables.

4.38 MC or MC-PCS cable supports, fasteners and clips shall be designed specifically for use with MC cables. Standard conduit supports, fasteners and clips, nails or other items are not permitted for installing MC cables.

END OF SECTION
SECTION 26 0534
OUTLET AND JUNCTION BOXES

PART 1 – GENERAL

1.1 Furnish and install electrical wiring boxes as specified and as shown on the electrical drawings.

1.2 Submit manufacturer's data for all items.

1.3 Common submittal mistakes which will result in the submittals being rejected:

1.3.1 Not including all items listed in the above itemized description.

1.3.2 Including catalog cut sheets which have several items on a page, and not clearly identifying by highlighting, underlining or clouding the items to be reviewed, or crossing out the items which are not applicable.

1.3.3 Not including actual manufacturer's catalog information of proposed products.

1.3.4 Do not include multiple manufacturers for similar products and do not indicate "or approved equal" statements, or "to be determined later" statements. The products being submitted must be the products installed.

PART 2 – PRODUCTS

2.1 Boxes shall be as manufactured by Steel City, Appleton, Raco, or approved equal.

2.2 All boxes must conform to the provisions of Article 370 of the CEC. All boxes shall be of the proper size to accommodate the quantity of conductors enclosed in the box. Minimum box size shall be 4” square x 1-½” deep.

2.3 Boxes generally shall be hot dipped galvanized steel with knockouts. Boxes on exterior surfaces or in damp locations shall be corrosion resistant, cast feraloy and shall have threaded hubs for rigid conduit and neoprene gaskets for their covers. Boxes shall be Appleton Type FS, Crouse-Hinds, or the approved equal. Conduit bodies shall be corrosion resistant, cast malleable iron. Conduit bodies shall have threaded hubs for rigid conduit and neoprene gaskets for their covers. Conduit bodies shall be Appleton Unilets, Crouse-Hinds, or the approved equal. Where recessed, boxes shall have square cut corners.

2.4 Deep boxes shall be used in wall covered by wainscot or paneling and in walls or glazed tile, brick, or other masonry which will not be covered with plaster. Through the wall type boxes shall not be used unless specifically called for. All boxes shall be nongangable. Boxes in concrete shall be of a type to allow the placing of conduit without displacing the reinforcing bars. All lighting fixture outlet boxes shall be equipped with the proper fittings to support and attach a light fixture.

2.5 All light, switch, receptacle, fire alarm devices and similar outlets shall be provided with approved boxes, suitable for their function. Back boxes shall be furnished and installed as required for the equipment and/or systems under this contract.

2.6 Pull and junction boxes shall be code gauge boxes with screw covers. Boxes shall be rigid under torsional and deflecting forces and shall be provided with angle from framing

Modular Office at THE JCE #20017
where required. Boxes shall be 4” square with a blank cover in unfinished areas and with 
a plaster ring and blank cover in finished areas. Covers for flush mounted oversize 
boxes shall extend ¾” past boxes all around. Covers for 4” square boxes shall extend ¼” 
past box all around.

2.7 All terminal cabinets and junction boxes or equipment back boxes which are required as 
a part of systems specified in Divisions 27 or 28, or any other low voltage communication 
systems, shall be furnished and installed by the Division 26 Contractor.

2.7.1 The Division 26 Contractor shall coordinate all box requirements with each 
system supplier prior to bid to determine special cabinet or back box 
requirements. The Contractor shall also provide stainless steel blank cover 
plates for all low voltage systems installed for future equipment.

2.7.2 The Contractor shall provide all plywood backboards indicated on walls or inside 
equipment enclosures. All backboards shall be a minimum of ¾” thick fire rated 
type plywood.

2.7.3 The Contractor shall coordinate exact rough in locations and requirements with 
each system supplier.

2.8 In addition to the above requirements, boxes for data networking wiring and equipment 
shall comply with the following:

2.8.1 All boxes shall be a minimum of 4-11/16” square x 2-1/8” deep.

2.8.2 Where pull boxes are required on individual conduits 1-¼” or smaller, provide 4-
11/16” square x 2-1/8” deep boxes. Where pull boxes are required on conduits 
larger than 1-¼” for straight pull through, provide eight times the conduit trade 
size for box length. Where pull boxes are required on conduits larger than 1-¼” 
for an angle or a U-pull through installation, provide a minimum distance of six 
times the conduit trade size between the entering and exiting conduit run for 
each cable.

2.9 Recessed boxes installed in fire rated floors/walls and /or smoke walls shall be sealed by 
Fire stopping material to comply with Division 1 to seal off flame, heat, smoke and fire 
gases. The Contractor shall submit copies of the manufacturers UL system design 
details proposed for use on this project. All Fire stopping material shall have an hourly 
fire-rating equal to or higher than the fire rating of the floor or wall through which the 
conduit, cables, or cable trays pass.

PART 3 – EXECUTION

3.1 Boxes shall be installed where required to pull cable or wire, but in finished areas only by 
approval of the Architect. Boxes shall be rigidly attached to the structure, independent of 
any conduit support. Boxes shall have their covers accessible. Covers shall be fastened 
to boxes with machine screws to ensure continuous contact all around. Covers for 
surface mounted boxes shall line up evenly with the edges of the boxes.

3.2 Outlets are only approximately located on the plans and great care must be used in the 
actual location of the outlets by consulting the various detailed drawings and 
specifications. Outlets shall be flush with finished wall or ceiling, boxes installed 
symmetrically on such trim or fixture. Refer to drawings for location and orientation of all 
outlet boxes.
3.3 Furnish and install all plaster rings as may be required. Plaster rings shall be installed on all boxes where the boxes are recessed. Plaster rings shall be of a depth to reach the finished surface. Where required, extension rings shall be installed so that the plaster ring is flush with the finished surface.

3.4 All cabinets and boxes shall be secured by means of toggle bolts on hollow masonry; expansion shields and machine screws or standard precast inserts on concrete or solid masonry; machine screws or bolts on metal surfaces and wood screws on wood construction. All wall and ceiling mounted outlet boxes shall be supported by bar supports extending from the studs or channels on either side of the box. Boxes mounted on drywall or plaster shall be secured to wall studs or adequate internal structure.

3.5 Boxes with unused punched-out openings shall have the openings filled with factory-made knockout seals.

3.6 Where standby power and normal power are to be located in the same outlet box or 480V in a switch box, install partition barriers to separate the various systems.

3.7 All device boxes and junction boxes for fire alarm system shall be painted red and shall be 4-11/16" square by 2-1/8" deep. No exceptions.

END OF SECTION
SECTION 26 0543
UNDERGROUND PULL BOXES AND MANHOLES

PART 1 – GENERAL

1.1 Furnish and install electrical underground pullboxes and manholes as specified and as shown on the electrical drawings.

1.2 Submit manufacturer's data for all items.

1.3 **Common submittal mistakes which will result in the submittals being rejected:**

1.3.1 Not including all items listed in the above itemized description.

1.3.2 Including catalog cut sheets which have several items on a page, and not clearly identifying by highlighting, underlining or clouding the items to be reviewed, or crossing out the items which are not applicable.

1.3.3 Not including actual manufacturer's catalog information of proposed products.

1.3.4 Do not include multiple manufacturers for similar products and do not indicate “or approved equal” statements or “to be determined later” statements. The products being submitted must be the products installed.

PART 2 – PRODUCTS

2.1 The concrete for pull boxes and manholes shall be class 5500 psi or as noted on the drawings. All pullboxes and manholes and covers located in parking lots, driveways, roads, or any other driveable areas shall be traffic rated.

2.2 Each manhole shall be provided with a fiberglass ladder and ground rod. Ground rods shall be copper or a copper-clad steel 3/4" diameter by 10-feet long. All non-current carrying metallic components shall be grounded to the ground rods with minimum #6 copper wire.

2.3 All underground pullboxes shall be provided with steel bolt down type covers. Bolts shall be bronze or brass. All communication or signal system pullboxes shall be sized to comply with CEC Article 370 unless where other sizes are specifically noted on the drawings.

2.4 All underground pullbox and manhole covers shall be provided with either "electrical" or "telephone" or "fire alarm" markings. The telephone marking shall be used to identify telephone, T.V., clock or any other types of communication systems.

2.5 All power and communication systems shall be provided with separate pullboxes or manholes. Fire alarm circuits shall also be provided with separate pullboxes from any other type of communication systems.

PART 3 – INSTALLATION

3.1 Shoring of the excavation shall be in accordance with all federal, state and local regulations.

3.2 Provide sealing material for the joints between sections per manufacturer’s instructions.
3.3 The contractor shall make the top and access assembly or lid flush with surrounding areas where installed in driveable or normal walking areas.

END OF SECTION
SECTION 26 2726
SWITCHES AND RECEPTABLES

PART 1 – GENERAL

1.1 Furnish and install all wiring devices as shown on drawings and as herein specified. Unless otherwise noted, device and plate numbers shown are Hubbell and shall be considered the minimum standard acceptable. Other acceptable manufacturers are Pass and Seymour, Leviton, General Electric and Bryant.

1.2 Submit manufacturers’ data on all items.

1.3 **Common submittal mistakes which will result in the submittals being rejected:**

1.3.1 Not correctly indicating ampacity rating of proposed devices.

1.3.2 Not including all items listed in the above itemized description.

1.3.3 Including catalog cut sheets which have several items on a page, and not clearly identifying by highlighting, underlining or clouding the items to be reviewed, or cross out the items which are not applicable.

1.3.4 Not including actual manufacturer’s catalog information of proposed products.

1.3.5 Do not include multiple manufacturers for similar products and do not indicate “or approved equal” statements or “to be determined later” statements. The products being submitted must be the products installed.

PART 2 – PRODUCTS

2.1 All switches shall be of the quiet mechanical type, Specification Grade, 20 amp, 120/277 volt AC as follows:

<table>
<thead>
<tr>
<th></th>
<th>HUBBELL</th>
<th>LEVITON</th>
<th>PASS &amp; SEYMOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Pole</td>
<td>CS120</td>
<td>CS1202</td>
<td>CS20AC1</td>
</tr>
<tr>
<td>Two Pole</td>
<td>CS1222</td>
<td>CS2202</td>
<td>CSB20AC2</td>
</tr>
<tr>
<td>Three-way</td>
<td>CS320</td>
<td>CS3202</td>
<td>CS20AC3</td>
</tr>
<tr>
<td>Key Switch</td>
<td>HBL1221L</td>
<td>1221-2L</td>
<td>PS20AC1-L</td>
</tr>
</tbody>
</table>

2.2 All switches shall have the "on" and the "off" position indicated on the handle. If switches of higher ampere ratings are required, they shall be of similar type and quality as those shown above. Groups of switches shown at one location shall be installed under a single plate up to a maximum of six where more than six switches are shown coordinate arrangement with the Architect.

2.3 Dimmer switches for incandescent lamp loads shall be square-law type, slide control dimmer with OFF position, Lutron or Hubbell "Nova-T" Series NT-600 (0-500 watt load), NT-1000 (501-900 watt load), NT-1500 (901-1500 watt load), or equal (no known equal).

2.4 All convenience receptacles and special outlets throughout shall be grounding type. Convenience receptacles shall be side wired, parallel slot, two pole, three wire, 20 amp as follows:
2.5 All safety or tamper proof receptacles shall have no exposed external current carrying metal parts, and shall have integral wiring leads suitable for two or three wire installations.

2.6 Special receptacles shall be as noted on the drawings.

2.7 Weatherproof plates shall be designed to meet CEC Article 410-57, wet location listed with cover “open.” Where weatherproof receptacles have been identified to be provided with locking covers, the cover shall be as manufactured by Pass & Seymour #4600-8 or Cole Lighting 310 Series. Rough-in requirements vary between manufacturers. Contractor to field verify requirements prior to installation.

2.8 All plates throughout shall be stainless steel. Where wiring devices are installed in concrete block walls, provide oversized 3-1/2” x 5” coverplates.

2.9 All devices shall be white unless otherwise noted or a special purpose outlet.

2.10 Unless where specifically detailed on the drawings, floor boxes shall be PVC suitable for concrete poured floors of minimum 3-1/2” depth, with a modular design to gang two or three sections together.

2.10.1 Carlon #E976 series or approved equal

2.10.2 Provide brass cover with brass carpet flange unless otherwise detailed.

PART 3 – EXECUTION

3.1 Switches for room lighting shall be located no more than 12” center line from door jamb at plus 48” center line above finished floor or +46” to top of devices where located over casework, reference CBC Figure 11B-5D.

3.2 All receptacles shall be mounted at plus 18” to center line above finished floor unless noted or shown otherwise. All receptacles shall be installed with the ground pin up, at the top of the receptacle to comply with IEEE 602-1986.

3.3 Furnish and install wall plates for all wiring devices, and outlet boxes, including special outlets, sound, communication, signal, and telephone outlets, etc. as required. All cover plates shall be appropriate for type of device.

END OF SECTION
SECTION 26 9090
ELECTRICAL CLOSEOUT

PART 1 – GENERAL

1.1 Upon completion of the electrical work, the entire installation shall be tested by the Contractor, and demonstrated to be operating satisfactorily to the Architect, Engineer, Inspector and Owner.

1.2 All testing and corrections shall be made prior to demonstration of operation to the Architect, Engineer, Inspector and Owner.

1.3 In addition to the demonstration of operation, the Contractor is also required to review the content and quality of instructions provided on items demonstrated with the Architect, Engineer, Inspector and Owner.

PART 2 – EXECUTION

2.1 Wiring shall be tested for continuity, short circuits and/or accidental grounds. All systems shall be entirely free from “grounds,” “short circuits,” and any or all defects.

2.2 Motors shall be operating in proper rotations, and control devices functioning properly. Check all motor controllers to determine that properly sized overload devices are installed, and all other electrical equipment for proper operation.

2.3 Tests and adjustments shall be made prior to acceptance of the electrical installation by the Architect, and a certificate of inspection and acceptance of the electrical installation by local inspection authorities shall be provided.

2.4 All equipment or wiring provided which tests prove to be defective or operating improperly shall be corrected or replaced promptly, at no additional cost to the Owner.

2.5 Test all motor and feeder circuits with a “megger” tester to determine that insulation values conform to Section 110-20, California Electrical Code (CED). Test reports must be submitted and approved by the engineer before final acceptance.

2.6 Test all grounding electrode connections to assure a resistance of no more than 10 ohms is achieved. Augment grounding until the ohmic value stated above is achieved. Provide certified test results to the Architect, Engineer and Inspector.

END OF SECTION
SECTION 27 0100
COMMUNICATIONS GENERAL PROVISIONS

ARTICLE 1 - SUMMARY

1.1 This Division of the specifications outlines the provisions of the contract work to be performed as a subcontract under the Division 26 scope of work. Reference the Division 26 Electrical General Provisions for scope of work and general requirements.

1.2 In addition, work in this Division is governed by the provisions of the bidding requirements, contract forms, general conditions and all sections under Division 1 requirements.

END OF SECTION
SECTION 27 1000
VOICE / DATA/IP-PAGE INFRASTRUCTURE

PART 1 – GENERAL

1.1 Include all labor, equipment and materials necessary for providing a complete networking infrastructure system as described herein and/or as indicated on the drawings.

1.2 Related specification sections:
   1.2.1 Section 26 01 00 - General Provisions.
   1.2.2 Section 26 05 33 - Conduit and Fittings.
   1.2.3 Section 26 05 19 - Conductors.
   1.2.4 Section 26 05 34 – Outlet and Junction Boxes.

1.3 Approved minimum Product and Contractor Extended Warranty Certifications;
   1.3.1 All components shall be manufactured by one of approved manufacturers, the installing Contractor must have the accompanying certification from the product manufacturer(s) for installation of a “Extended Warranted System” as required by each manufacturer and as indicated in these specifications.
   1.3.1.1 Specified system warranties are to be established between the component and cable manufacturers and the District, warranties between the cable manufacturer only or installing Contractor and the District are not considered equal.
   1.3.1.2 Warranty shall be a full “Performance Warranty” installed by a “Certified Contractor” as specified by one of the approved manufacturer’s. A “Component Warranty” will not be considered equal. All components, labor, and “Performance Criteria” shall be warranted by one of the approved manufacturers;

1.4 Acceptable manufacturers are:
   1.4.1 Leviton / Berk-Tek
      1.4.1.1 Installing Contractor must be LEVITON Network Solutions Premier certified to install this system.
      1.4.1.2 Warranty provision and training must be for the Levition/Berk-Tek – Limited Lifetime Premium Performance Warranty program.

   1.4.2 Commscope
      1.4.2.1 Commscope’s Training and Warranty programs encompass the brand names known as AMP Netconnect.
      1.4.2.2 Installing Contractor must be PartnerPro certified to install any of the systems under the Commscope Family of brand names. Alternate certification that applies is AMP ND&I Premier Certification for products installed with the AMP Netconnect brand name.
1.4.2.3 Warranty provision and training must be for the Commscope (AMP Netconnect, Uniprise and Systimax) – 25-Year Premium Performance Warranty program.

1.4.3 Warranty shall be to the District, for the period as defined by the Network Infrastructure System selected for installation, after District acceptance and sign-off of the completed system. The Contractor must provide documentation from one of the approved manufacturers, as indicated in Section 1.3, indicating their qualifications for installation of this system in compliance with the manufacturer’s warranty period requirements as a warranted Contractor.

1.4.4 Equipment qualifications: It is the intent of these specifications that each bidder provides all hardware, components and installation services that are necessary to ensure a fully operational wiring system including warranties, as shown in the EIA/TIA Category-6 guidelines.

1.4.5 All components, parts, infrastructure, patch cables, termination panels and cables must be classified by the manufacturer or manufacturers as a part of the “Extended Warranty” program. Contractor may not mix in components from other certified programs or materials that are not considered part of the “Lifetime” warranty.

1.4.6 Systems or components as manufactured by any other manufacturer which, are not specifically listed in 1.3, are not approved for use on this project.

1.5 Installing Contractor qualifications: Firms and their personnel must be regularly engaged in the installation of data networking cabling and equipment for systems of similar type and scope. The Contractor must have a full-service office able to respond to emergency callouts during the warranty period. The Contractor must also provide complete installation of all wiring and devices or equipment. Subcontracts with Electrical Contractors or other warranted or non-warranted Contractors for supervised installation of any part of this system are not approved.

1.5.1 Contractor shall have on staff a minimum of (1) BICSI RCDD on staff as full-time employees.

1.5.2 The successful Contractor shall be a California licensed C7 or C10 Premise Wiring Contractor as defined in this specification.

1.5.3 All work shall be performed under the supervision of a company accredited and trained by the Manufacturer of the components and cable and such accreditation must be presented with the bid submittal. Contractor must be accredited a minimum of 180 days prior to bid submittal date. All personnel performing work on this project must have successfully completed the manufacturer’s training courses to completely comply with the extended warranty requirements prior to performance of any work on this project. Accreditation will consist of individual employee certifications issued by the manufacturer or manufacturers.

