

SECTION 01 01 50

ADDITIONAL REQUIREMENTS FOR DIVISION OF THE STATE ARCHITECT

PART 1 - GENERAL

1.1 GENERAL:

1.1.1 The following additional requirements apply to this Project that is being reviewed by the Division of the State Architect (DSA).

1.2 ADDITIONAL REQUIREMENTS:

1.2.1 In addition to the duties specified in the Contract Documents, the duties of the Design Builder shall be in accordance with the requirements specified in Title 24 of the California Code of Regulations (CCR).

1.2.2 In addition to the duties specified in the Contract Documents, the duties of the Architect and the Architect's consultants shall be in accordance with the requirements specified in Part 1, Title 24, CCR.

1.2.3 DSA is not subject to arbitration proceedings.

1.2.4 Notify DSA at start of construction in accordance in Part 1, Title 24, CCR.

1.2.5 Design Builder shall submit 100 % Construction Documents to DSA for approval.

1.2.6 Design Builder shall schedule a Presubmittal meeting with DSA and the Design Build Team to obtain specific requirements from DSA for submittal of construction documents and to make DSA aware of the scheduled submittal date.

1.2.7 If and when applicable, addenda and change orders shall be submitted to and approved by DSA. Do not begin any work under an addendum or change order until such applicable DSA approval is obtained. Addenda and change orders shall be in accordance in Part 1, Title 24, CCR.

1.2.8 If and when applicable, do not begin work under a written order until a change order has been submitted to and approved by DSA in accordance with Part 1, Title 24, CCR. Substitutions effecting structural, fire/life/safety or access compliance shall be submitted as change orders for DSA approval. The Design Builder will be responsible for the additional architectural and engineering costs associated with the review and regulatory processing of these substitutions.

1.2.9 Unless otherwise indicated or specified, perform the work in conformance with the latest edition of applicable regulatory requirements. A copy of Part 1 and Part 2 of Title 24, CCR shall be available on the Project site. If and when applicable, the codes adopted by the City, County, State and Federal agencies shall govern minimum requirements for this Project.

1.2.10 Design Builder shall submit verified reports in accordance with Part 1, Title 24, CCR.

- 1.2.11 DSA may supervise construction, reconstruction, or repair in accordance with Part 1, Title 24, CCR.
- 1.2.12 Construction shall be observed by a full-time Project Inspector approved by DSA in accordance with Part 1, Title 24, CCR.
- 1.2.13 Testing requirements of the District's Testing Laboratory shall be in accordance with Part 1, Title 24, CCR.
- 1.2.14 Special Inspection on masonry construction, glued laminated lumber, wood framing using timber connectors, ready-mixed concrete, gunite, pre-stressed concrete, high strength steel bolt installation, welding, pile driving, and mechanical and electrical work shall be as required by Part 1, Title 24, CCR. The costs of special inspection will be paid for by the District.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

WORK COVERED BY CONTRACT DOCUMENTS

PART 1 - GENERAL**1.1 SUMMARY**

This Section includes summary of work including:

- 1.1.1 Work covered by Contract Documents
- 1.1.2 Work under other contracts
- 1.1.3 Future work
- 1.1.4 Work sequence
- 1.1.5 Cooperation of Design Builder and coordination with other work
- 1.1.6 Maintenance
- 1.1.7 Occupancy requirements
- 1.1.8 Reference Standards
- 1.1.9 Products or services ordered in advance
- 1.1.10 District furnished products
- 1.1.11 Execution