1.5.4 All personnel engaged in the testing of premises fiber optic and copper UTP cable systems must have successfully completed the test equipment manufacturer’s training courses. Certification of such training must be presented with the bid submittal. Cut sheets of the test equipment to be utilized shall be provided with the Phase I project material submittals.
1.5.5 If Contractor routes cables and/or associated pathways in another route than indicated on the drawings, they shall maintain all maximum cable installation distances as required by the manufacturer's distance limitations.

1.6 In order to ensure project cohesion, a single point of contact is required to provide a “TURNKEY” solution. The work covered under this section of the specification consists of furnishing all; labor; cabling; equipment; supplies; materials, and training. The Contractor will perform all operations necessary for the “TURNKEY” and fully completed installation in accordance with the specifications herein. As such, the successful Contractor must be factory trained on all aspects of Network Infrastructure Cabling System.

1.7 The drawings indicate a schematic routing of cables above ceilings. The Contractor shall field-verify the most appropriate routing of all above-ceiling cable prior to bid. Where cables penetrate through walls a conduit sleeve shall be provided. Where cables pass through fire rated walls, the conduit sleeve shall be sealed to maintain the rating of the wall assembly.

1.8 Unless otherwise noted in the project drawings or these specifications, the Division 26 Contractor shall provide the installation of all conduits, outlet and junction boxes, trenching and pull box installation.

1.9 The Contractor shall provide a licensed, qualified electrical Contractor for installation of all conduits, outlet and junction boxes, trenching and pull box installations.

1.10 General Submittal Requirements

1.10.1 **Phase I Submittal** shall be made in electronic format within (20) working days after the award of the contract by the District. This submittal shall include the following:

1.10.1.1 Complete Bill of Materials in Excel Spreadsheet format with bills of quantities, including all materials, components, devices, and equipment required for the work. The bills of quantities shall be tabulated respective of each and every system as specified, and shall contain the following information for each Section listed:

1.10.1.2 Description and quantity of each product.

1.10.1.3 Manufacturer's Name and Model Number.

1.10.1.4 Material Cut Sheets shall provide detailed product information and shall be original manufacturer product bulletins. Copies of material information from vendor websites shall not be considered equal and will not be accepted.

1.10.1.5 Material Cut Sheet part number provided shall be highlighted or provided with an arrow directed at the corresponding part number.

1.10.1.6 Specification Item Number referenced for each required product or if not shown in the specifications, Drawing Detail Number being referenced. (ie; Spec. 271000 Item 2.1 or DWG E4.15/#1)

1.10.1.7 Include with submittals all warranty information and a description of support and maintenance services to be provided. Also include all
licenses and maintenance agreements required for continued operation of the equipment.

1.10.2 **Phase II Submittal** shall be provided within (20) working days after the approval of the Phase I submittals and prior to any fabrication or field conduit installations. All shop drawings shall be engineered in a CAD Software. Submission shall include electronic print copies to match the contract drawings, and Phase II submittals drawings shall include the following.

1.10.2.1 MDF and IDF equipment rack or cabinet elevations will be required to be provided including cable routing, grounding, support, UPS, network electronics, etc. and position of all components in the rack or cabinet.

1.10.2.2 Provide labeling plan which identifies the proposed scheme for identifying all components including Racks, patch panels (fiber and copper), site distribution feed cables, horizontal station cables and site conduit systems (handholes, pullboxes, etc.).

1.10.2.3 Provide shop drawings showing all end device locations, tap values, paging zones and amplifier sizing for each zone for analog speakers and horns, including devices connected to IP-Based zone controllers.

1.10.3 Common submittal mistakes which will result in submittals being rejected:

1.10.3.1 Not including the qualifications of the installing Contractor Company and Contractor's Staff.

1.10.3.2 Not including all items listed in the above itemized description.

1.10.3.3 Including catalog cut sheets which have several items on a page, and not clearly identifying by highlighting, underlining or clouding the items to be reviewed (provided for the project) or crossing out the items which are not applicable.

1.10.3.4 Not including actual manufacturer's cut sheets or catalog information of proposed products.

1.10.3.5 Do not include multiple manufacturers for similar products and do not indicate “or approved equal” statements, or “to be determined later” statements. The products being submitted must be the products installed.

1.10.4 The Contractor shall make a written request directly to Johnson Consulting Engineers for electronic drawing files (CAD). As a part of the written request, please include the following information:

1.10.4.1 Clearly indicate Project Name and Client, Johnson Consulting Job Number (located in bottom left corner of JCE Engineering Stamp) and each drawing Sheet Number required (i.e., E1.1, E2.1, E4.1 etc.).

1.10.4.2 Identify the name, Company, Title, phone number, mailing address and e-mail address of the person to receive the files.
1.10.4.3 Detail or Riser diagram sheets, System Schematic drawings or any other drawings other than floor plans or site plans, will not be made available to the Contractor.

1.10.4.4 Files will only be provided in the AutoCAD format in which they were created (i.e., version 2015 or version 2016). Files will not be made available in REVIT format.

1.10.5 Requests for files will be processed as soon as possible; a minimum of 7 working days should be the normal processing time. The Contractor shall be completely responsible for requesting the files in time for their use and delays in requesting files will not alleviate the Contractor from submitting required documents within the required timeline.

PART 2 – RACKS AND CABINETS

2.1 Equipment racks have been detailed on the drawings and additional component information requirements have been described in the MDF or IDF products sections. The following is a list of approved manufacturers for each type of rack to be furnished.

2.1.1 Alternate equipment manufacturers other than those indicated will not be reviewed or approved for use on this project.

2.1.2 (Open Frame – 4-Post) shall be manufactured by Chatsworth CPI QuadraRack or Middle Atlantic R4 Series. Reference drawing details and specifications for complete requirements.

PART 3 – MDF ROOM REQUIREMENTS

Main Distribution Frame (MDF is existing in Building K)

PART 4 – IDF REQUIREMENTS

Intermediate Distribution Frame (IDF) is Existing in Building 'O'

4.1 The Intermediate Distribution Frame (IDF) Room shall be a secondary wiring and equipment location for the data networking system. The Contractor shall include the following items at this location.

4.1.1 Category-6 Modular Patch Panels (rack mounted) with RJ45 style connectors, for terminating all twisted pair cable from each Voice/Data, WAP, AV Equipment and IP Camera outlet, served from this location. Provide a minimum of 25% spare capacity for future wiring requirements. All patch panels shall be 48-Ports only, 24-Port patch panels shall not be accepted. Provide cable support bars at the rear of each patch panel all cables shall be secured to bars with velcro straps.

PART 5 – MDF/IDF PATCH CORD REQUIREMENTS

5.1 Copper Patch Cords

5.1.1 Copper patch cords shall be furnished and installed by the Contractor.

5.1.2 Provide Enhanced Category-6 rated (Patch Panel End) patch cords with pre-molded boot, provide quantity equal to:
5.1.2.1 Provide 100% of the total Enhanced Category-6 rated cable ports provided on the patch panels.

5.1.2.2 All patch cords to be installed by Contractor. Provide 100% of total copper patch cords required to be (4) feet in length.

5.1.3 Provide Enhanced Category-6 rated (Workstation End) patch cords with premolded boot, provide quantity equal to:

5.1.3.1 Provide 100% of the total Enhanced Category-6 rated cable ports provided on the patch panels.

5.1.3.2 All patch cords to be installed by Contractor. Provide 100% of total copper patch cords required for voice and data locations, to be (10) feet in length, unless otherwise noted.

5.1.3.3 All patch cords to be installed by Contractor. Provide 100% of total copper patch cords required for AV Equipment locations, to be (4) feet in length, unless otherwise noted.

5.1.3.4 All patch cords to be installed by Contractor. Provide 100% of total copper patch cords required for IP Camera and WAP locations, to be (2) feet in length, unless otherwise noted.

5.1.4 Requirements for all copper patch cords furnished:

5.1.4.1 Color of patch cords shall be determined by the color codes shown in the drawing details or as otherwise directed by the District IT Department.

5.1.4.2 Patch cords shall be as manufactured by Leviton or Commscope, based on the network infrastructure system furnished by the Contractor.

5.1.4.3 Definition of “Enhanced Category-6 Rated” patch cables – Since there is no official EIA/TIA rating level determined to be “Enhanced Category-6”, the provision of any cables shall be based on the manufacturer’s performance claims for the product.

5.1.4.4 Patch cords furnished must be in compliance with the manufacturer’s “Channel” warranty requirements. Patch cords not warranted through the selected manufacturer Channel warranty program will not be approved for use with the network infrastructure.

PART 6 – CABLELING REQUIREMENTS

6.1 Category-6 Station Cable

6.1.1 Contractor shall provide a Category-6 UTP cable to each Data, Voice, WAP, Audio-Visual Data and IP Camera indicated on the drawings and specifications. Provide quantity of cables as indicated on the drawings at each location.

6.1.2 Provide one Category-6, 4-pair, unshielded twisted pair (UTP) cable from the nearest MDF or IDF location to each RJ45 data outlet port indicated on the
drawings. Dual port outlets will require two such cables. Four port outlets will require four cables. Refer to the drawing details for jacket color requirements for each type of connection. Color of cable jacket for each type of connection shall be determined by the drawing details. Confirm color of cable jackets prior to ordering with the District IT Director. Contractor shall be responsible for providing the correct jacket color per the drawings per District Standards.

6.1.3 Unless otherwise shown in drawing details, the color of the Category 6 UTP cables shall be blue, shall be copper wire, individually insulated and color coded.

6.1.4 The cables shall be UL or ETL rated and UL verified in compliance Category-6 EIA/TIA standards. Approved cables for Network Infrastructure System;

Commscope (Uniprise) — CS37R
Superior Essex — NextGain Cat 6eX - #54-246-xA

6.1.5 Manufacturer names and part numbers are shown as a point of reference and do not specifically designate required packaging or color for the cable. Contractor shall verify colors and packaging options shall be determined by Contractor preferences.

6.1.6 Definition of “Enhanced Category-6 Rated” cable – Since there is no official EIA/TIA rating level determined to be “Enhanced Category-6”, the provision of any cable shall be based on the manufacturer’s performance claims for the product.

6.2 Category-6 Outlets

6.2.1 Unshielded twisted pair Category-6 outlets shall be an RJ45 Enhanced performance type 8-position / 8 conductor modular jacks, and shall comply with Category-6 performance requirements. Provide single port, dual port, four port or quantity as indicated on the floor plans at each outlet location. All outlets shall be wired in an EIA/TIA 568B configuration.

6.2.2 Provide Category-6 inserts, wired for EIA 568B. Provide installation kits for all locations furnished with Category-6 UTP cabling.

6.2.3 Refer to the detail drawings for color of the Category-6 outlets required. Contractor shall be responsible for confirming all color requirements prior to ordering.

6.2.4 Provide the following Category-6 UTP data connector per Network Infrastructure warranty requirements;

6.2.4.1 Leviton eXtreme Cat6+ Quick Port Series 61110-R
6.2.4.2 AMP NetConnect (Commscope) SL 110 Series 1-1375055

6.3 Outlet Faceplates

6.3.1 Provide a two-port faceplate for all one and two port outlet locations. Provide blanks for all unused openings.
6.3.2 Provide a four-port faceplate for all three and four port outlet locations. Provide blanks for all unused openings.

6.3.3 All fax/modem locations shall be provided as single port outlets. Requirements shall be the same as a single port data outlet as shown on the Technology Legend.

6.3.4 For single port voice outlet locations intended for wall telephone connections, a wall telephone type faceplate with attachment studs shall be provided. The wall telephone jack shall be 8-pin, RJ45 type and use IDC wire terminations only. Provide Category-6 insert, within stainless steel wall plate faceplate. Provide faceplate from the approved manufacturers listed in the specifications.

6.3.5 Provide single port or dual port Surface mount small surface mounted outlet box for IP Camera data outlets in the J-Box for the camera locations. Provide surface mount box by Leviton QuickPort Series 41089-xxx or equal by one of the approved manufacturers. The location shall also be furnished with a blank weather-tight faceplate to protect the data termination until the cameras are installed.

6.3.6 Wireless Access Point data connections for ceiling mounted WAPs shall be terminated above the accessible ceiling at the wireless access point (WAP) location. Refer to the drawing details for additional requirements.

6.3.7 Wireless Access Point data connections for WAPs shall be terminated at the WAP location as shown in the drawing details. Provide surface mount box by Leviton QuickPort Series 41089-xxx or equal by one of the approved manufacturers. The location shall also be furnished with a blank inserts for the unused ports. Label the cables and faceplate the same as standard data outlets.

6.3.8 All faceplates and surface mount outlet boxes shall be furnished with label windows. All labeling shall be installed within the label window.

6.3.9 Confirm color of all faceplates prior to ordering. All data outlet faceplates shall have a unique sequential identification number applied to faceplate. Hand written labels are not permitted. All color schemes shall be approved by the customer prior to installation.

6.3.10 Colored inserts are required for this project. Refer to the detail drawings for the exact color scheme to be provided. Inserts submitted that do not follow the color and identification requirements will be rejected. Inserts installed that do not follow the color coding as shown in the detail drawings will be replaced at the Contractor’s expense.

6.3.11 All labels will be installed under label windows. Labels adhered to the surface of the faceplate will not be accepted. Contractor must provide clear laminating type of cover material over the surface mounted labels where used.

6.3.12 Reference the drawings for special outlet configurations or plate requirements

6.3.13 All data outlet faceplates shall have a unique sequential identification number applied to faceplate. Refer to the detail drawings for labeling requirements. Hand written labels are not permitted. Faceplates, with the exception of wall telephone outlets, shall include color coded port inserts. All color schemes shall be approved by the District prior to installation.
6.3.14 Reference the drawings for special outlet configurations or plate requirements.

6.4 Wireless Access Points

6.4.1 The District will provide all wireless access point units and programming will be by the District IT Department. The Contractor shall install each Wireless access point as required and provide patch cord installation at the WAP. The Contractor shall provide a list including the room number, location, and MAC address of each device installed to the District IT Department. Provide minimum 10’ slack cable at each WAP location.

6.4.2 Refer to drawing details for installation requirements for WAP locations.

PART 7 – IP PAGING REQUIREMENTS

IP-Based Paging General Requirements

7.1 The project shall be furnished with additional devices on the IP-Based Intercom/Paging System using IP-Based Zone Controllers with analog speakers and horns to deliver the Intercom announcements and Pass Class Bells to the interior and exterior of the building. The speakers and horns shall be connected to the amplifiers in the IDF Closet which are controlled by the Zone Controllers.

7.2 The Contractor shall furnish and install all IP-based control devices and all analog speakers, horns, amplifiers, software upgrades, licensing and all associated hardware.

7.3 Data Contractor shall be responsible for furnishing enclosures for all speakers and horns. Contractor shall provide vandal resistant screws with all enclosures for attachment of the speaker grill or exterior horn baffle. Exterior horn locations shall be provided with stainless steel vandal resistant screws and baffle. Provide (2) tools with the project for removal of the vandal-resistant hardware, matching whatever type of fastener is provided, delivered to the District IT Department.

7.4 All surface mounted enclosures shall be furnished and installed by the 27 10 00 Contractor in all areas shown in the floor plans including exterior surface mounted enclosures.

7.5 Recessed flush mount enclosures, both interior and exterior, shall be furnished by the 27 10 00 Contractor and installed by the Division 26 Contractor, unless otherwise noted on the Legend or Floor Plans. Recessed enclosures shall be furnished with manufacturer provided “wing” bracket panels (depending on model) that attach to the side of the enclosure and are used for attachment to the structural members.

7.6 IP-Based Zone Controllers, Amplifiers, paging speakers, horns and associated enclosures shall be as manufactured by Atlas/IED Analog and Atlas/IED IPX-Series.

7.7 IP-Based Zone Controllers shall be connected to a POE port on the network switch in the IDF Room. Coordinate the connection of the POE powered devices with the District IT Department. IP-Based Zone Controllers must be patched to a POE powered switch to allow for proper operation.

7.8 All speakers/horns shall be provided with home run speaker cables to the IDF Closet. Speaker/horn connections shall be terminated at the Communications Backboard on Terminal Strips and identified with unique type-written labels to match the labels provided
for the UTP cables, identified per the District Standards, or as shown in the detail drawings and the specifications.

7.9 Contractor is responsible for proper paging coverage and tap settings of the speakers and horns. Contractor shall confirm tap settings are adequate after the school has been occupied, testing the paging after the students have occupied the campus to properly judge the ambient noise levels and make adjustments before the project completion.

7.10 All wiring shall test free of grounds and shorts.

**IP-Based Zone Controllers and Amplifiers for Analog Paging Speakers and Horns**

7.11 Provide IP-Based zone controllers for standard analog speakers and horns per the locations shown on the floor plans.

7.12 The Building shall be provided with zone controllers for both the interior and exterior coverage zones. Each building shall be provided with a minimum of (2) zone controllers, one for the exterior and one for the interior. Standard paging zones shall be as follows: Zone “A” shall be designated for the overall interior paging and Zone “B” shall be designated for the overall exterior paging, including hallways and courtyards as shown on the floor plans.

7.13 Provide Atlas/IED Part #IP-ZCM2RMK Dual Zone Controller with rack mount bracket kit at the IDF Equipment Rack. Contractor shall install the Zone Controllers in the IDF Equipment Rack as shown on the detail drawings and as detailed in these specifications. Contractor shall coordinate the zoning for the building with the District IT Director and the District Facilities Director.

7.14 Zone Controllers shall be connected to the amplifiers furnished and installed by the Contractor in the Equipment Rack. See drawing details for further requirements. The Zone Controller’s built in 15-watt amplifier will not be used for this installation.

7.15 Provide amplifiers for the analog paging speakers and horns connected to the zone controllers. Amplifiers shall be rack mounted in the IDF equipment rack. Provide rack mount adapter bracket as required to mount two amplifiers in a single rack unit. Provide quantity of amplifiers to service the quantity of horns and speakers as shown on the drawings. A separate amplifier must be provided for each IP zone controller output. Size of amplifier shall be determined by the load, plus 25% expansion capacity. Larger amplifier may be required for a single zone depending on quantity of horns and speakers requiring amplification. Contractor is responsible for providing sufficient power amplification to service all speakers and horns. Contractor is responsible for connecting the amplifiers to the IP-Based Zone Controllers and insuring proper operation between the Zone Controllers and amplifiers. All speakers/horns shall be connected to the amplifiers at 70 volts.

7.16 Provide amplifier choice based on load: Approved Model; Atlas/IED Model #PA60G (or approved equal). Connect the “line out” terminal on the Zone Controller to the amplifier input.

7.17 Provide rack mount adapter bracket Model #PA702-RMK, one bracket for each pair of amplifiers provided. If there is a single amplifier to be installed at the rack, the amplifier would still require the rack mount bracket. Provide optional Level Control Security Covers for all models.
7.18 Amplifier outputs shall be routed to the terminal strips on the Communications Backboard. The outputs shall be labeled with the Building Name and the Zone Type (Interior/Exterior). The amplifier outputs shall be cross connected to the speaker cables.