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- 1.2.1 The work includes to construct the Title IX Locker Room renovation at Laney College for the Peralta Community College District, to be located at 900 Fallon Street, Oakland, CA 94607. The building was constructed circa 1968. The proposed modernization includes the same 21,800 SF below grade locker room space but upgrading its entirety, including a new architectural layout of the rooms. The renovated building will promote interaction among the students, and the modernization of existing space will celebrate women and female athletes of Laney college, simplify access, reduce travel distance, improve security, support a diverse community, achieve Title IX compliance, and improve financial efficiency. The scope of work includes a new MEP system, HVAC system, fire protection system installation, and installation of new furniture, fixtures and equipment.
- 1.2.2 The existing building, parking and exterior gathering areas of the Laney College Campus will remain in operation during construction of the new facility. The DBE will ensure adequate protection of the facility and vehicular and pedestrian traffic at all times.
- 1.2.3 The Contract requires Design Builder to commission and turn over the Locker Room Renovation Project to District as a completed project in accordance with the terms and conditions of the Contract Documents. The Project is more fully described in the Criteria Documents included with this Project Manual and the Design Builder's Proposal.
- 1.2.4 Unless provided otherwise in the Contract Documents, all risk of loss to Work covered by the Contract Documents shall rest with Design Builder until Final Completion and Acceptance of the Work by the District or termination of the Design-Build Contract, whichever occurs first.

1.3 WORK UNDER OTHER CONTRACTS

1.3.1 Telecommunications Room end point electronics by District IT Services or District's third party vendor.

1.3.2 Furniture Procurement and Installation by District's furniture vendor.

1.4 FUTURE WORK

1.4.1 Design/Builder is alerted to the fact that additional District projects may be performed at the facility over the duration of this project. As projects are known and funded, the work will be identified to the Design Builder so that necessary coordination can be performed.

1.5 WORK SEQUENCE

1.5.1 The Design Builder shall construct the Work in stages and at times to accommodate District operational requirements in the existing building during the construction period and shall coordinate its construction schedule and operations with District.

1.5.2 Construction of Laney Theater Expansion Project will take place during the Locker Room construction. Coordination with Contractor for required work for new columns and foundations to be located within Storage (Rm. 150) will be required for work access and schedule coordination.

1.6 COOPERATION OF DESIGN BUILDER AND COORDINATION WITH OTHER WORK.

1.6.1 Should construction work, or work of any other nature, be underway by other forces or by other contractors within or adjacent to the limits of the Work at the time of executing the Contract, or should work be performed under the contracts listed in paragraphs 1.3 and 1.4 above, the Design Builder shall cooperate with all such other contractors or forces to the end that any delay or hindrance to their work will be avoided. The cost of such cooperation will be considered as included in the contract price and no additional payment will be made therefor. Design Builder shall coordinate with such other contractors and forces as required by Document 00 50 00 (Agreement).

1.6.2 District reserves the right to perform other or additional work, within or adjacent to the limits of the Work specified, at any time by the use of other forces. In the event that the performance of such other or additional work materially increases or decreases Design Builder's costs, the work and the amount to be paid therefor will be appropriately adjusted as determined by District.

1.6.3 Design Builder shall limit use of the Site for the Work and for construction operations to allow for:

1.6.3.1 District's operations

1.6.3.2 Work by other contractors

1.6.4 Design Builder shall coordinate use of and access to the Site with other contractors, utilities, and District's forces, as required by Document 00 50 00 (Agreement). District has final authority over coordination, use of premises, and access to the Site.

- 1.6.5 Design Builder shall cooperate with District and others who may occupy or begin work on Site and inside any building thereon prior to completion of Work of this Contract.
- 1.6.6 Design Builder shall cooperate with contractors for other area work, not included in Contract, but which may take place during construction period.
- 1.6.7 Design Builder, and all design consultants and major subcontractors shall participate in partnering sessions as described in Section 00 50 00 (Agreement).

1.7 MAINTENANCE

- 1.7.1 Cost of maintenance of systems and equipment prior to Substantial Completion, as defined in section 00 50 00 (Agreement), is included in the Contract Price and no additional payment will be made therefor.