**Analog Paging Speakers and Horns**

7.19 Recessed accessible ceiling mounted speaker – Atlas/IED Part #DT12 1’x2’ drop in type speaker with external tap selector, recessed ceiling enclosure with perforated tile baffle and tile bridge. Speaker baffle shall be white power coat epoxy finish. Speaker shall be tapped at 2 watts each.

7.20 All ceiling mounted speakers shall be provided with a minimum of (1) 12-AWG ceiling support wire securely attached to the structure above as detailed in the drawings. The speaker shall not depend on the ceiling tile grid for support.

7.21 Surface mounted speaker – Atlas/IED Part #VP14ENC with square surface mount slanted enclosure. Provide 8” speaker plus baffle – Atlas/IED Part #VP14MB with white power coat epoxy finish and shall be attached to the enclosure with vandal-resistant screws. Speaker shall be tapped at a minimum of 5 watts. The speaker shall be surface mounted on the wall, over J-Box furnished by the Division 26 Contractor.

7.22 Recessed Exterior Paging Horn – Provide Atlas/IED Part #VP161-APF Vandal Proof Baffle, #APF-15T series Horn/Loudspeaker, and #161RES stainless steel series enclosure. Unit must be weather and vandal resistant. All horns shall be tapped at 15 watts, except for horns in the exterior hallways or building courtyards with exterior exposure at 5 watts.

7.23 Surface Mounted Exterior Paging Horn – Provide Atlas/IED Part #VP161-APF Vandal Proof Baffle, #APF-15T series Horn/Loudspeaker, and #161SES stainless steel series enclosure. Unit must be vandal and weather resistant. All horns shall be tapped at 15 watts, except for horns in the exterior hallways or building courtyards with exterior exposure at 5 watts.

7.24 Each speaker location cable shall be individually home run to the IDF Closet Communications Backboard. Provide 1-pair, 18-AWG unshielded CMR rated speaker cable by West Penn #224 (or approved equal) to each speaker location. Terminate speaker cable on terminal strips at the backboard. All speakers shall be home run to the IDF location. Speakers/Horns may not be run in a series, unless otherwise shown on the drawings. All speaker runs shall be numbered and labeled with type-written wrap around labels.

7.24.1 Cross connect the output from the amplifiers on the terminal strips to the speakers and horns. All connections shall be labeled at the terminal strip with the Zone and Building Name or Number.

7.24.2 All speaker cables installed shall contain all necessary conductors and/or cables to all devices shown on the Drawings and the Contractor shall make all necessary conductor terminations to all devices for a complete system.

7.24.3 All cables routed underground shall be suitable for wet location provided with UL listed wet location insulation or flooded type cable construction as manufactured by West Penn Aquaseal #AQ224 (or approved equal).

7.25 Contractor shall be responsible for testing all paging speakers and horns and ensuring the proper volume levels are set in the paging software, on the amplifiers and on the
speakers/horns. Provide (4) man hours for re-adjustment of the speaker’s and horn’s volume, per the District’s requirements, 4 weeks after the building has been occupied by the students. Check with School Administrative Staff for areas that are either too loud or too soft. The final adjustments to the individual IP-Based speakers/horns, zone controllers, analog speakers/horns and amplifiers shall be documented and furnished as part of the As-Built documents for the project.

7.26 Wrap around labels are required on all cable connections at the rear of the amplifier, at the zone controller and at the terminal strip for all cabling to the speakers or connections between equipment. Label shall clearly define paging zones, room numbers or type of port. Label shall be Brady self-Laminating 1.2” x 1/5” wrap around type #29689 – (No approved equal

IP-Based Paging Software and Server

7.27 District has an existing software version of the Informacast control software and the Cisco Call Manager software. The Contractor shall be responsible for providing upgrades to the existing Informacast control software, if applicable. The Cisco Call Manager software changes shall be provided by the District

7.27.1 Coordinate the pass class bell schedules and desired paging tone to be used with the District IT Department and the Site Principal.

7.27.2 Contractor is responsible for providing all licensing requirements and software updates (as required to bring product up to date) to drive the speakers, horns, zone controllers, program tones, bell schedules and announcement controls.

7.27.3 Programming of speakers and horns for page coverage zones, tones, time schedules, pass class bell, pre-recorded emergency announcements, VoIP interface, paging announcements, pre-recorded emergency announcements and pass class bell notifications for the new speaker locations to be completed by the Contractor. The District will be responsible for providing IP addressing to the Contractor for the network to identify all system IP devices.

7.27.4 Contractor's responsible for providing MAC addressing and identification of individual speakers and horns, zone controllers or any other IP based device in the system. Provide spreadsheet list to the district IT department.

7.27.5 Contractor to provide a minimum of 4-hours of meeting time with the District to confirm all programming requirements. The Contractor shall provide Meeting Minutes and proposed bell schedules, access control codes, pre-recorded message requirements and proposed bell tones to the District and the Project Engineer for approval. Contractor shall not program system until programming proposals have been approved.

PART 8 - INSTALLATION

8.1 Upon completion of 10% of the cabling installation, the Contractor shall notify the Project Engineer for an inspection of the methods and types of materials used on the project. The Contractor shall give a minimum of 72 hours notification to the Project Engineer for the scheduling of the inspection. The Contractor will be given a written review of the findings, so if adjustments are required, they can be done before the project proceeds.
The Contractor shall be responsible for adhering to the findings and a follow-up inspection will not be provided.

8.2 Pull strings shall be provided with all cable runs including but not limited to; conduit stub ups, conduit sleeves, cable trays, open wiring routes, innerduct, and point-to-point conduits. Pull strings shall be free from cable bundles in open wiring routes. Pull strings shall not be substituted for pull ropes for the exterior site conduits.

8.3 Velcro cable management straps are required on all Category-6 cable bundles, the last 20 feet or upon entry into equipment closet, a maximum of 12" apart. Cable bundles shall also be routed through cable management or "D" rings in the equipment closet.

8.4 Data Contractor shall supply protective bushings or slide on rings at the ends of all exposed conduits used for the data system cabling. This is to include all conduits installed for any future data cabling requirements. Contractor shall submit planned protection bushings prior to installation of cabling for approval.

8.5 Velcro cable management straps are required on the cabling in the rear section of the vertical managers on the equipment racks. Straps shall be a maximum of 12" apart. At a minimum, Velcro straps shall be provided at each point the cables are routed to the patch panels from the main bundle.

8.6 Every fiber in every fiber optic cable must be terminated at both ends on a fiber patch panel in the MDF/IDF closet or cabinet location. Termination shall be accomplished using the correct style of connectors as directed by the District with a strain relief boot. All connectors shall be of the same manufacture to ensure compatibility. Polarity of fiber strands must be observed at all times.

8.7 Labeling

8.7.1 Each cable run shall be permanently labeled at each end with a unique sequential number which corresponds to a similar number provided for each data outlet and patch panel point. A printed label shall be placed at each of the following locations;

8.7.1.1 On the cable at the rear of the patch panel or termination block. Requires the use of a self-laminating wrap around label. Brady Label self-laminating 1.2" by 1.5" wrap around label Part #29689 (NO ACCEPTABLE EQUAL).

8.7.1.2 On each cable in the j-box behind the faceplate location. Requires the use of a self-laminating wrap around label. Brady Label self-laminating 1.2" by 1.5" wrap around label Part #29689 (NO ACCEPTABLE EQUAL).

8.7.1.3 On the cable at the terminal strip prior to termination point. Requires the use of a self-laminating wrap around label. Brady Label self-laminating 1.2" by 1.5" wrap around label Part #29689 (NO ACCEPTABLE EQUAL).

8.7.1.4 On the face of the patch panel, provide a 3/4" by 3/4" label with a letter or number identifying the patch panel designation. For special purpose data connections such as WAP, Audio-Visual, IP Page and IP Camera ports, the label shall be designated with colored label icon or marker.
8.7.1.5 On the face of the faceplate in the label holder window. The label shall be clearly defined with a minimum #10 font size.

8.7.2 Hand written labels are not permitted. Where cable ID includes room number identification, the Contractor shall obtain written verification of final room numbers prior to beginning labeling (numbers on plans do not always match final room numbers). Cable pulling cross reference lists will not be accepted with final documentation.

8.7.3 Each patch panel port shall be identified with a unique sequential labeling scheme. Port identification labeling pattern shall be consistent throughout the project.

8.7.4 All faceplates shall be identified with permanent printed labels. Labels must not be subject to removal by incidental contact. Contractor shall be responsible for replacing defective labeling for a period of one year from date of final sign-off of project.

8.7.5 All fiber optic and UTP feed cables shall be identified with a permanent, water resistant, printed labels. Labeling information shall include closet identifications, quantity of conductors (UTP) or strands (fiber) and house pair designations (UTP). Cables shall be labeled in the IDF/MDF closets at the site conduit entrance point, Riser conduit entrance point and prior to entering either punch blocks or patch panels. Labels for fiber and copper feeds shall include both the name of the origination point and the destination point, house pair or house fiber strand count, cable composition (ie:12-Strand MM 50/125 LO; 6-Strand SM). See details for additional requirements.

8.7.6 Labeling will follow recommended EIA/TIA standards or as requested by the customer. Contractor will confirm labeling pattern prior to final identification or testing. All test results will be identified by the final labeling scheme. Contractor shall be required to have the labeling scheme approved in writing by the District IT Director prior to manufacture or installation of the labeling.

8.7.7 All fiber optic cables and/or innerduct shall be tagged with fiber optic warning tags in every manhole or pullbox. Fiber warning tags shall also be placed at each end of the cable in the termination closets in clear view. A minimum of (3) tags are required at each end, with a label tag on each cable in the service loop. Fiber warning tags shall be placed on fiber optic cable and/or innerduct routed through open ceiling environments at increments no less than 15 feet apart.

8.7.8 Refer to detail drawings for additional labeling requirements.

8.8 Where open wiring cables are run through the ceiling space (only permitted where specifically noted on the drawings), the wire shall be bundled together and supported above the ceiling.

8.9 All cables must be fastened to the building structure via “j-hooks” or an approved Category 6 suspension system, and not directly in contact with ceiling system. For “j-hooks” maximum fill capacity is as follows: 1-5/16” hooks – 35 cables; 2” hooks - 60 cables; 4” hooks - 120 cables. For quantities beyond 120 cables use a sling support system such as “Erico Cable Cat” or equal. Maximum fill capacity 200 cables. D-rings, “Caddy #WMX cable hangar”, “Caddy Bridle Rings”, drive rings or any other type of wire ring support is not allowed.
8.10 All new cabling shall include the support systems (J-hooks, saddles, Velcro ties, etc.) regardless if the outlets are shown as new locations or existing locations where the cables are to be replaced.

8.11 Where cables pass through a fire-resistant portion of the structure, conduit sleeves shall be provided to maintain the rating of the wall penetrated. Sealing of all penetrations with an approved fire barrier is required. Conduits and sleeves must remain accessible for future use. Permanent sealants may not be used to seal sleeves and conduits.

8.11.1 The 27 10 00 Contractor shall be responsible for fire-stopping all unused conduit sleeves in the ceiling or through rated walls. The Electrical Contractor shall be responsible for fire-stopping around the conduit or sleeve, unless the sleeve is installed by the 27 10 00 Contractor, in which case, the 27 10 00 Contractor shall be responsible for all fire-stopping requirements.

8.11.2 Expanding foam is not an acceptable sealant for any conduit opening. Contractor shall be responsible for complete replacement of the conduit and cabling in any conduit filled with expanding foam used as a sealant.

8.12 Fiber optic feed cables connecting to equipment racks from the MDF Room or from an adjacent IDF location, shall be installed with not less than a 20-foot service loop between the rack and mounted on the backboard. See drawings for fiber optic service loop requirements.

8.13 Provide 6 inches of cable slack at computer data system outlets inside conduit box.

8.14 In an accessible ceiling area, provide a 10-foot (stored in a Figure-8 configuration) service loop above the all data/voice outlet locations. Service loop must be securely tied up off of ceiling tiles or ceiling surface and supported at two opposite points. Neatly coil cable without exceeding minimum bend radius limitations. Do not provide length in excess of 15 feet, as it may cause improper test results and errors.

8.15 Do not provide a service loop in the MDF/IDF Room on the UTP cables, unless otherwise noted. Cables shall be neatly routed around the perimeter of the room to the cable runway from the point of entrance into the room.

8.16 The minimum bending radius for all cables and the maximum pulling tension shall not exceed manufacturer’s recommendations.

8.17 Cables installed in manholes and pullboxes shall be supported with Velcro ties or loosely fitted UV rated tie wraps, on wall mounted cable support racks. The cables shall be clearly labeled in the manhole or pullbox.

8.18 Provide a full 360-degree loop of slack cable around manhole and pullbox interiors. Cables entering handholes from the bottom, shall not be allowed to touch the bottom of the cover when closed and shall not be pinched or crushed in any way.

8.19 Cable pulling shall use a split mesh grip over the cable jacket. Connection directly to optical fibers and copper wire conductors shall not occur.

8.20 When pulled through conduits, cable pulling lubricants shall be continuously applied to all cables and be specifically approved by the manufacturer.
8.21 Where cables are pulled through or pulled from a center of run, pull without splices or terminations, lead out the cables at all manholes, pullboxes, and conduits, taking care to feed them in again by hand for the next run.

8.22 For each cable pull where a cable direction change is required, flexible feed-in tubes, pullout devices, multi-segmented sheaves, etc., shall be used to ensure proper cable pulling tensions and side wall pressures. Cables shall not be pulled directly around a short right-angle bend. Any device or surface the cable comes in contact with when under pull-in tension shall have a minimum radius 50% greater than the final specified minimum installed cable bending radius. The maximum possible size radius sheaves and feed-in tubes, usable in the available working space, shall be provided in all situations, to ensure the minimum possible cable sidewall pulling pressure. Do not use devices with multi-segment "roller" type sheaves.

8.23 Cable lengths over 250 feet shall be machine pulled, not hand pulled. Cables shall be pulled in a continuous, smooth operation without jerking or stop-start motion after initiation of pull. Maximum cable pulling speed shall be less than 50 feet per minute. Minimum pulling speed shall be greater than 15 feet per minute.

8.24 A pull string shall be placed with all UTP and paging station cables at the time of installation. Conduit runs and surface raceway for station cabling shall be furnished with a minimum 2-Ply spiral wrap style, pull string rated for 240 ft/lbs. pulling strength, such as manufactured by Greenlee #431 or approved equal. Includes all conduit stubs and cables routed through open ceilings and cable trays. Pull strings shall be tied off in the junction box and in the ceiling. Provision for the installation of the pull string shall apply to all empty and spare conduits as well. Single ply type pull string will not be accepted as a substitute for the 2-ply pull string.

8.25 A measuring pull tape shall be placed with all feed cables at the time of installation. Indoor riser and Outdoor conduit runs between buildings designated for feed cabling, in excess of 150 feet shall be provided with a minimum ½” polyaramid style, measuring true tape pull string annotated with footage increments rated for 2500 ft/lbs. pulling strength, such as manufactured by Greenlee #39245 or approved equal. Conduit runs less than 150 feet shall be furnished with a ¼” polyaramid style, measuring true tape pull string annotated with footage increments rated for 1250 ft/lbs. pulling strength, such as manufactured by Greenlee #39243 or approved equal. Provision for the installation of the measuring pull tape shall apply to all empty and spare conduits as well. Standard twine style pull strings and standard nylon or polypropylene style pull ropes will not be accepted as a substitute for the polyaramid measuring tape type pull string.

8.26 When pulling cable through conduit, cables shall be pulled straight into or out of the raceway without bends at the raceway entrance or exit. Pull in cable from the end having the sharpest bend (i.e., bend shall be closest to the reel.) Keep pulling tension to minimum by liberal use of lubricant, hand turning of reel, and slack feeding of cable into duct entrance. Employ not less than one man at reel and one at manhole or pullbox during this operation. Cables shall be pulled directly from cable reels.

8.27 All cables shall be new and extend continuous from each MDF or IDF backboard or rack to all outlet locations.

8.28 Where cables are not installed in a conduit or other raceway system, they shall not be routed parallel with other line voltage equipment or wiring (120 volt and above) within 36” or within 12” of line voltage equipment or wiring where crossing.

8.29 Where OSP-Rated UTP cables or OSP-Rated fiber optic cables are routed exposed through ceilings for more than 50'-0", Contractor shall install the cable in innerduct or
EMT conduit in the ceiling. Innerduct installed in the accessible ceiling space shall be a minimum of riser rated and a minimum of 1" in diameter. Innerduct shall be supported a minimum of every 3-feet to the structural members.

PART 9 - TESTING

9.1 All Category-6 cables shall be point to point (link) tested after installation/termination, and verified to operate at minimum 1000Mbps. Performance of installed cables shall satisfy all current addendums to the EIA/TIA 568A standard for Category-6 wiring. In addition, testing shall satisfy all proposed amendments to the existing ISO/IEC requirements. The wiring shall support all specified communication protocols. Testing shall support the Category-6 requirements by the EIA/TIA.

9.2 Upon completion of testing cable links for both copper and fiber optic cabling, the Contractor shall supply a copy of the original database files downloaded from the tester in original format on a USB Flash Drive. Contractor shall provide with the testing database files, an original copy of the tester’s manufacturer software program (included in original cost) for record management and archiving, in a Windows format (i.e.; Fluke Linkware software program)

9.2.1 The manufacturer’s software program will be used by the Project Engineer to review all test results, and then turned over to the District to keep as their record copy with the final approved test results. Provide (3) copies of tests on USB Flash drive. Do not submit test results for review in Excel or PDF file formats, as the submittal will be rejected and not reviewed.

9.3 Contractor will repair or replace cable runs or connecting hardware that do not meet specified criteria.

9.4 Multimode fiber optic cables shall be tested bi-directionally at 850nm and 1300nm. All fiber strands shall be tested with an OTDR (Optical Time Domain Reflectometer). All fiber test results shall contain final source and destination information that matches IDF or MDF labeling shown on the fiber optic patch panels and final documentation. OTDR test results shall be included with the copper test results and submitted with the tester’s software for review. Do not submit test results for review in Excel or PDF file formats, as the submittal will be rejected and not reviewed.

9.5 Test procedures shall comply with EIA/TIA 526-14 Method B. Test results shall meet the minimum following criteria:

9.5.1 Fiber optic test results shall not exceed 2db total attenuation loss in addition to inherent loss published by manufacturer tested at minimum 2000 Mhz for 850nm and 500 Mhz for 1300nm for the fiber optic cable.

9.5.2 Test all data cables minimum Category-6 UTP cable to test results for “Channel Testing” requirements @ 250 Mhz per current EIA/TIA requirements. Any cables which do not meet these minimum requirements shall be replaced or repaired at no cost to the District.