1.8 OCCUPANCY REQUIREMENTS

- 1.8.1 Whenever, in the opinion of District, Work or any part thereof is in a condition suitable for use, and the best interest of District requires such use, District may take Beneficial Occupancy of and connect to, open for public use, or use the Work or such part thereof pursuant to paragraph 8.16.3 (Beneficial Occupancy) of paragraph 1.7 of section 00 50 00 (Agreement). In such case, District will inspect the Work or part thereof, and issue a Certificate of Beneficial Occupancy for that part of Work.
- 1.8.2 Prior to date of Final Acceptance of the Work by District, all necessary repairs or renewals in Work or part thereof so used, not due to ordinary wear and tear, but due to defective design, materials or workmanship or to operations of Design Builder, shall be made at expense of Design Builder, as required in section 00 50 00 (Agreement).
- 1.8.3 Use by District of Work or part thereof as contemplated by this Section shall in no case be construed as constituting acceptance of Work or any part thereof. Such use shall neither relieve Design Builder of any responsibilities under Contract, nor act as a waiver by District of any of the requirements thereof.
- 1.8.4 District may specify in the Contract Documents that portions of the Work, including electrical and mechanical systems or separate structures, shall be substantially completed on milestone dates prior to the Substantial Completion of all of the Work. Design Builder shall notify District in writing when Design Builder considers any such part of the Work ready for its intended use and substantially complete and request District to issue a Certificate of Substantial Completion for that part of the Work.

PART 2 - PRODUCTS

2.1 REFERENCE STANDARDS

- 2.1.1 For products specified by association or trade standards, comply with requirements of District standards, except where more rigid requirements are specified or are required by applicable codes.

2.2 PRODUCTS OR SERVICES ORDERED IN ADVANCE

2.2.1 District furnished products listed in paragraph 2.3 below will be procured under separate contracts and provided by District or vendor to Design Builder for installation under the terms of paragraph 1.6 above. Design Builder to provide utility service and stub out connections as necessary for the installation of District furnished products.

2.3 DISTRICT FURNISHED PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 Internet/Web-Based Project Management Software. The Design Builder is directed to use the project's existing Internet/Web-based project management software, to track and manage the project, as described in Section 01 31 20 Project Management Software.

END OF SECTION

SECTION 01 11 20

DESIGN SERVICES AND DELIVERABLES

PART 1 - GENERAL

1.1 SUMMARY

This Section includes a summary of the Work including:

- 1.1.1 Design Services
- 1.1.2 Proposal Phase
- 1.1.3 Design Confirmation Phase
- 1.1.4 Construction Documents Phase
- 1.1.5 Construction Phase
- 1.1.6 Operation/Project Close Out

1.2 DESIGN SERVICES

1.2.1 Summary of Design and Technical Requirements

- 1.2.1.1 The Criteria Documents set forth the District's minimum design and construction requirements for the Project that the Design Builder shall meet in preparing designs and constructing the Project. Design Builder shall prepare designs to meet these requirements and submit deliverables as described in these requirements. The requirements of this Section supplement but do not supersede the requirements of the Criteria Documents.
- 1.2.1.2 As required in this specification, Design Builder shall submit designs and deliverables meeting the requirements of the Contract Documents at 100% Design Development, 50% Construction Documents and 100% Construction Documents. DBE shall obtain District approval of the 100% DD and 50% Construction Documents prior to continuing with design. DBE shall obtain approval of the 100% CD documents prior to submission to DSA. Design Builder may elect to create incremental packages of major building components or activities it deems advantageous towards scheduling or permitting efficiencies. Design Builder will be responsible for meeting District and approving agency requirements for one hundred percent (100%) Construction Documents submittal for review and approvals.
- 1.2.1.3 Unless specifically and expressly limited, Design Builder's scope of work shall include all engineering, procurement and construction necessary to complete the Project.

1.2.2 Summary of Work

- 1.2.2.1 Unless specifically excluded from this Contract, Design Builder shall provide to District all professional architectural, engineering services and other specialty consultants as necessary to perform Design Builder's obligations under the Contract Documents and to complete the Project including, but not limited to, the requirements of the

Criteria Documents, as modified, if at all, pursuant to section 00 50 00 (Agreement) (the “Services”).