9.6 End to end attenuation testing shall be performed with a temporary test jumper cable at each end of the installed fiber cable. The test jumper utilized shall be the same fiber core size and grade of glass as the installed cable. The measured attenuation of the test jumpers, test connectors, and test interconnection sleeve between the two test jumpers shall be less than 1dB as calibrated at the time of the test at indicated wave lengths and frequencies. Test jumpers shall be “zeroed out” before testing of fiber strands begins.
PART 10 – CLOSE-OUT DOCUMENTATION

10.1 Final As-Built Drawing Submittals - Provide (1) hard bound copy of "E-size" As-Built drawings and (3) copies on USB Flash Drive in AutoCAD (2014 or newer version) format. A Hand marked-up copy of the original construction drawings will not be accepted as the final As-Built drawing submittal. Final As-Builts shall include copies of the floor plan drawings of each building, detailed elevations of each MDF or IDF locating all equipment, quantities outlets and speaker locations, locations of all sleeves and identification of all final cable routes. In addition, the drawings shall include all outlet locations with cable identification numbers.

END OF SECTION
ARTICLE 1 - SUMMARY

1.1 This Division of the specifications outlines the provisions of the contract work to be performed as a subcontract under the Division 26 scope of work. Reference the Division 26 Electrical General Provisions for scope of work and general requirements.

1.2 In addition, work in this Division is governed by the provisions of the bidding requirements, contract forms, general conditions and all sections under Division 1 requirements.

END OF SECTION
SECTION 28 1300
SECURITY SYSTEM

PART 1 – GENERAL

1.1 Furnish all materials, equipment and labor, and perform all operations in connection with systems work as indicated on the drawing, as specified herein and required to complete the work.

1.2 Related Specification Sections:

1.2.1 Division 26 05 33 – Conduit and Fittings
1.2.2 Division 26 05 19 or 26 05 13 – Conductors
1.2.3 Division 26 05 34 – Outlet and Junction Boxes

1.3 All security system components shall be manufactured by and wiring shall be furnished and installed by a factory authorized contractor and distributor. The Contractor shall hold a license from the State of California for the purpose of installing security systems.

1.4 The contractor shall be regularly engaged in the installation and repair of the type of equipment to be installed.

1.5 The conduit, outlets, terminal cabinets, device backboxes, etc., which form a part of the rough-in work, shall be furnished and installed complete by the Contractor. Security system components as listed under products shall be furnished and installed by the authorized subcontractor.

1.6 The subcontractor shall furnish all equipment, accessories and material required for the complete installation of a security system in accordance with specifications and as shown on the drawings. Any material and/or equipment necessary for the proper operation of the system not specified or described herein shall be deemed part of this specification. The distributor must also provide complete installation of all wiring and devices or equipment. Supervised installation for the wiring and devices shall be permitted with the following conditions:

1.6.1 A letter will be required from the security system manufacturer’s representative certifying that the cable installation was completed in compliance with the manufacturer’s recommended installation requirements.

1.6.2 The cables shall be tested in the presence of the manufacturer’s representative. These tests will then be submitted to the electrical engineer.

1.6.3 The security system shall be warranted by the manufacturer’s representative per the contract agreement.

1.7 Phase I Submittal shall be made within (20) working days after the award of the contract by the District. This submittal shall include the following:

1.7.1 Complete bills of quantities, including all materials, components, devices, and equipment required for this work. The bills of quantities shall be tabulated respective of each and every system as specified, and shall contain the following information for each item listed:

1.7.1.1 Description and quantity of each item.
1.7.1.2 Manufacturer's Name and Model Number.
1.7.1.3 Manufacturer's Specification Sheet.
1.7.1.4 Description of any specialty backbox requirements.

1.8 Phase II submittals shall be provided within (20) working days after the approval of the Phase I submittals and prior to any fabrication or field conduit installations. All shop drawings shall be engineered and drawn on a CAD System. Each submission shall include 'D' or 'E' size print copies to match the contract drawings, and (1) data disc copy with files in a AutoCAD 2000i or 2004 format. Building floor plan CAD files on disc will be made available via express mail after the receipt of payment of $50.00 per building floor plan, or $300.00 minimum which ever is lesser. Contractor shall make the request for drawings in writing directly to Johnson Consulting Engineers, confirmation of the request and a release form will be forwarded to the contractor to include a signed copy with payment prior to release of files. Detail or riser diagram sheets or any other drawings other than floor or site plans, will not be made available to the contractor. Phase II submittals drawings shall include the following:

1.8.1 Provide complete shop drawings to include:

1.8.1.1 Complete floor plans showing the locations throughout the project of all receptacles, conduits, wireways, tray, pullboxes, junction boxes, equipment locations, and other devices.

1.8.1.2 Typical system riser diagrams, specialty equipment or rack elevations will be required to be provided.

1.9 The contractor shall provide as part of this contract additional motion sensors to equal 10% of the total quantity of devices shown on the drawings or a minimum of three (3) for each type, whichever is greater. Installation of conduit, boxes and wiring of these devices shall be included, and required locations coordinated with final approved shop drawings. Any devices not required to be included during construction shall be delivered to the District at the completion of the project. The quantities of these devices shall be listed as a part of the Phase 1 submittals.

1.10 Common submittal mistakes which will result in submittals being rejected:

1.10.1 Not including the qualifications of the installing contractor.

1.10.2 Not including all items listed in the above itemized description.

1.10.3 Including catalog cut sheets which have several items on a page, and not clearly identifying by highlighting underlining or clouding the items to be reviewed, r crossing out the items which are not applicable.

1.10.4 Not including actual manufacturer's catalog information of proposed products.

1.10.5 Do not include multiple manufacturers for similar products and do not indicate "or approved equal" statements, or "To be determined later" statements. The products being submitted must be the products installed.

PART 2 – PRODUCTS

2.1 Building Security System

2.2 Main Control Panel – Existing NAPCO Magnum Alert 2000 Series in Building ‘P’.
2.3 Provide additional components to the existing supervised intrusion detection system including, but not limited to, control panels, expansion panels, keypads stations, motion detectors, door contacts, zone expanders and a digital communicator.

2.3.1 Upon detection of an intruder by initiation of any device in the system, the system shall cause alarm information to be sent by digital dialer to an independent alarm monitoring agency. Each motion sensor and/or door contact shall have a distinct address and each address shall report to the monitoring agency including the site name, building name, and room number identifications associated with each device. The installing Contractor must submit a list of all devices and their reporting identifications to the district for review and approval prior to any programming. Naming and room numbers must be consistent with actual facility identifications, which may vary from identifications included in the bid construction documents. An operational test of each installed system must be able to confirm compliance with the above requirements for each device installed, before the system will be considered complete and operational.

2.4 Systems shall detect the entry and/or the motion of a body taking not more than four steps in an area secured with motion detection equipment where entry doors or windows are possible access.

2.5 System shall be zoned with the (4) buildings included as part of these documents controlled separately and each sensor individually addressable so that portions of the facility may be secured while others remain unsecured. All zones shall be able to be armed or disarmed from the Master Keypad in the Administration Building. An additional keypad shall be provided in the designated building shown on the drawings, which will be used for arming or disarming the new zone specific to the portions of the campus included in the project drawings.

2.6 Administration of Security System (Keypad)

2.6.1 When staff arrives, they would enter their code to the keypad. This would disarm the building in which the staff works, and the “not armed” indicator light and the annunciator will be triggered.

2.6.2 When staff is leaving, (and presumably is the last one from their building leaving) they would press the “Command” button, then select “Arm”, then select “All”. The building would arm, and the armed indicator light at the annunciator will be triggered.

2.7 Master Keypad

2.7.1 The Administration Building is the location of the existing Master Keypad for the campus. The Master Keypad is the main keypad control, able to arm and disarm all zones throughout the site. The Master Keypad shall be programmed to accept the new zone that will be provided in the new project. The Contractor shall program the control functions and access for the approved personnel to control the new zones.

2.7.2 Contractor shall meet with the Principal and Security Personnel at the school to determine the coverage zone for the keypad in the new buildings and the building additions. Program and set zones as required to provide a turn-key installation of the security system.
2.8 **Keypads** - Keypads shall be alpha numeric LCD display series capable of displaying system status and controlling the alarm system. Unit shall receive its operating power from the control panel.

2.8.1 Keypad shall be furnished in the building shown on the drawings and shall be control the new zone or as otherwise directed by the District. Keypads shall have the ability to Arm/Disarm the entire zone area.

2.8.2 Provide keypads at locations as shown on drawings for coverage of all of the project buildings or as otherwise required by the School District. The new zone shall have the ability to be controlled by the existing Master Keypad located in the Administration Building. Provide two-line Alphanumeric LCD display keypad by Model #6160 by Honeywell or equal by Bosch Model.

2.9 **Motion Sensors** - Motion sensors shall be passive infrared with microwave Doppler radar detection. Sensor coverage patterns shall be as required for optimum coverage at each individual location. Sensor shall be wall mounted at the locations as shown on the drawings.

2.9.1 Wall Mounted Motion Sensors – Classrooms - Honeywell Model #DT-8050A or approved equivalent by Napco Magnum Alert. Coverage pattern minimum capability of 50-feet by 60-feet. Larger non-classroom spaces shall also be provided with this model of sensor.

2.9.2 Wall Mounted Motion Sensors – Offices, Workrooms or other similar smaller rooms - Honeywell Model #DT-8035 Model #ISC-BDL2-WP6x or approved equal by Napco Magnum Alert. Coverage pattern minimum capability of 30-feet by 30-feet.

2.9.3 Ceiling Mounted Motion Sensors – Rooms with accessible ceilings including classrooms and relocatables shall be furnished with a ceiling mounted sensor by Honeywell Model #DT-8360DTM or approved equal by Napco Magnum Alert.

2.9.4 Submittals for equivalent approval must be submitted to the Project Engineer within 10 days of award of project or the equivalent will not be considered.

2.10 **Wire and Cable** - Cabling shall be as required for system operation or as shown in the specifications and detail drawings. Refer to the floor plans for additional requirements.

2.10.1 Interior Riser Rated Keypad Cable - Provide (4) conductor, 18-AWG, Polypropylene coated stranded bare copper conductors with PVC jacketed, Riser-rated cable for keypad locations within a building. Provide Honeywell Part #2115 or West Penn Part #244.

2.10.2 Exterior Riser Rated Keypad Cable - Provide (4) conductor, 18-AWG, stranded bare copper conductors with PVC jacketed, Outdoor-rated, direct burial type cable for keypad locations between buildings. Cable shall be used for all exterior cable runs. Provide Honeywell Part #4157 or West Penn Part #AQ244.

2.10.3 Interior Riser Rated Motion Detector Cable - Provide (4) conductor, 22-AWG, Polypropylene coated stranded bare copper conductors with PVC jacketed, Riser-rated cable for motion detector locations within a building. Provide Honeywell Part #2104 or West Penn Part #241.
2.10.4 Interior Riser Rated Door Contact Cable - Provide (2) conductor, 22-AWG, Polypropylene coated stranded bare copper conductors with PVC jacketed, Riser-rated cable for door contact locations within a building. Provide Honeywell Part #2102 or West Penn Part #221.

PART 3 – EXECUTION

3.1 All connections throughout the system shall be soldered, crimped by means of AMP lugs, fastened with screw type terminals, made by spring tension clip "punch block" terminals or made by standard plugs and receptacles.

3.2 All conductors in terminal cabinets shall be carefully formed and harnessed in a workmanlike manner.

3.3 Labeling

3.3.1 Each cable run shall be permanently labeled at each end with a unique sequential number which corresponds to a similar number provided for each data outlet and patch panel point. A printed label shall be placed at each of the following locations:

3.3.1.1 On the cable at the within 6” of the notification device or in the J-Box near the device for door contacts. Requires the use of a self-laminating wrap around label. Brady Label self-laminating 1.2” by 1.5” wrap around label Part #29689 (NO ACCEPTABLE EQUAL).

3.3.1.2 On the cable at the terminal strip prior to termination point or on cable where terminated on the 66-Type punch blocks. Requires the use of a self-laminating wrap around label. Brady Label self-laminating 1.2” by 1.5” wrap around label Part #29689 (NO ACCEPTABLE EQUAL).

3.3.1.3 Inside a terminal cabinet or prior to the termination in a Pop-it. Requires the use of a self-laminating wrap around label. Brady Label self-laminating 1.2” by 1.5” wrap around label Part #29689 (NO ACCEPTABLE EQUAL)

3.3.2 Hand-written labels are not permitted. Where cable ID includes room number identification, the Contractor shall obtain written verification of final room numbers prior to beginning labeling (numbers on plans do not always match final room numbers). Cable pulling cross reference lists will not be accepted with final documentation.

3.3.3 Labeling will follow recommended District Standards or best practices if there is no District standard. Contractor will confirm labeling pattern prior to final identification or testing. All test results will be identified by the final labeling scheme. Contractor shall be required to have the labeling scheme approved in writing by the District IT Director prior to manufacture or installation of the labeling.

3.3.4 The Electrical Contractor shall be responsible for fire-stopping around the conduit or sleeve, unless the sleeve is installed by the 27 10 00 Contractor, in which case, the 27 10 00 Contractor shall be responsible for all fire-stopping requirements.
3.3.5 Refer to detail drawings for additional labeling requirements.

3.4 Where open wiring cables are run through the ceiling space (only permitted where specifically noted on the drawings), the wire shall be bundled together and supported above the ceiling.

3.5 The 28 13 00 Contractor shall supply protective bushings or slide on rings at the ends of all exposed conduits used for the security system cabling. This is to include all conduits installed for any future security cabling requirements. Contractor shall submit planned protection bushings prior to installation of cabling for approval.

3.6 The 28 13 00 Contractor shall furnish and install separate cable support pathways and shall not use a support system pathways installed by another Contractor. All cables must be fastened to the building structure via the use of "j-hooks" or an approved suspension system and not directly in contact with ceiling system. For "j-hooks" maximum fill capacity shall be followed per the manufacturer's recommendations. D-rings, "Caddy Bridle Rings", drive rings or any other type of wire ring support is not allowed.

3.7 All security system cabling shall be installed in conduit where indicated on the drawings or where routed exposed and shall be open wiring where routed above accessible ceilings or in walls.

3.8 The 28 13 00 Contractor shall furnish and install their own sleeves through rated barriers, not sleeves installed by other Contractors. The sleeves shall not exceed a 40% fill rate for the conduit size per NEC code definitions, with a 1" conduit minimum sleeve size provided. Where cables pass through a fire-resistant portion of the structure, conduit sleeves shall be provided to maintain the rating of the wall penetrated. Sealing of all penetrations with an approved fire barrier is required. Conduits and sleeves must remain accessible for future use. Permanent sealants may not be used to seal sleeves and conduits.

3.8.1 Expanding foam is not an acceptable sealant for any conduit opening. Contractor shall be responsible for complete replacement of the conduit and cabling in any conduit filled with expanding foam used as a sealant

3.9 Coordinate with the 27 10 00 Contractor for shared responsibility for fire-stopping all shared conduit sleeves into the MDF/IDF closet or through floor penetrations. The Security Contractor shall firestop any sleeves used in common pathways with the data cable installed by the 27 10 00 Contractor, if the conduit has already been previously sealed.

3.10 Locate motion sensors on walls to provide optimum coverage of the space and to not conflict with the architectural aesthetics of the building. Locations of motion sensors as shown on the floor plans are diagrammatic only. Ceiling mounted motion sensors shall provide coverage of all entry points of the space and shall not interfere with the operation of other similar sensors, such as the lighting occupancy sensors.

3.11 Keypads shall be wired not to exceed 1000 ft cable run from the main control panel and no more than two (2) keypads per 1000-foot cable run. Provide #18AWG minimum. All Cables routed underground shall be suitable for wet location provided with UL listed wet location insulation or flooded type cable construction.

3.12 Final System Acceptance
3.12.1 The system will be accepted only after a satisfactory test of the entire system has been accomplished by a Factory-Trained Distributor in the presence of a representative of the authority having jurisdiction and the Owner's representative. This contractor shall provide all personnel, ladders and testing equipment to assist the local authority in completing this test. Actuate each device and verify that the system performs as specified.

3.12.2 Once the system has been tested, the contract shall not be considered complete until after owner training has been completed. The Contractor shall notify in writing their intent to provide the training for the system. This notification shall be given to the Division 21 Contractor, Architect and the Project engineer a minimum of two weeks prior to the scheduled training session. The Division 21 Contractor and or the architect shall be responsible for notifying the owner to confirm that the appropriate district personnel will be made available for this training session. If the Division 21 Contractor does not receive confirmation that the training session can be performed on the proposed date, then another time shall be provided. The training shall consist of the following:

3.12.2.1 Provide a minimum of one (1) two-to-four-hour training period located at the project site, to instruct District personnel in proper operation of all systems.

3.12.2.2 Provide a minimum of three (3) complete owner operation manuals for the district records.

3.12.2.3 Provide a minimum of two (2) complete as built sets of drawings for the district records.

3.12.2.4 Provide all spare parts as described in Part 1 of these specifications

3.12.2.5 Provide written confirmation and proposed scheduled dates for follow up training and one-year complete system test.

3.12.2.6 Provide a proposed cost to the owner to provide additional complete system testing on an annual basis, in addition to the one-year test required as a part of this contract.

3.13 All Security System cables and devices shall be point to point tested after installation/termination and verified to operate at 100% performance. The sensor devices shall be tested and confirmed for operational confirmation at the security panel. System shall be tested in a “mock-intrusion” to confirm that the proper sequence of events will occur regarding the notification of the District and/or Monitoring Company, per the District’s Security and Safety protocols and instructions. Intrusion System shall integrate with the Video Surveillance cameras as required by the District. Confirm inter-system operability requirements with the District.

3.14 One Year Complete System Test - Provide as a part of this contract after a period of one (1) year from the final acceptance of the system the contractor shall return to provide a 100% test of all devices and the operation of the system including battery tests. All test results shall be documented, and results provided to the owner. All defective parts shall be replaced at no cost to the District.

END OF SECTION
SECTION 28 3000
FIRE ALARM SYSTEM

PART 1 – GENERAL

1.1 Work Included:

1.1.1 Furnish and install all equipment, accessories, and materials in accordance with these specifications and drawings to provide a complete and operating fire alarm system.

1.2 Related Work:

1.2.1 Division 26 01 00: Electrical General Provisions
1.2.2 Division 26 05 33: Conduit and Fittings
1.2.3 Division 26 05 34: Outlet and Junction Boxes

1.3 The equipment and installation shall comply with the current applicable provisions of the following standards:

CBC - 2019. . . . . California Building Code (CBC), Part 2, Title 24, CCR.
CEC - 2019. . . . . California Electrical Code, (CEC), Part 3, Title 24, CCR.
CFC - 2019. . . . . California Fire Code (CFC), Part 9, Title 24, CCR.

1.4 The system and all components shall be listed by Underwriters Laboratories, Inc. for use in Fire Protective Signaling Systems under the following standards as applicable:

UL 38 . . . . . . . . . . . . Manually Actuated Signaling Boxes.
UL 50 . . . . . . . . . . . . Cabinets and Boxes.
UL 268 . . . . . . . . . . Smoke Detectors for Fire Protective Signaling Systems.
UL 268A . . . . . . . . . Smoke Detectors for Duct Applications
UL 346 . . . . . . . . . . Waterflow Indicators for Fire Protective Signaling Systems.
UL 464 . . . . . . . . . . Audible Signaling Appliances.
UL 864 . . . . . . . . . . Control Units for Fire Protective Signaling Systems.
UL 1481 . . . . . . . . . Power supplies for Fire Protective Signaling Systems.
UL 1971 . . . . . . . . . Visual Signaling Appliances.

1.5 Only Fire Alarm Control Panel Equipment and Peripheral Field Devices have been shown on the Contract Bid Single Line Block Diagram. Specific and complete wiring between Control Equipment and Peripheral Equipment has been deleted for clarity.

1.6 Submittal shall be made in accordance with Division 26 01 00 – Shop Drawings and Submittals. This submittal shall include the following:

1.6.1 Complete bills of quantities, including all materials, components, devices, and equipment required for this work. The bills of quantities shall be tabulated respective of each and every system as specified, and shall contain the following information for each item listed:

1.6.1.1 Quantity of each type of equipment item.
1.6.1.2 Description of each item.
1.6.1.3 Manufacturer's Name and Model Number.
1.6.1.4 Manufacturer's Specification Sheet.
1.6.1.5 California State Fire Marshall Listing Sheets for all components.
1.6.1.6 Equipment items which have individual components, will require that all component parts be listed individually.
1.6.1.7 Letter indicating the contractor’s intent to comply with Phase II submittal drawings.

1.7 Phase II Submittal shall be provided **within (20) working days** after the approval of the Phase I submittals and prior to any fabrication or field conduit installations. All shop drawings shall be engineered and drawn on a CAD System. Each submission shall include 'D' or 'E' size print copies to match the contract drawings, and one (1) data disk copy with files in a AutoCAD 2000i or 2004 format. Building floor plan CAD files on disk, will be made available via express mail after the receipt of payment of $50.00 per building floor plan, or $300.00 minimum which ever is less. Contractor shall make the request for drawings in writing directly to Johnson Consulting Engineers, confirmation of the request and a release form will be forwarded to the contractor to include a signed copy with payment prior to release of files. Detail or riser diagram sheets or any other drawings other than floor or site plans, will not be made available to the contractor.

1.7.1 **Provide complete shop drawings to include the following:**

1.7.1.1 Complete floor plans, at scale of contract documents, showing the locations throughout the project of all receptacles, conduits, wireways, tray, pullboxes, junction boxes, equipment racks, and other devices.
1.7.1.2 Point to point wiring diagrams showing wiring from panel terminals to each device.
1.7.1.3 Scaled floor plans indicating the location of devices, conduit runs, types, and number of conductors.
1.7.1.4 Riser diagram indicating all wiring and circuits.
1.7.1.5 Current State Fire Marshal listing sheets for all components and devices.
1.7.1.6 Provide battery power supply calculations, indicate point of power supply connection, means of disconnect, over-current protection, etc. for each panel.
1.7.1.7 Provide detailed information on conductors to be used-manufacturer, type, size, insulation, etc.
1.7.1.8 Provide voltage drop calculations for all conductor run is from each panel (i.e., main FACP, remotes, power extenders, etc.) for each panel.
1.7.1.9 Provide written sequence of system operation matrix.
1.7.1.10 Provide list of zones. (Every device that is addressable.)
1.7.1.11 Provide detailed drawing for annunciator panel indicating all zones and initiating devices.

1.8 **Common submittal mistakes which will result in submittals being rejected:**
1.8.1 Not including the qualifications of the installing contractor.

1.8.2 Not including all items listed in the above itemized description.

1.8.3 Including catalog cut sheets which have several items on a page, and not clearly identifying by highlighting, underlining or clouding the items to be reviewed, or crossing out the items which are not applicable.

1.8.4 Not including actual manufacturer’s catalog information of proposed products.

1.8.5 Do not include multiple manufacturers for similar products and do not indicate “or approved equal” statements, or “to be determined later” statements. The products being submitted must be the products installed.

1.9 All equipment and material shall be new and unused, and listed by Underwriter's Laboratories for the specific intended purpose. All control panel components and field peripherals shall be designed for continuous duty without degradation of function or performance. All equipment covered by this specification or noted on Installation Drawings shall be equipment suited for the application and shall be provided by a single manufacturer or be recognized and UL listed as compatible by both manufacturers.

1.10 It will be the responsibility of the Contractor to ensure proper specification adherence for system operation, final connection, test, turnover, warranty compliance, and after-market service. The distributor of the equipment specified must be factory-trained and certified.

1.11 Basic System Functional Operation, upon operation of any automatic, manual or other initiation device the following shall occur:

1.11.1 The system alarm LED shall flash.

1.11.2 A local piezo electric signal in the control panel shall sound.

1.11.3 A backlit 80 character LCD display shall indicate all information associated with the fire alarm condition, including the alarm point and its location within the protected premises.

1.11.4 History storage equipment shall log the information associated with each new fire alarm control panel condition, along with time and date of occurrence.

1.11.5 All system output programs assigned via control by event equations to be activated by the particular point in alarm shall be executed, and the associated system outputs (alarm notification appliances and/or relays) shall be activated.

1.11.6 LED display and audible signaling at the remote annunciator indicating building, fire zone, and type of device. Annunciator shall also provide a separate audible signal for CO detection with a green flashing light, with classroom number indication.

1.11.7 Automatic retransmission to a UL central station for fire department notification.

1.11.8 Automatic shut down of air conditioning units and/or smoke dampers furnished with duct detectors. Each building shall shut down all A/C units and dampers within that building as one zone.
1.12 All equipment and components shall be new, and the manufacturer's current model. The materials, appliances, equipment and devices shall be tested and listed by a nationally recognized approval agency for use as part of a protective signaling system, meeting the NFPA 72, 2019 Edition with California State Amendments.

1.13 All equipment and components shall be installed in strict compliance with manufacturer's recommendations. Consult the manufacturer's installation manuals for all wiring diagrams, schematics, physical equipment sizes, etc., before beginning system installation.

1.14 All equipment shall be attached to walls and ceiling/floor assemblies and shall be held firmly in place. Fasteners and supports shall be adequate to support the required load.

1.15 All wiring shall be installed in a conduit system.

1.16 The contractor shall provide as a part of this contract additional control modules, heat detectors, smoke detectors, CO detector, duct detectors, manual pull stations, strobes, mini-horns and exterior horn devices etc., to equal 10% of the total quantity of devices shown on the drawings, or a minimum of three (3) for each type, whichever is greater. Installation of conduit, boxes and wiring of these devices shall be included, and required locations coordinated with CSFM final approved shop drawings. Any devices not required to be included during construction shall be delivered to the District at the completion of the project. The quantities of these devices shall be listed as a part of the Phase I submittals.

1.17 The installing contractor shall provide a copy of current documentation, indicating that the contractor installing the fire alarm systems or devices and wiring, is certified by Underwriters Laboratories (UL) in its product directories under the listing category "PROTECTIVE SIGNALING SERVICES - LOCAL, AUXILIARY, REMOTE STATION, AND PROPRIETARY." The contractor shall be certified by the manufacturer to install and program the system. The contractor must also provide complete installation of all wiring and equipment, and software programming. Supervised installation of the wiring, devices and/or any software programming shall not be permitted.

1.17.1 The installing contractor must also be an "authorized dealer" by the equipment manufacturer, and must have completed all required training prior to the bid of this project.

1.17.2 The fire alarm system installation shall be warranted by the manufacturer's representative.

1.17.3 The Contractor shall have a current California C-10 or C-7 Contractor's License, and all individuals working on this project shall have passed the Department of Industrial Relations Division of Apprenticeship Standards – “Fire / Life Safety Certification Program.”

1.17.4 The installing contractor shall provide, at the time of submittal, a letter of intent to provide an extended service warranty. This warranty shall extend for a total of three (3) years, starting at the completion, testing, and training of this project. The service warranty shall cover all material and labor to keep operational all system devices installed under this project, and shall include two (2) complete U.L. system’s tests and cleaning of all devices at year two (2) and year three (3) of the warranty. Routine cleaning of devices, other than at the two (2) specified U.L. system’s testing periods, will not be included as a part of this warranty.
1.17.5 The installing contractor shall provide, at the time of submittal, a letter indicating that the installation crew for this project meets the following NICET certifications:

1.17.5.1 25% of the installing field personnel must have completed NICET Level 2 Certification.

1.17.5.2 One of the installing field personnel and /or supervisor must have completed NICET Level 3 Certification.

1.17.5.3 Contractor shop drawings shall be signed by an individual who has completed NICET Level 4 Certification.

1.18 All conduit and standard backboxes will be furnished and installed by the Division 26 Contractor. Specialty boxes will be furnished by the equipment supplier to be installed by the Division 26 Contractor.

1.19 Equipment and materials shall be the standard product of Simplex.

Alternate equipment as manufactured by any other manufacturer not specifically listed above will not be approved for use on this project. D.S.A approved drawings are included as a part of the drawing set

PART 2 - PRODUCTS

2.1 Main Fire Alarm Control Panel

2.1.1 Fire alarm control panel is EXISTING Simplex #4100U.

2.1.2 The system shall be controlled and supervised by a microprocessor based monitoring fire alarm control panel. The systems shall be addressable, field configurable, programmable and editable. The system shall continuously scan devices for change of status. Each device shall have its own unique address, but shall also be grouped by building as a separate zone for remote annunciation and alarm report purposes.

2.1.3 The system shall be provided with a networking card and software and modem to communicate with the District-wide diagnostic and annunciation network.

2.1.4 The fire alarm control panel shall be housed in a lockable, code gauge steel cabinet with 80 character LCD display, master controller operators panel, Indicating lamps, silence switch and reset switch mounted on cabinet front. The fire alarm control panel shall be physically and visually located in the general office for monitoring by staff, and shall sound the “Temporal Pattern” in all zones. Signal duration shall be field programmable and initially set at three minutes. Provide all control modules, synchronous modules, etc., to provide a complete working system per all codes that apply.

2.1.5 The fire alarm control panel shall come with standardized software for on-site customization of the system. The unit shall be capable of providing a 600-event historical log with zone or point selectable alarm verification.

2.1.6 The unit shall support 127 addressable points per module and one output point, SPST contact per zone. Provide the number of modules necessary to control and supervise fire alarm devices as shown on the Drawings, as well as to provide 25% spare capacity.
2.1.7 The fire alarm control panel shall be capable of providing a walk test.

2.2 The power feed for the FACP shall be 3-wire, 120volt, AC, single phase (20A circuit) permanently labeled “FIRE ALARM CONTROL POWER”, terminating at the master fire alarm control and supervisory panel. The label shall be red with 1/4” high white lettering. The source circuit breaker must be provided with a lock-on device.

2.3 In addition to the AC circuit, the panel shall be equipped with a DC battery to activate an audible alarm and pilot light in case of a power failure on the AC circuit.

2.4 Batteries must drive signaling devices per current requirements of California State Fire Marshal. Battery calculations are required as part of the submittal.

2.5 The master fire alarm panel shall be equipped with a manual pull lever type, supervised report station.

2.6 With the exception of the manually operated report station required at the master fire alarm panel and large assembly areas, the remainder of the school facility shall be equipped with approved, electronically supervised, automatic fire detection devices, such that every room, space, including concealed spaces, such as the attic spaces above ceilings, etc., is provided with approved coverage.

2.7 Automatic fire detection devices shall be addressable analog smoke and heat detectors. Where used, heat detectors shall be fixed temperature x-rate of rise, fixed at 135°F and a 15°F/min rate of rise. In janitor rooms equipped with kilns, devices shall be fixed at 170°F.

2.8 MANUAL FIRE ALARM STATIONS shall be addressable test-reset lock in order that they may be tested, and so designed that after actual emergency operation, they cannot be restored to normal, except by use of a key. An operated station shall automatically condition itself so as to be visually detected, as operated, at a minimum distance of 100 feet, front or side. Manual stations shall be constructed of die-formed, satin-finished aluminum, with operating directions provided on the cover in depressed red letters. The word FIRE shall appear on each side of the stations in depressed letters, 1/2-inch in size or larger. Stations shall be suitable for semi-flush mounting on a standard single-gang box or switch plate, and shall be provided with a terminal block for connection of fire alarm system wiring. Manual pull stations must comply with CBC sections 11B-309 and 11B-403.

2.9 HORN / STROBE DEVICE shall be of the semi-flush type designed for mounting to a standard four-inch square electrical outlet box. Each device shall be provided with a semi-flush accessory plate. Exterior horns shall be weatherproof. The strobe unit shall have a meantime between failure (MTBF) of 1,000 hours or greater. The strobe section shall have a minimum flash rate of approximately one flash per second, with candela rating as per UL standard 1971. Housing shall be white.

2.9.1 In areas containing two or more audible devices, or three or more visual devices, these devices shall be synchronized, Per NFPA 72, Chapter 18 California Amendments (2019).

2.10 STROBES. The strobe unit shall have a meantime between failure (MTBF) of 1,000 hours or greater. The strobe section shall have a minimum flash rate of approximately one flash per second, with candela rating as per UL standard 1971. Housing shall be white.
2.10.1 In areas containing two or more audible devices, or three or more visual devices, these devices shall be synchronized, per NFPA 72, Chapter 18 California Amendments (2019).

2.10.2 Maximum pulse duration to be 0.20 of a second with an ADAAG 4.28.3(3). Visual alarms maximum duty cycle of 40%.

2.10.3 Capable of providing minimum candela. Intensity as shown on plans (effective strength measured at the source).

2.10.4 The flash rate to be a minimum of 1 Hz and a maximum of 2 Hz per NFPA 72 18.5.3.1.

2.11 HEAT DETECTOR DEVICES shall be addressable, fixed temperature x rate of rise, fixed at 135°F and a 15°F/min rate of rise. In janitor rooms equipped with kilns, devices shall be fixed at 170°F.

2.12 SMOKE DETECTOR DEVICES shall be analog addressable, photo-electric.

PART 3- EXECUTION

3.1 All wiring shall be (min) #18 AWG copper or as noted on drawings. All underground conductors shall be UL wet location rated for use in wet locations, West Penn “Aquaseal” or equal. There shall be no splices in underground handholes or vaults. A multi-conductor cable rated for use in wet locations will also be acceptable. It must be labeled “FIRE ALARM” in all pull boxes, using a water-tight labeling system.

3.2 Interior, dry location wiring for low voltage initiating circuits shall be #18 AWG copper, twisted shielded pair minimum, signaling circuits shall be No. 14 AWG minimum, and wiring for 120 volt circuits shall be No. 12 AWG minimum. All wiring shall be color coded, solid copper conductor. Use of power limited cable shall be restricted to controls listed for this purpose. Single conductors shall be type THHN/THWN-2 insulated copper.

3.3 Wire markers shall be provided for each wire connected to equipment. The marker shall be of the taped bank type, of permanent material, and shall be suitable and permanently stamped with the proper identification. The markers shall be attached in a manner that will not permit accidental detachment. Changing of wire colors within circuits shall be unacceptable.

3.4 A terminal cabinet shall be installed in the electric room for the fire alarm systems at each building. All fire alarm wiring shall terminate on UL approved strips in this terminal cabinet. All wiring shall be labeled at each termination strip. Wiring shall be configured such that all end-of-line resistors will be installed at the terminal cabinet.

3.5 Fire Sprinkler Activation detecting System(s) shall each be indicated on a separate zone in the fire alarm control panel.

3.6 Fire Alarm Control Panel and all other equipment shall be mounted with the center of all operable reset buttons, located a maximum of 48” front approach / 54” side approach above floor level.

3.7 Contractor shall provide complete wiring between all equipment.

3.8 The Fire Alarm/Life Safety Installation shall comply fully with all Local, State and National Codes, and the Local Authority Having Jurisdiction (AHJ) DSA.
3.9 The Fire Alarm Control Panel and power supply shall be connected to a separate dedicated branch circuit, maximum 20 amperes. This circuit shall be labeled at the main Power Distribution Panel as FIRE ALARM CIRCUIT.

3.10 The Control Panel Cabinet shall be grounded securely to a power system ground conductor. Provide a 1/2-inch conduit and 1#12 grounding conductor to the building electrical service ground bus.

3.11 Conduit shall enter into the Fire alarm Control Panel back box only at those areas of the back box which have factory conduit knockouts.

3.12 All field wiring shall be completely supervised. In the event of a primary power failure, disconnected standby battery, removal of any internal modules, or any open circuits in the field wiring; an audible and visual trouble signal will be activated until the system and its associated field wiring are restored to normal condition.

3.13 All cables and wiring shall be listed for Fire Alarm/Life Safety use, and shall be of the type as required by and installed per CEC Article 760.

3.14 Final System Acceptance


3.14.2 Beam detectors shall be tested by two methods:

3.14.2.1 Manual slow cover test to confirm reflector alignment is correct.

3.14.2.2 Software fire test per UL268.5 to demonstrate when signal level is reduced simulating obstruction the detector will go into alarm.

3.14.3 The system will be accepted only after a satisfactory test of the entire system has been accomplished by a Factory-Trained Distributor in the presence of a representative of the authority having jurisdiction and the Owner's representative. This contractor shall provide all personnel, ladders and testing equipment to assist the local authority in completing this test. Actuate each device and verify that the system performs as specified.

3.14.4 The Contractor will present a complete set of "as-built" Fire Alarm/Life Safety system drawings, and the factory supplied Operator's Manuals as required by the General Provisions section of this specification.

3.14.5 Once the system has been tested and the certificate of compliance completed, the contract shall not be considered complete until after owner training has been completed. The contractor shall notify in writing their intent to provide the training for the system. This notification shall be given to the Division 21 Contractor, Architect and the Project Engineer a minimum of 2 weeks prior to the scheduled training session. The Division 21 Contractor and/or the architect shall be responsible for notifying the owner to confirm that the appropriate District personnel will be made available for this training session. If the Division 21 Contractor does not receive confirmation that the training session can be performed on the proposed date, than another time shall be provided. The training shall consist of the following:
3.14.5.1 Provide a minimum of one (1) four-to-six-hour training period located at the project site, to instruct District personnel in proper operation of all systems.

3.14.5.2 Provide a minimum of three (3) complete owner operation manuals for the District records.

3.14.5.3 Provide a minimum of two (2) complete as built sets of drawings for the District records.

3.14.5.4 Provide all spare parts as described in part 1 of these specifications

3.14.5.5 Provide written confirmation and proposed scheduled dates for follow up training and 1 year complete system test.

3.15 Follow up Training

3.15.1 Provide as a part of this contract, the follow up instructional training period within six (6) months after the final acceptance of the systems. This training shall include a minimum of one four-to-six-hour training period to instruct District personnel in proper operation of all systems and shall instruct the District technicians how to repair any non-operational parts of the system as required. All defective parts shall be replaced at no cost to the owner.

END OF SECTION
SECTION 31 1000
SITE CLEARING

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Removal of existing debris.

1.02 RELATED REQUIREMENTS
A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
B. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
C. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products.
D. Section 31 2200 - Grading: Topsoil removal.
E. Section 31 2200 - Grading: Fill material for filling holes, pits, and excavations generated as a result of removal operations.

1.03 PROJECT CONDITIONS
A. Minimize production of dust due to clearing operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
B. Comply with other requirements specified in Section 01 7000.

PART 2 PRODUCTS

2.01 MATERIALS
A. Fill Material: As described in geotechnical investigation

PART 3 EXECUTION

3.01 SITE CLEARING
A. Comply with other requirements specified in Section 01 7000.
B. Minimize production of dust due to clearing operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

3.02 EXISTING UTILITIES AND BUILT ELEMENTS
A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
B. Protect existing utilities to remain from damage.
C. Do not disrupt public utilities without permit from authority having jurisdiction.
D. Protect existing structures and other elements that are not to be removed.

3.03 VEGETATION
A. Do not remove or damage vegetation beyond the limits indicated on drawings.
   1. 40 feet (12 m) outside the building perimeter.
   2. 10 feet (3.1 m) each side of surface walkways, patios, surface parking, and utility lines less than 12 inches (305 mm) in diameter.
   3. 15 feet (4.6 m) each side of roadway curbs and main utility trenches.
   4. 25 feet (7.5 m) outside perimeter of pervious paving areas that must not be compacted by construction traffic.
B. Install substantial, highly visible fences at least 3 feet (1 m) high to prevent inadvertent damage to vegetation to remain:
   1. At vegetation removal limits.
C. In areas where vegetation must be removed but no construction will occur other than pervious paving, remove vegetation with minimum disturbance of the subsoil.

D. Vegetation Removed: Do not burn, bury, landfill, or leave on site, except as indicated.
   1. Chip, grind, crush, or shred vegetation for mulching, composting, or other purposes; preference should be given to on-site uses.
   2. Trees: Sell if marketable; if not, treat as specified for other vegetation removed; remove stumps and roots to depth of 18 inches (450 mm).
   3. Sod: Re-use on site if possible; otherwise sell if marketable, and if not, treat as specified for other vegetation removed.

E. Restoration: If vegetation outside removal limits or within specified protective fences is damaged or destroyed due to subsequent construction operations, replace at no cost to Owner.

3.04 DEBRIS

A. Remove debris, junk, and trash from site.

B. Leave site in clean condition, ready for subsequent work.

C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION
SECTION 31 2200
GRADING

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Removal of topsoil.
B. Rough grading the site for site structures.
C. Finish grading.

1.02 RELATED REQUIREMENTS
A. Section 31 2316.13 - Trenching: Trenching and backfilling for utilities.

1.03 REFERENCES
B. ASTM D 1557-91 -- Test Methods for Laboratory Compaction Characteristics of Soils Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); 1991.
D. ASTM D 2487-93 -- Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System); 1993.

1.04 SUBMITTALS
A. Project Record Documents: Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.

1.05 QUALITY ASSURANCE
A. Perform Work in accordance with State of California, Public Works Department standards.

1.06 PROJECT CONDITIONS
A. Protect above- and below-grade utilities that remain.
B. Protect plants, lawns, and other features to remain as a portion of final landscaping.
C. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from grading equipment and vehicular traffic.

1.07 SITE CONDITIONS
A. The owner makes no representation as to the existing soil or sub-surface conditions or its suitability for the proposed/intended use. The Contractor shall take all necessary measures required to verify and substantiate the existing site conditions, and incorporate in his bid the required materials, methods and labor required to provide an acceptable finished product based on the provisions and requirements of this section.
B. Site Utilities:
   1. Advise utility companies of excavation activities before starting excavations. Locate and identify underground utilities passing through work area before starting work.
   2. If underground utilities are encountered in locations other than indicated, immediately advise utility owners before proceeding. Amend project record documents to show actual locations.
   3. Protect existing utilities indicated to remain.
   4. Do not interrupt existing utilities without advance notice to and written approval from the owner.
   5. Repair or replace any existing utilities that are damaged due to the work of this contract at no cost to the owner.
PART 2 PRODUCTS

2.01 MATERIALS

A. Where sufficient approved materials are not available from required excavations on site, obtain and pay for materials from approved sources off site without charge to the owner.

B. For each soil material proposed for use as fill or backfill, whether obtained on or off site, testing laboratory shall classify soil material, develop Proctor curve, and perform any other tests required.

C. Obtain approval of the architect / geotechnical engineer for each soil material.

D. Satisfactory Topsoil: Fertile agricultural soil, typical for locality, capable of sustaining vigorous plant growth; free of subsoil, rocks larger than 2 inches in diameter, clay, toxic matter, plants, weeds, and roots.

E. Backfill and Fill Materials: Materials classified as satisfactory.

F. Satisfactory Fill Material (ASTM D 2487): Clean deposits free of roots, stumps, vegetation, deleterious matter, trash, debris, and unsuitable materials as approved in the field by the project geotechnical consultant and classified as follows:
   1. GW (well-graded gravel).
   2. GP (poorly graded gravel).
   3. GM (silty gravel).
   4. SW (well-graded sand).
   5. SM (silty sand).

G. Unsatisfactory Fill Material (ASTM D 2487):
   1. GC (clayey gravel).
   2. SP (poorly graded sand).
   3. SC (clayey sand).
   4. CL (clean clay).
   5. ML (silt).
   6. OL (organic clay).
   7. OL (organic silt).
   8. CH (fat clay).
   9. MH (elastic silt).
   10. OH (organic clay).
   11. OH (organic silt).
   12. PT (peat).

H. Subbase Materials: Well-graded, clean, sound, durable particles of crushed stone or crushed gravel, and screenings. Obtain the architect's / soil engineer's approval of source, quality, and gradation.

PART 3 EXECUTION

3.01 PROJECT GEOTECHNICAL INVESTIGATION

A. Copies of this investigation should be reviewed by the Contractor, and are available upon request.

B. The "Preliminary Geotechnical Investigation" shall be for informational purposes only and any information obtained from such report as to subsurface soil conditions or to elevations of underlying rock is approximate only, and is not guaranteed, and does not form a part of the Contract.

C. All recommendations as provided in the "Preliminary Geotechnical Investigation" shall be adhered to and form the minimum requirements for the execution of the work.

3.02 EXAMINATION

A. Verify that survey bench mark and intended elevations for the Work are as indicated.

B. Verify the absence of standing or ponding water.
3.03 PREPARATION

A. Identify required lines, levels, contours, and datum.
B. Stake and flag locations of known utilities.
C. Protection: Provide markers indicating limits of work and clear identification of items and areas requiring protection.
D. Provide barricades, temporary fences, warning signs, and warning lights around open excavations as necessary to prevent injury to persons.
E. The contractor is solely responsible for determining the potential for injury to persons and damage to property. Any indication of temporary fencing delineated on the drawings is a minimum requirement, and does not relieve the contractor of the responsibility of providing adequate protection of the work.
   1. Where such potential is present, take appropriate protective measures.
   2. Protect persons from injury and protect existing and new improvements from damage caused directly or indirectly by construction operations.
F. Do not allow excavation subgrades and soil at foundations to be subjected to effects of rain or other sources of excessive moisture. Provide protective covering materials and divert site drainage and run off as necessary. Should prepared, compacted subgrades be damaged by rain or excessive moisture, remove soil materials to the depth required by the Soils Engineer and replace with acceptable materials and recompact in conformance with specified requirements.
G. Locate, identify, and protect from damage above- and below-grade utilities to remain.
H. Provide temporary means and methods to remove all standing or ponding water from areas prior to grading.
I. Protect site features to remain, including but not limited to bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs, from damage by grading equipment and vehicular traffic.
J. Protect plants, lawns, and other features to remain as a portion of final landscaping.

3.04 EROSION CONTROL

A. To the maximum extent practicable, prevent erosion or displacement of soils and discharge of soil-bearing water runoff to adjacent properties and waterways.
B. Provide erosion control during the entire project in accordance with applicable regulations.

3.05 COMPLIANCE WITH STATE STORM WATER PERMIT FOR CONSTRUCTION

A. Contractor shall be required to comply with all conditions of the State Water Resources Control Board (State Water Board) National Pollutant Discharge Elimination System General Permit for Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity (the "Permit") for all construction activity which results in the disturbance of in excess of five acres of total land area or which is part of a larger common area development or sale. It shall be the Contractor's responsibility to evaluate cost of compliance with the Storm Water Pollution Prevention Program (SWPPP) in bidding on this contract. Contractor shall comply with all requirements of the State Water Resources Control Board. Contractor shall include all costs of compliance with specified requirements in the contract amount.
B. Contractor shall be responsible for implementing and complying with the provisions of the Permit and the SWPPP, including the standard provisions, monitoring and reporting requirements as required by Permit. Contractor shall provide copies of all reports and monitoring information to the Owner.
C. Contractor shall comply with the lawful requirements of any applicable municipality, the County, drainage district, and other local agencies regarding discharges of storm water to separate storm drain system or other watercourses under their jurisdiction, including applicable requirements in municipal storm water management programs.
D. Failure to comply with the Permit is in violation of federal and state law. Contractor hereby agrees to indemnify and hold harmless the Owner, its officers, agents, and employees from and against any and all claims, demands, losses or liabilities of any kind or nature which Owner, its officers, agents, and employees may sustain or incur for noncompliance with Permit arising out of or in connection with the project, except for liability resulting from the negligence or wilful misconduct of Owner, its officers, agents or employees. Owner may seek damages from Contractor for delay in completing the contract in accordance with Article 6 of the General Conditions, caused by the Contractor’s failure to comply with Permit.

3.06 PROTECTION OF TREES

A. Provide temporary guards to protect trees and vegetation to remain. Place guards so as to prevent all forms of vehicular traffic or parking within drip lines.
   1. Do not allow excess foot traffic within drip lines.
   2. Do not stockpile construction materials, soil, or aggregates within drip lines.
   3. Water trees and other vegetation to remain within limits of the area of construction activities as required to maintain their health during course of construction operations.

B. Engage a qualified arborist to remove branches or roots to the extent required by this specification or shown on the drawings.

C. Excavate within drip line of trees only where indicated.

D. Where underground utilities must pass within drip line, hand-dig tunnels to avoid cutting main lateral roots and taproots. Minor roots may be cut only when necessary.
   1. Where root system is damaged or cut back, prune branches to maintain root/branch balance.

E. Immediately protect exposed roots until re-establishment in backfill. Cover with approved mulching material and keep continuously moist.

F. Where cutting is required, cut branches and roots using properly sharpened tools and without breaking members.

G. Promptly repair any damaged trees to prevent death or loss of vigor.
   1. Where the contractor’s operations result in dead or severely damaged trees, remove trees and provide new trees of similar size, except provide 6 inch-caliper trees to replace existing trees over 6 inches caliper.
      a. Species as selected by the architect.

3.07 DEWATERING

A. Do not allow surface or ground water to flow into or accumulate in excavations.

B. Do not allow water to flow in an uncontrolled fashion across the project site or to erode slopes or to undermine foundations. Do not allow water to be diverted onto adjacent properties. Arrange excavation operations so as to provide continual and effective drainage of excavations.

C. Provide and maintain temporary diversion ditches, dikes, and grading as necessary; do not use trench excavations for this purpose. When required by surface or subsurface water conditions, provide sumps, wellpoints, French drains, pumps, and other control measures necessary to keep excavations free of water. When existence of ground water near or above final excavation level is indicated or suspected, provide control measures prior to excavating to lowering water level and maintain water level continuously below working level.

3.08 GEOTECHNICAL RECOMMENDATIONS

A. Site Preparation: Site preparation shall begin with the removal of vegetation and other deleterious debris from the project area. Clearing and grubbing should extend outside of the proposed excavation and fill areas when reasonable. The debris and unsuitable material generated during clearing and grubbing shall be removed from the project area and disposed of at a legal dumpsite away from the project area, unless directed otherwise by the District Representative.

B. Compacted Fill:
1. Compacted fill should be placed in horizontal lifts of approximately 8 inches in loose thickness. Prior to compaction, each lift shall be moisture conditioned to near optimum, mixed, and then compacted by mechanical methods to 95 percent of its Proctor density as evaluated by ASTM D 1557.

2. Only existing on-site material that is classified as competent and suitable may be used for compacted fill, provided they meet all the requirements of this section and are moisture conditioned (i.e., dried if above optimum moisture levels) prior to use.

C. Place 6-inches of Cal Trans Class II aggregate base compacted to a minimum of 90% per ASTM D-1557. Place 2-inches asphalt concrete over the aggregate base. The aggregate base and asphalt concrete are to be placed as soon as possible so that the subgrade and aggregate base is not allowed to dry out prior to their placement. If allowed to dry out or allowed to become overly wet, additional testing will be required.

3.09 EXCAVATIONS

A. General: Excavation includes the removal of any and all materials necessary to achieve the required subgrade elevations and includes any required over-excavation necessary to achieve the required sub-grade compaction, and the reuse or disposal of such materials.

B. Unnecessary Excavation: The expense of excavation of materials outside of limits indicated or ordered in writing by the architect and the correction thereof to the satisfaction of the architect shall be borne by the contractor.

1. Unnecessary excavation under footings: Either deepen footings to bear on actual subgrade elevation without changing top elevations or place concrete fill up to required elevation, as required by the architect.

2. Unnecessary excavation other than under footings: Either place compacted fill or otherwise correct conditions, as required by the Soils Engineer.

C. Excavation for Structures:

1. Excavate beyond footings and foundations so as to allow proper construction and inspection of concrete formwork and other materials. Excavate to the required elevation.
   a. Tolerance: Plus or minus 0.10 foot.

D. Excavation for Footings and Foundations:

1. Delay excavation to final grade and final compaction until just before concrete will be placed.

2. Remove any loose or sloughed material and adjust excavations to conform to required lines, grades, and tolerances and to form a suitable bearing surface. Do not disturb bottom of completed excavations.

3.10 STORAGE

A. Stockpile materials to be used for filling and backfilling, including excavated materials classified as satisfactory soil materials, at locations indicated or as directed. Stockpile in a manner to freely drain surface water; cover if necessary to prevent wind-blown dust.

1. Store soil materials without intermixing. Protect from contamination with other soils or debris.

2. Do not stockpile materials inside of drip line of trees to remain.

3.11 FILLING AND BACKFILLING

A. Preparation: Backfill excavations as soon as practicable. Complete the following operations before backfilling:

1. Inspection and acceptance of below-grade construction.

2. Inspection, testing, and approval of underground utilities.

3. Surveying of underground utilities for record documents.

4. Concrete formwork removal.

5. Removal of loose material, muck, debris, and trash from excavation.

6. Installation of temporary or permanent horizontal bracing for structures to receive backfill.

B. Installation: Place approved soil materials in 6 to 8 inch maximum layers to required elevations. Compact to minimum 95% of the corresponding maximum density (ASTM D 1557).
1. Do not place material on muddy or uncompacted surfaces.

C. Installation: Place fill materials to required elevations in lifts of required depth. Provide fill materials beneath each area as indicated.
2. Paved areas: Subbase material.
3. Exterior steps/ramps: Subbase material.
4. Building slabs: Capillary water barrier material.
5. Piping/conduit: Subbase material where indicated; otherwise use satisfactory soil materials.

3.12 PAVEMENT SUBBASE / SUBGRADE PLACEMENT
A. Place lifts such that compaction true to grade and level is accomplished with a minimum of surface disturbance and segregation or degradation of materials. Maintain moisture content within prescribed limits during placing and compacting.

B. When the total thickness of subbase is less than the maximum lift thickness permitted, place material in a single lift. When the total thickness of subbase is greater than the maximum lift thickness permitted, place materials in two or more lifts of uniform thickness with no lift less than 3 inches or greater than 8 inches in thickness.

C. Cut any over build to grade. Should top elevation be lower than allowable tolerances, scarify to a depth of 6 inches, add new material, and recompact to bring to grade within required tolerances.

3.13 BUILDING AREAS
A. Place fill or backfill lifts such that compaction true to grade and level is accomplished with a minimum of surface disturbance and segregation or degradation of materials as specified in the project preliminary soils report. Maintain grade control and cross section by means of line and grade stakes. Maintain moisture content within prescribed limits during placing and compacting.

B. When the total thickness of materials to be placed is less than the maximum lift thickness permitted, place material in a single lift. When the total thickness of materials to be placed is greater than the maximum lift thickness permitted, place materials in two or more lifts of uniform thickness with no lift less than 3 inches or greater than 8 inches in thickness.

3.14 COMPACTION
A. Place materials used in backfilling and filling in layers not exceeding loose depths as follows:
1. Heavy equipment compaction: 8 inches.

B. Place material simultaneously on opposite sides of walls, small structures, utility lines, etc. to avoid displacement or overstressing.

C. In-Place Density Requirements: Compact soil to not less than the values given below, expressed as a percentage of maximum density at optimum moisture content.
1. Unpaved areas: Top 12 inches of bottom of over-excavation and subsequent lifts:
   a. 90 percent.
2. Paved areas: Top 12 inches of bottom of over-excavations and subsequent lifts, except the upper one foot from rough finish grade:
   a. 95 percent.
   b. 95 percent within upper one foot below base coarse.
3. Exterior steps and ramps: Top 12 inches of bottom of over-excavation and subsequent lifts:
   a. 95 percent.
4. Building areas and structures: Top 12 inches of bottom of over-excavation and subsequent lifts:
   a. 95 percent.
5. Utility trenches: Compact backfill and fill materials to in-place density specified for applicable area of trench, but in no case less than 90 percent.
D. Moisture Control: During compaction, control moisture of bottom of over-excavations and subsequent lifts to within tolerances from optimum moisture content as recommended by testing laboratory. Wet surface with water when additional moisture is required. Aerate soil to aid in drying or replace soil when excessive moisture is present.

3.15 ROUGH GRADING
A. General: Smooth grade to a uniform surface that complies with compaction requirements and required lines, grades, and cross sections and is free from irregular surface changes.
B. Provide smooth transition between existing adjacent grades and changed grades. Cut out soft spots, fill low spots, and cut down high spots to conform to required surfaces tolerances.
C. Remove topsoil from areas to be further excavated, re-landscaped, or re-graded, without mixing with foreign materials.
D. Do not remove topsoil when wet.
E. Remove subsoil from areas to be further excavated, re-landscaped, or re-graded.
F. Do not remove wet subsoil, unless it is subsequently processed to obtain optimum moisture content.
G. When excavating through roots, perform work by hand and cut roots with sharp axe.
H. See Section 31 2323 for filling procedures.
I. Stability: Replace damaged or displaced subsoil to same requirements as for specified fill.
J. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack surface water control.
K. Slope grades to direct water away from structures and to prevent ponding. Finish subgrade to required elevations within the following tolerance:
   1. Unpaved areas: Plus or minus 0.10 foot.
   2. Paved areas: Plus or minus 0.05 foot.
   3. Exterior steps and ramps: Plus or minus 0.05 foot.
   4. Inside building lines: 1/2 inch in 10 horizontal feet.

3.16 FINISH GRADING
A. Before Finish Grading:
   1. Trench backfilling has been inspected.
   2. Verify subgrade has been contoured and compacted.
B. Remove debris, roots, branches, stones, in excess of 1/2 inch (13 mm) in size. Remove soil contaminated with petroleum products.
C. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 3 inches (75 mm).
D. Place topsoil where required to level finish grade.
E. Place topsoil during dry weather.
F. Remove roots, weeds, rocks, and foreign material while spreading.
G. Near plants spread topsoil manually to prevent damage.
H. Fine grade topsoil to eliminate uneven areas and low spots. Maintain profiles and contour of subgrade.
I. Lightly compact placed topsoil.
J. Maintain stability of topsoil during inclement weather. Replace topsoil in areas where surface water has eroded thickness below specifications.

3.17 PROOFROLLING
A. After completion of required compaction and immediately prior to proceeding with subsequent construction, proof roll in the presence of testing laboratory representative.
B. Areas to Receive:
   1. Pavement.
   2. Building slabs on grade.

3.18 TOLERANCES
   A. Top Surface of Subgrade: Plus or minus 0.10 foot (1-3/16 inches) (30 mm) from required elevation.
   B. Top Surface of Finish Grade: Plus or minus 0.04 foot (1/2 inch) (13 mm).

3.19 REPAIR AND RESTORATION
   A. Existing Facilities, Utilities, and Site Features to Remain: If damaged due to this work, repair or replace to original condition.
   B. Trees to Remain: If damaged due to this work, trim broken branches and repair bark wounds; if root damage has occurred, obtain instructions from Architect as to remedy.
   C. Other Existing Vegetation to Remain: If damaged due to this work, replace with vegetation of equivalent species and size.

3.20 FIELD QUALITY CONTROL
   A. Testing Laboratory Services: Provide timely notice to testing laboratory. Do not proceed with construction until testing of each bottom of over excavation and lift of fill or backfill has been performed and required inspections and approvals have been obtained.
   B. Maximum Density at Optimum Moisture Content: Determine in accordance with ASTM D 1557-91.
   C. In-Place Density Tests: ASTM D 1557-90 (sand cone method), ASTM D 2167 (rubber balloon method), or ASTM D 2922 (nuclear method), as applicable.
   D. If testing service reports indicate that subgrade or fills are below specified density, scarify or remove and replace to the required depth, recompact, and retest at no cost to the owner.

3.21 FIELD QUALITY CONTROL
   A. See Section 31 2323 for compaction density testing.

3.22 MAINTENANCE
   A. Completed Areas: Protect from damage by pedestrian or vehicular traffic, freezing, erosion, and contamination with foreign materials.
      1. Repair and re-establish grades to specified tolerances in settled, eroded, or rutted areas.
   B. Damaged Areas: Where completed or partially completed surfaces become eroded, rutted, settled, or lose compaction and whether due to subsequent construction operations or weather conditions, restore materials to required conditions: Scarify or remove and replace to the required depth, return to optimum moisture content, and compact materials to the required density before continuing construction.
   C. Correction: Should settling occur within the project correction period, remove finished surfacing, add additional approved material, compact material, and reconstruct surfacing. Construct surfacing to match and blend in with adjacent surfacing as nearly as practicable.

3.23 CLEANING
   A. Spread any excess satisfactory topsoil in locations on site as directed by the architect and District. Properly dispose of unsatisfactory topsoil off site.
   B. Spread any excess satisfactory soil in location on site as directed by the architect and District.
   C. Remove any unsatisfactory soil, trash, debris, and other materials not required for use on the project and legally dispose of it off the owner's property.
   D. On-site burning is not permitted.
   E. Leave site clean and raked, ready to receive landscaping.

END OF SECTION
SECTION 31 2316
EXCAVATION

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Excavating for paving and site structures.

1.02 RELATED REQUIREMENTS
A. Section 01 7000 - Execution and Closeout Requirements: General requirements for dewatering of excavations and water control.
B. Section 31 2200 - Grading: Grading.

1.03 PROJECT CONDITIONS
A. Verify that survey bench mark and intended elevations for the Work are as indicated.
B. Protect plants, lawns, rock outcroppings, and other features to remain.
C. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

PART 3 EXECUTION

2.01 EXAMINATION
A. Verify that survey bench mark and intended elevations for the work are as indicated.

2.02 PREPARATION
A. Identify required lines, levels, contours, and datum locations.
B. See Section 31 2200 for additional requirements.
C. Grade top perimeter of excavation to prevent surface water from draining into excavation. Provide temporary means and methods, as required, to maintain surface water diversion until no longer needed, or as directed by the Architect.

2.03 EXCAVATING
A. Excavate to accommodate new structures and construction operations.
B. Notify Architect of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
C. Slope banks of excavations deeper than 4 feet (1.2 meters) to angle of repose or less until shored.
D. Do not interfere with 45 degree bearing splay of foundations.
E. Cut utility trenches wide enough to allow inspection of installed utilities.
F. Hand trim excavations. Remove loose matter.
G. Correct areas that are over-excavated and load-bearing surfaces that are disturbed; see Section 31 2323.
H. Provide temporary means and methods, as required, to remove all water from excavations until directed by the Architect. Remove and replace soils deemed suitable by classification and which are excessively moist due to lack of dewatering or surface water control.
I. Determine the prevailing groundwater level prior to excavation. If the proposed excavation extends less than 1 foot (305 mm) into the prevailing groundwater, control groundwater intrusion with perimeter drains routed to sump pumps, or as directed by the Architect. If the proposed excavation extends more than 1 foot (305 mm) into the excavation, control groundwater intrusion with a comprehensive dewatering procedures, or as directed by the Geotechnical Engineer.
J. Remove excavated material that is unsuitable for re-use from site.
K. Remove excess excavated material from site.
2.04 FIELD QUALITY CONTROL
   A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection and testing.
   B. Provide for visual inspection of load-bearing excavated surfaces before placement of foundations.

2.05 PROTECTION
   A. Divert surface flow from rains or water discharges from the excavation.
   B. Prevent displacement of banks and keep loose soil from falling into excavation; maintain soil stability.
   C. Protect open excavations from rainfall, runoff, freezing groundwater, or excessive drying so as to maintain foundation subgrade in satisfactory, undisturbed condition.
   D. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.
   E. Keep excavations free of standing water and completely free of water during concrete placement.

END OF SECTION
SECTION 31 2323  
FILL

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Filling, backfilling, and compacting for footings, slabs-on-grade, and paving.
B. Filling holes, pits, and excavations generated as a result of removal (demolition) operations.

1.02 RELATED REQUIREMENTS

A. Section 31 2200 - Grading: Removal and handling of soil to be re-used.
B. Section 31 2200 - Grading: Site grading.
C. Section 31 2316 - Excavation: Removal and handling of soil to be re-used.
D. Section 31 2316.13 - Trenching: Excavating for utility trenches outside the building to utility main connections.

1.03 REFERENCE STANDARDS

B. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN·m/m3)); 2012.
C. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method; 2015.
D. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN·m/m3)); 2012.
F. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2011.
G. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth); 2005.
H. New Asphalt Pavement Area Recommendations, Solana Vista Elementary School Relocatables, Solana Beach, California, dated March 11, 2011, Project No. 107032001, by Ninyo & Moore; 5710 Ruffin Road, San Diego, CA 92123; (858) 576-1000.

1.04 DEFINITIONS

A. Finish Grade Elevations: Indicated on drawings.
B. Subgrade Elevations: As indicated on drawings and/or as determined by paving or slab sections.

1.05 SUBMITTALS

A. See Section 01305 - Submittals, for submittal procedures.
B. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used, including manufactured fill.
C. Compaction Density Test Reports.

1.06 DELIVERY, STORAGE, AND HANDLING

A. When necessary, store materials on site in advance of need.
B. When fill materials need to be stored on site, locate stockpiles where indicated.
   1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
   2. Prevent contamination.
   3. Protect stockpiles from erosion and deterioration of materials.
C. Verify that survey bench marks and intended elevations for the Work are as indicated.

PART 2 PRODUCTS

2.01 FILL MATERIALS

A. General Fill: Subsoil excavated on-site.
   1. Graded.
   2. Clean deposits free of roots, stumps, vegetation, deleterious matter, trash, debris, and unsuitable materials as approved in the field by the project geotechnical consultant.

B. Concrete for Fill: Lean concrete.


D. Topsoil: Topsoil excavated on-site, or imported.
   1. Graded.
   2. Free of roots, rocks larger than 1 inch (____ mm), subsoil, debris, large weeds and foreign matter.

E. Bedding Material: Bedding material shall be sand, gravel, crushed aggregate or approved native material. Bedding material shall have a sand equivalent of not less than 30 or have a coefficient of permeability greater than 0.001 centimeters per second. Bedding material shall be sized within the following range:
   1. 3/4" Sieve: 100 percent passing.
   2. No. 4 Sieve: 35 to 65 percent passing.
   3. No. 200 Sieve: 0 to 10 percent passing.

2.02 ACCESSORIES

2.03 SOURCE QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements, for general requirements for testing and analysis of soil material.

B. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery to site.

C. If tests indicate materials do not meet specified requirements, change material and retest.

PART 3 EXECUTION

3.01 EXAMINATION

A. Identify required lines, levels, contours, and datum locations.

B. See Section 31 2200 for additional requirements.

C. Verify subdrainage, dampproofing, or waterproofing installation has been inspected.

D. Verify areas to be filled are not compromised with surface or ground water.

3.02 PREPARATION

A. Scarify and proof roll subgrade surface to a depth of 6 inches (150 mm) to identify soft spots.

B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with general fill.

C. Compact subgrade to density equal to or greater than requirements for subsequent fill material.

D. Until ready to fill, maintain excavations and prevent loose soil from falling into excavation.

3.03 FILLING

A. Fill to contours and elevations indicated using specified materials.

B. Fill up to subgrade elevations unless otherwise indicated.

C. Employ a placement method that does not disturb or damage other work.

D. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
E. Maintain optimum moisture content of fill materials to attain required compaction density.
F. Granular Fill: Place and compact materials in equal continuous layers not exceeding 6 inches (150 mm) compacted depth.
G. Slope grade away from building minimum 2 inches in 10 feet (50 mm in 3 m), unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
H. Correct areas that are over-excavated.
2. Other areas: Use general fill, flush to required elevation, compacted to minimum 90 percent of maximum dry density.
I. Compaction Density Unless Otherwise Specified or Indicated:
1. Under paving, slabs-on-grade, and similar construction: 90 percent of maximum dry density.
2. At other locations: 90 percent of maximum dry density.
J. Reshape and re-compact fills subjected to vehicular traffic.
K. Maintain temporary means and methods, as required, to remove all water while fill is being placed as required, or until directed by the Architect. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack of dewatering or surface water control.

3.04 FILL AT SPECIFIC LOCATIONS
A. At Foundation Walls and Footings:
1. Use general fill.
2. Fill up to subgrade elevation.
3. Compact each lift to 90 percent of maximum dry density.
4. Do not backfill against unsupported foundation walls.
B. Over Buried Utility Piping, Conduits, and Duct Bank in Trenches and _____:
1. Bedding: Use sand or granular fill.
2. Cover with general fill.
3. Compact in maximum 8 inch (200 mm) lifts to 90 percent of maximum dry density.

3.05 TOLERANCES
A. Top Surface of General Filling: Plus or minus 1 inch (25 mm) from required elevations.
B. Top Surface of Filling Under Paved Areas: Plus or minus 1 inch (25 mm) from required elevations.

3.06 FIELD QUALITY CONTROL
A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection and testing.
B. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D 698 ("standard Proctor"), ASTM D 1557 ("modified Proctor"), or AASHTO T 180.
C. If tests indicate work does not meet specified requirements, remove work, replace and retest.

3.07 CLEANING
A. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.
B. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.

END OF SECTION
SECTION 32 1216
ASPHALT PAVING

PART 1 GENERAL
1.01 SECTION INCLUDES
A. Aggregate base course.
B. Single course bituminous concrete paving.
C. Surface sealer.

PART 2 PRODUCTS
2.01 MATERIALS
A. Asphalt Cement: ASTM D946.
B. Aggregate for Base Course: uniformly graded in accordance with Section 203, SSPWC.
C. Crushed Aggregate Base: Crushed rock and rock dust conforming to the requirements of Section 200, SSPWC, with 3/8 inch sieve requirement waived, or Class II aggregate base as defined in Section 26, CSS.

2.02 ASPHALT PAVING MIXES AND MIX DESIGN
A. Use dry material to avoid foaming. Mix uniformly.
B. Mix: Caltrans Standard Section 39, 3/8 inch or ½ Inch maximum aggregate size, medium gradation curve, AR-4000 or AR-8000 as required by outside temperatures at time of laying.
C. Reclaimed Asphalt Pavement (RAP) not permitted.

2.03 SUB-BASE
A. Bring areas to be surfaced to required sub-grades by cutting and filling with suitable equipment.
B. Bring to optimum moisture content and compact to minimum 95 percent density in accordance with ASTM D1557 by rolling with a power roller. Provide a hard, even surface to receive subsequent base and paving. All exposed sub-grades shall be compacted by rolling or tamping to a minimum of 95 percent of maximum density.
C. Finish sub-grade to required grades with allowance for compression and for thickness of base course and finish paving thickness.

2.04 SOIL STERILIZATION
A. After sub-base has been compacted and approved by the Geotechnical Engineer, treat areas to be paved with the specified soil sterilizer.
B. Exercise caution during storage of material and during application. Prevent injury to humans, animal life, adjacent plant life and property. Keep soil sterilization materials minimum three feet from tree wells or any plant life.
C. Legally dispose containers.

2.05 BASE COURSE
A. Place and compact aggregate base upon finished sub-grade in conformance with Section 301-2 SSPWC.
B. Thickness of Base after Compaction: As indicated on Drawings but not less than 4 inches.

PART 3 EXECUTION
3.01 PREPARATION - PRIMER AND TACK COAT
A. Apply primer coat or base course surfaces in conformance with Section 302-5.3, SSPWC, at rate of .10 to .25 gallons per sq. yd. Allow to cure prior to application of asphalt course.
B. Apply tack coat to contact surfaces of curbs, gutters and adjacent materials except where expansion joints occur, in conformance with Section 302-5.4, SSPWC.
C. Coat surfaces of catch basin frames with oil to prevent bond with asphalt pavement. Do not tack coat these surfaces.

3.02 PLACING ASPHALT PAVEMENT - SINGLE COURSE

A. Install redwood headers.

B. Place asphalt in conformance with Section 302-5, SSPWC. Conform to temperature maximums and minimums specified therein. Materials shall not be applied which have cooled below the lower limit allowable.

C. Place to thickness as Indicated on drawings but not less than 3 inches if not indicated.

D. Install drainage grilles and frames in correct position and elevation.

E. Compact pavement by rolling with equipment specified in Section 302-5.6, SSPWC. Do not displace or extrude pavement from position.

F. Develop a uniform pattern of smooth continuous compaction. Compaction equipment shall not leave roller marks, rock pockets, ridges or depressions.

3.03 PLACING ASPHALT PAVEMENT - OVERLAY

A. Follow guidelines set forth in Paragraph 3.02.

B. Ensure Pavement Reinforcing Fabric is installed completely and properly on section to receive overfay asphalt.

C. Place to thickness as indicated on drawings but not less than 1-1/2 inches if not indicated.

3.04 SEAL COAT

A. Application: Apply Seal Coat to surface in accordance with Section 302??8.2, SSPWC. All asphalt pavements shall be sealed with two coats of specified seal coat product with surface preparation and application to conform to Plans and Specifications and Manufacturer's recommendations.

B. Apply seal coat 30 days or more after surface course application, in accordance with Manufacturer's recommendations.

C. Misting: Just prior to seal coating, the asphalt may need to be sprayed with a mist of water in an amount that will leave the surface damp but with no puddles or visible water.

D. Weather limitations: The seal coat shall not be applied when the surface has puddles or visible water or when the humidity or impending weather conditions will not allow proper curing nor when the atmospheric or pavement temperature is below 50 degrees Fahrenheit (10 degrees Centigrade).

E. Spreading Equipment: Rubber faced squeegee attached to tank or hand squeegee.

F. Add water to specified seal coat material. When air temperatures of 90 degrees F or more are encountered during application, consult manufacturer for recommendations.

G. Seal Coat product may be mixed with water to obtain desired consistency, 10% to MAXIMUM OF 20% water may be added. Note: as the pavement Increases in roughness, the amount of dilution shall be decreased. care must be taken not to over dilute.

H. The Seal Coat product shall be mixed constantly by skid; trailer or truck mounted tank with agitation systems capable of thoroughly blending material.

I. If pavement surface exhibits imperfections as determined by the District Representative, the addition of sand aggregate to seal coat, and amounts thereof, shall be as recommended by the manufacturer.

J. Curing: The mixture shall be permitted to dry for a minimum of 24 hours after the final application before opening to traffic and shall be sufficiently cured to drive over without damage to seal coat.

END OF SECTION
SECTION 32 1313
CONCRETE PAVING

PART 1 GENERAL
1.01 SECTION INCLUDES
A. Concrete walks.

PART 2 PRODUCTS
2.01 FORM MATERIALS
A. Wood form material, profiled to suit conditions.
B. Joint Filler: Preformed; non-extruding bituminous type (ASTM D1751) or sponge rubber or cork (ASTM D1752).
   1. Thickness: 1/2 inch (12 mm).

2.02 REINFORCEMENT
A. Reinforcing Steel: ASTM A615/A615M, Grade 80 (80,000 psi) (550 MPa) yield strength; deformed billet steel bars; unfinished.
B. Steel Welded Wire Reinforcement: Plain type, ASTM A1064/A1064M; in flat sheets; unfinished.
C. Dowels: ASTM A615/A615M, Grade 40 - 40,000 psi (280 MPa) yield strength; deformed billet steel bars; unfinished finish. Dowel sizing shall be as indicated on drawings.

2.03 CONCRETE MATERIALS
A. Obtain cementitious materials from same source throughout.
C. Fine and Coarse Mix Aggregates: ASTM C33/C33M.
D. Fly Ash: ASTM C618, Class C or F.
E. Water: Clean, and not detrimental to concrete.

2.04 ACCESSORIES
A. Curing Compound: ASTM C 309, Type 1, Class A.
B. Joint Sealer: Type as specified in Section 07900.

2.05 CONCRETE MIX DESIGN
A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
B. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended by manufacturer.
C. Concrete Properties:
   1. Compressive strength, when tested in accordance with ASTM C39/C39M at 28 days; 3,250 psi (22.41 MPa).
   2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
   3. Minimum cement content per cubic yard: 6.5 sacks.
   5. Water-Cement Ratio: Maximum 50 percent by weight.
   6. Total Air Content: 4 percent, determined in accordance with ASTM C173/C173M.
   7. Maximum Slump: 4 inches (100 mm) +/- 1" (+/- 25.4 mm).
   8. Maximum Aggregate Size: 1 inch (25.4 mm).

PART 3 EXECUTION
3.01 EXAMINATION
A. Verify compacted subgrade is acceptable and ready to support paving and imposed loads.
B. Verify gradients and elevations of base are correct.
3.02 SUBBASE
   A. Prepare subbase in accordance with State of California Public Works standards.

3.03 PREPARATION
   A. Moisten base to minimize absorption of water from fresh concrete.

3.04 FORMING
   A. Place and secure forms to correct location, dimension, profile, and gradient.
   B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
   C. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

3.05 REINFORCEMENT
   A. Place reinforcement at midheight of slabs-on-grade.
   B. Interrupt reinforcement at contraction joints.
   C. Place dowels to achieve pavement and curb alignment as detailed.

3.06 PLACING CONCRETE
   A. Place concrete in accordance with ACI 304R.
   B. Ensure reinforcement, inserts, embedded parts, formed joints are not disturbed during concrete placement.
   C. Place concrete continuously over the full width of the panel and between predetermined construction joints. Do not break or interrupt successive pours such that cold joints occur.
   D. Apply surface retarder to all exposed surfaces in accordance with manufacturer’s instructions.

3.07 JOINTS
   A. Align curb, gutter, and sidewalk joints.
   B. Place 3/8 inch (10 mm) wide expansion joints at 20 foot (6 m) intervals and to separate paving from vertical surfaces and other components and in pattern indicated.
      1. Form joints with joint filler extending from bottom of pavement to within 1/2 inch (13 mm) of finished surface.
      2. Secure to resist movement by wet concrete.
   C. Provide scored joints.
      1. At 5 feet (1.524 m) intervals, or as indicated on the drawings.
      2. Between sidewalks and curbs.
      3. Between curbs and pavement.

3.08 FINISHING
   A. Sidewalk Paving: (Surfaces less than 5% slope): medium broom, texture perpendicular to direction of travel with troweled and radiused edge 1/4 inch radius.
   B. Sidewalk / Ramp Paving: (Surfaces greater than 5% slope): heavy broom, texture perpendicular to direction of travel with troweled and radiused edge 1/4 inch radius.
   C. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer’s instructions.

3.09 TOLERANCES
   A. Maximum Variation of Surface Flatness: 1/4 inch (6 mm) in 10 ft (3 m).
   B. Maximum Variation From True Position: 1/4 inch (6 mm).

3.10 CONCRETE CURING
   A. Comply with requirements of ACI 308. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
B. Moist cure and maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
   1. Normal concrete: Not less than 5 days.

C. Surfaces Not in Contact with Forms:
   1. Start initial curing as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding, water-saturated sand, water-fog spray, or saturated burlap.
   2. Begin final curing after initial curing but before surface is dry.
      a. Curing compound: Apply in two coats at right angles, using application rate recommended by manufacturer.

3.11 PROTECTION
A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.

B. Do not permit pedestrian traffic over pavement for 7 days minimum after finishing.

END OF SECTION
SECTION 32 1726
TACTILE WARNING SURFACING

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Plastic tactile and detectable warning tiles for pedestrian walking surfaces.

PART 2 PRODUCTS

2.01 MANUFACTURERS
A. Plastic Tactile and Detectable Warning Surface Tiles:

2.02 TACTILE AND DETECTABLE WARNING DEVICES
A. Plastic Tactile and Detectable Warning Tiles: ADA Standards compliant, pre-molded tactile dome sheet composed of fiber-reinforced, polymermodified cement and coated with an acrylic resin emulsion. Mats are 1 mm thick with truncated domes .9 inches in diameter by .2 inches high.
   B. Detectable warning surfaces shall comply with CBC Section 11B-705.1.
   C. Detectable warning surfaces shall be yellow, conforming to FS 33538 of Federal Standard 595B, except for locations at curb ramps, islands, or cut through medians where color used shall contrast visually with that of adjacent walking surfaces, either light-on-dark, or dark-on-light per CBC section 11B-705.1.1.3 and 11B-705.1.1.5.
   D. Detectable warning surfaces shall differ from adjoining surfaces in resiliency or sound-on-cane contact per CBC section 11B-705.1.1.4.
   E. Material Properties:
      1. Water Absorption: 6.5% water ponding, when tested in accordance with ASTM D570. ASTM E96: 0.0102 grams/24 hours.
      2. Slip Resistance: .80 minimum combined wet/dry static coefficient of friction, when tested in accordance with ASTM C1028.
      3. Compressive Strength: [5,690 PSI] pounds per square inch ([39] MPa), minimum, when tested in accordance with ASTM C109.
      4. Tensile Strength: [855] pounds per square inch ([5.89] MPa), minimum, when tested in accordance with ASTM C190.
      5. Chemical Stain Resistance: No reaction to 1 percent hydrochloric acid, motor oil, calcium chloride, gum, soap solution, bleach, or antifreeze, when tested in accordance with ASTM D543.
      6. Abrasion Resistance: less than 1.5% thickness loss when tested in accordance with ASTM D1242.
      7. Flame Spread Index: 25, maximum, when tested in accordance with ASTM E84.
      8. Adhesion: No delamination of tile prior to board failure in a temperature range of 20 to 180 degrees F (minus 7 to 82 degrees C), when tested in accordance with ASTM C903.
      9. Loading: No damage when tested according to AASHTO LRFD test method HS20.
     10. Salt and Spray Performance: No deterioration or other defect after 200 hours of exposure, when tested in accordance with ASTM B117.
      11. Shape: As required by application.

2.03 ACCESSORIES
A. Bond Coat Adhesive: Water based acrylic emulsion resin adhesive.
   1. SSTD-589 as manufactured by Safety Step TD.
B. Top Coat: Water based pigmented acrylic.
   1. SSTD-100 as manufactured by Safety Step TD.
C. Clear Finish Sealer: Water based, clear, acrylic sealer.
   1. SSTD-1250 as manufactured by Safety Step TD.
D. Texture: Skid Resistant Silica

END OF SECTION
PART 1 GENERAL

1.01 SECTION INCLUDES

A. Types of Fence
   1. Buried perimeter fencing shall be a fence with 8'-0" of chain link fabric, top, and bottom rails. The bottom rail and fabric shall be buried 6" below grade.
   2. Standard fencing shall be a fence with 8'-0" of chain link fabric and top rails. If required the bottom rail shall be within two inches above the finish grade.
   3. Standard fencing will be used as non-preimeter fences and for perimeter fences placed over concrete or asphalt paved surface. Exceptions to this rule shall be indicated on drawings.

B. Relocation of Existing Fencing
   1. Any existing fence to be removed and relocated shall be taken down, have concrete broken off posts, and be reinstalled in accordance with these specifications. The contractor is permitted to keep the removed posts and install new posts. Splicing posts by welding is not permitted.

C. Underground Utilities
   1. Identification and repair of any and all underground utilities (irrigation, power, water, and low voltage wiring) affected by work being done is the responsibility of the contractor.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Chain Link Fences and Gates:
   1. Allied Tube and Conduit.
   3. Anchor Fence Div.

2.02 MATERIALS


C. Concrete: ASTM C 94; Normal Portland Cement, 2,500 psi strength at 28 days, 3 inch slump; 3/4 to 1 inch nominal sized coarse aggregate.

D. Fencing Materials: Posts, gate frames, braces, rails, stretcher bars, truss rods and tension wire shall be of galvanized steel. Gate hinges, post caps, stretcher bar bands, bolts, hardware, and other parts shall be of steel, malleable iron, ductile iron, except that post tops, rails ends, clips may be of aluminum. All fencing, pipe, fabric, and accessories shall conform to the specifications described in the "Product Manual" published by the Chain Link Fence Manufacturers Institute unless further restricted by this section.

2.03 COMPONENTS

A. Line Posts: All line posts shall be nominal 2-3/8" inch, 2.375 inch O.D. galvanized tubing for fabric height up to 8 feet, and 2-7/8 inch O.D. for fabric height over 8 feet to 16 feet or less.

B. Terminal Posts: Angels, corners, ends and pull posts shall be nominal 3-7/8 inch schedule 40 galvanized tubing for fabric height up to 8 feet, and, 4 inch O.D. for fabric height over 8 feet to 16 feet or less. 2.88 inch.

C. Top and Brace Rail: All top rails shall be nominal 1-5/8 inch schedule 40 galvanized tubing. Top rails shall be provided with expansion coupling and shall be securely fastened to gate and terminal posts by means of suitable hot-dipped galvanized connections. Top rail shall pass through the extension arms to form a continuous brace from end to end of each stretch of fence.
D. Bottom Rail: All bottom rails shall be nominal 1-5/8 inch, 1.625 inch O.D schedule 40 galvanized tubing. Bottom rail shall be installed in accordance with manufacturer's directions using couplings.

E. Gates: Gate frames shall be nominal 1-5/8 inch, O.D. schedule 40 galvanized tubing welded at all joints to provide rigid water-tight construction. Gate fabric shall match the line fence fabric in all regards with the exception of the mesh size which shall be 1 inch on the gates. Gates shall be 8-feet high with heavy malleable iron extension arms as previously described. Swing gates shall be furnished with pivot-type hinges, center stop, and hold open devices. Gates shall provide clear openings as shown on the drawings.

F. Gate Posts
   1. Man Gate Posts: Posts shall be 4" OD schedule 40 galvanized steel pipe.
   2. Drive Through Gate Posts: Posts shall be 6-5/8" OD schedule 40 galvanized steel pipe.
   3. All gate posts shall be provided with heavy malleable iron extension arms as previously described.

G. Fabric shall be ASTM A392, Class 1, zinc coated (1.2 oz.), steel wire/fabric, woven in a 2 inch mesh size, 9 gauge coated wire size, galvanized after weaving, with salvage knuckle end closed, bottom salvage knuckle end closed.

H. Tension Wire: 9 gage thick steel, single strand.

I. Tension Bar shall be 3/16" x 3/4 inch hot-dipped galvanized steel.

J. Tie Wire: 9 gauge steel tie wire and hog rings zinc coated.

K. Pipe: All posts, braces, rails and gate framing members shall be coated with zinc by the hot-dip process after fabrication. The strip steel used in the manufacturer of the pipe shall conform to either ASTM A-120 (Schedule 40) or ASTM A0569 (SS 40 by Allied Tube and Conduit Corporation or equal). Pipe conforming to ASTM A-120 shall receive not less than 1.8 ounces per square foot of zinc coating. Pipe conforming to ASTM A-569 shall be triple coated with a minimum of 0.9 ounces per square foot of zinc, 15 micrograms per square inch of chromate, and 0.3 mils of polyurethane finish. Pipe shall be straight or have an installed deflection not greater than 1/2" per span or post.

L. Bracing: Rails shall be nominal 1-5/8 inch, 1.660 inch O.D. schedule 40 galvanized tubing with adjustable truss braces 3/8" in diameter and all fittings hot-dipped galvanized. All end and corner posts, unless otherwise shown, shall be suitably braced with pipe set in horizontal position, with adjustable truss braces between terminal and first line posts, complete with all fittings. Terminal posts shall be braced laterally in an approved manner.

M. Barbed Wire Support Arms: All posts shall be provided with pressed copper-bearing galvanized steel extension arms. All end posts shall be provided with heavy malleable iron extension arms. All extension arms shall be heavily coated with zinc by the hot dip process. Each extension arm shall be sized to carry three strands of 12-1/2 gauge, 4 PT, Class III barbed wire at an angle of 45 degrees, the upper strand 12" out from the fence line and 12" above the top of the fabric. Arms shall be the type that allow top rail to pass through their bases to form a continuous brace. Barbed wire arms shall be of sufficient strength to withstand a weight of 250 pounds applied at the outer or the top strand of barbed wire.

N. Barbed Wire: Barbed wire shall be of the four-point pattern, composed of two strands of No. 12-1/2 gauge, copper bearing steel wire, Class III with large hard temper barbs spaced a maximum of 5 inches apart, and shall be heavily galvanized by the hot dip process. Each extension arm shall carry three strands of barbed wire at an angle of 45 degrees, the upper strand 12 inches out from the fence line and 12 inches above the top of the fabric. Install three strands on the extension arms at the top of the fence and over gate. The extension arms shall be installed so they are pointing to the exterior perimeter created by the fence.

2.04 ACCESSORIES

A. Caps: Formed steel, malleable cast iron, or aluminum, sized to post diameter with set screw retainer.
B. Fittings: Sleeves, bands, clips, rail ends, tension bars, fasteners and fittings; steel.

C. Gate Hardware at Maintennace Gate Only: Fork latch with gravity drop; two 180-degree gate hinges per leaf and hardware for padlock.

D. Accessible Gate Hardware: Refer to drawings and details.
   1. Gates equipped with panic hardware shall utilize the following hardware:
      a. Von Duprin 99EO-626-299 w/ PA option.
      b. Von Dupring 994L-626 Trim w/ breakaway lever.
      c. Falcon Rim Cylinder 953-626.

2.05 FINISHES
A. Components (Other than Fabric): Galvanized in accordance with ASTM A 123, at 1.8 oz/sq ft.
B. Hardware: Galvanized to ASTM A 153/A 153M, 1.3 oz/sq ft coating.
C. Accessories: Same finish as framing.

PART 3 EXECUTION
3.01 EXAMINATION
A. Verify that line of fence has been properly identified.
B. Verify that proper grade has been established.
C. Verify location of underground utilities and structures.
D. Begin fence construction only after adequate clearance on both sides of fence is available.

3.02 INSTALLATION
A. Concrete Placement: Posts and gate hold open devices shall be placed in concrete. Concrete shall meet the minimum requirements of Section 03 3000 Cast-In-Place Concrete.
B. Post Setting and Spacing
   1. All posts shall be spaced in the line of fence not to exceed 10-foot centers for a fence not exceeding 8 feet and 8-foot centers for a fence height greater than 8 feet not exceeding 16 feet.
   2. All post shall be set in a concrete foundation to a depth of not less than 36 inches for a fence not exceeding 8 feet and a minimum of 60 inches for a fence height greater than 8 feet not exceeding 16 feet.
   3. Set terminal posts (end, corner, and gate) at beginning and end of each continuous length of fence and at abrupt changes in vertical and horizontal alignments.
C. Install framework, fabric, accessories and gates in accordance with ASTM F 567. The fence erection, including all connections, shall be made in accordance with manufacturer's directions and the "Product Manual" published by the Chain Link Manufacturers Institute.
D. Place fabric on outside of posts and rails. Fabric shall be stretched out enough to resist a 6-inch deflection laterally, top or bottom, when force is exerted with the hand. Fabric shall be attached to and supported by terminal and gate posts by means of 3/16 x ¾ inch hot-dipped galvanized tension bars.
   1. Fabric shall be fastened to line posts and to the top and bottom rails by means of tie wire spaced approximately two feet apart. There shall be two complete wraps made with the tie wire around the fabric on all perimeter security fence.
   2. Posts bracing and other structural members of the fence shall be located on the inside of the security fence.
   3. The fence and gate fabric for fences 16 feet in height shall be 2 pieces of 8 foot high 9 gauge material overlapped 4 inches and hog tied every 12 inches using 9 gauge galvanized steel wire per SNL Standard Drawing CJISO5STD.
E. Set intermediate posts plumb, in concrete footings with top of footing 2 inches above finish grade. Slope top of concrete for water runoff.
F. Line Post Footing Depth Below Finish Grade: ASTM F 567.
1. For fence less than 5'-0" in height footing shall be 32" deep, for fences between 5'-0" and 8'-0" footings shall be 36" deep.

2. Diameter - 12" minimum.

G. Corner, Gate and Terminal Post Footing Depth below Finish Grade: ASTM F 567. All posts shall be spaced in the line of the fence not to exceed 10-foot centers for a fence height not exceeding 8 feet. Gate post footings shall be a minimum of 12" in diameter and a minimum of 36" deep. Terminal and corner post footings shall be a minimum of 4 times the O.D. of the post diameter and 32" in depth for gates under 5'-0" and 36" deep for fences over 5'-0", but under 8'-0".

H. Brace each gate and corner post to adjacent line post with horizontal center brace rail and diagonal truss rods. Install brace rail one bay from end and gateposts. All ends of corner posts, unless otherwise shown, shall be suitably braced with pipe set in horizontal position, with adjustable truss braces between terminal and first line of posts, complete with all fittings.

I. Provide top rail through line post tops and splice with 6-inch long rail sleeves. Top rail shall pass through the extension arms to form a continuous brace from end to end of each stretch of fence.

J. Install center brace rail on corner gate leaves.

K. Do not stretch fabric until concrete foundation has cured 48 hours.

L. Stretch fabric between terminal posts or at intervals of 100 feet maximum, whichever is less.

M. Position bottom of fabric 2 inches above finished grade.

N. Fasten fabric to top rail, line posts, braces, and bottom tension wire with tie wire or hog rings at maximum 15 inches on centers.

O. Attach fabric to end, corner, and gateposts with tension bars and tension bar clips.

P. Do not attach the hinged side of gate to building wall: provide gate posts.

Q. Install gate with fabric to match fence. Install two hinges per leaf up to 4 feet, and 3 hinges per leaf anything over 4 feet, with latch, catches, and drop bolt.

R. All bolts shall be cut flush on the face of the nut, and shall have a smooth surface.

S. All screw, nuts, bolts, bars, wire mesh, hinges and hinge pins shall be securely fastened inward to preclude surreptitious removal and assure visual evidence of tampering. All bolts protruding into areas of travel or that will pose a threat of injury will be cut so as only 2 or less threads are exposed beyond the nut.

T. Hardware accessible from outside the area shall be restrained by peening, brazing or spot welding to preclude removal.
   1. Exceptions: Carriage bolts with round head need not be restrained when used to connect top or bottom rail, latches or center stop. Carriage bolts need not be restrained when used on hardware where the nut is not accessible from the outside.
   2. Exceptions: Bolts and hardware on fence other than perimeter security fence shall not be restrained unless directed otherwise.

U. Surfaces that have been cut, filed, or where the galvanized coating has been damaged shall be coated with a zinc enriched paint, anti corrosive aluminum paint or suitable substitute to prevent corrosion per ASTM A-780.

V. Clearances
   1. The bottom rail shall be installed so that it is not over 2 inches above grade at any point (standard fence only).
   2. Provide suitable closure at irregularities in grade, such as curbs or ditches.
      a. Provide suitable extension from the bottom rail made from an equivalent material.
      b. Fabric closures shall be sufficiently secured to the bottom rail and extensions with fabric ties. Overlap the fabric for the enclosure a minimum of 6 inches above the bottom rail.
   3. Vertical posts shall not exceed 5 inches open space to the adjacent post or solid structure.
4. Gates in the closed position shall have vertical and horizontal clearances not greater than 6 inches.

3.03 TOLERANCES

A. Maximum Variation from Plumb: 1/8” Tolerance.
B. Maximum Offset From True Position: 1/2 inch.
C. Components shall not infringe adjacent property lines.
D. The bottom rail shall be installed so that it is not over 2 inches above grade at any point.
E. Vertical posts shall not exceed 6 inch open spaces to the adjacent post or solid structure.
F. Gates in the closed position shall have vertical and horizontal clearance not greater than 6 inches.
G. Provide suitable closure at irregularities in grade, such as curbs or ditches. This can be accomplished with suitable extensions from the bottom rail made from an equivalent material. Vertical posts shall not exceed 6 inch open spaces to the adjacent post or solid structure. If fabric is utilized in the closure it shall be sufficiently secured to the bottom rail and extensions with fabric ties. Overlap the fabric for the enclosure a minimum of 6 inches above the bottom rail.

END OF SECTION