- 1.2.2.2 Design Builder shall perform the Services using the persons and subconsultants listed in Design Builder’s Pre-Qualification Questionnaire and Proposal and may substitute personnel or subconsultants only upon the District’s written consent, which is in District’s discretion but will not be unreasonably withheld. Design Builder represents that it and its subconsultants possess all necessary training, qualifications, licenses and permits to perform the Services, and that their performance of the Services will conform to the standard of practice of a professional that specializes in performing professional services of like nature and complexity of the Services. Design Builder’s licensed subconsultants (architectural, engineering and other specialty consultants) shall owe a duty of care to the District in performing their architectural and engineering portions of the Services.
- 1.2.2.3 Design Builder and its subconsultants shall make an independent assessment of the accuracy of the information provided by the District concerning existing conditions (including but not limited to existing utilities and structures and tie-ins to existing or contemplated facilities) and the adequacy of available design information/technical reports. Design Builder shall rely on the results of its own independent investigations and not on information provided by District. Design Builder shall conduct such further investigations of existing conditions as are necessary for Design Builder to perform the Services and shall advise District of any further design or other services necessary to complete the Project.
- 1.2.2.4 Design Builder’s design shall provide that all surfaces, fixtures and equipment are readily accessible for maintenance, repair or replacement by ladders, power lifts, cat walks, and the like without exceeding the design loads of the floors, roofs, ceilings, and that such access is in conformance with Cal OSHA. All drawings, shop drawings and specifications in the Construction Documents, structural, electrical and other design calculations, site data, and any other deliverable required by State or Federal law shall comply with State and Federal standards. Design Builder shall comply with any other requirements of public or private authorities with jurisdiction over the Project, the Construction Documents, or tie-ins to the Project. Design Builder shall comply with the applicable standard of care of a specialist when preparing Construction Documents to comply with applicable building codes, ordinances, statutes, laws, District standards, governmental regulations and private restrictions, including necessary tie-ins, applicable to the Project and the Services, including, but not limited to, those listed in this Contract, all environmental, energy conservation, energy tie-in, and disabled access requirements, regulations and standards of State and local Fire Marshals or other authorities having jurisdiction over the Project.
- 1.2.2.5 District at all times shall have the right (but not the duty) to review Design Builder’s design work, whether performed by Design Builder or a subconsultant of any tier, and whether in a final or preliminary form,

to determine progress and conformance to the requirements of the Contract Documents. In the event the District should ever dispute the conformance of any design work (at any stage) with the intent of the Contract Documents, then the District's determination shall control and the Design Builder and/or its subconsultants shall perform the disputed design services and/or work to completion in accord with the District's determination. The Design Builder shall, however, retain its rights under the procedure of Article 13 of section 00 50 00 (Agreement) for disputes and claims, and Design Builder may under that procedure and in its name advance any claim of a subconsultant of any tier.

- 1.2.2.6 All work associated with the abatement of hazardous materials is the responsibility of the Design Builder. The Design Builder shall employ an industrial hygienist to perform and monitor the work. Refer to Section 01 88 20 (Miscellaneous Hazardous Materials Performance Requirements) for additional information.
- 1.2.2.7 All work associated with permanent signage and wayfinding is the responsibility of the Design Builder.
 - 1.2.2.7.1 The Design Builder will work closely with the District and the District Standards to develop signage and wayfinding scope that meets the needs of the Project. The Wayfinding and Signage subconsultant shall address the following items while developing their design:
 - 1.2.2.7.1.1 Changeability – Design must allow for the cost effective modification as the needs of the Project change over time. Signage should be specified so that the District can easily update signage on site.
 - 1.2.2.7.1.2 Durability and Maintenance – Signage and wayfinding materials must be extremely durable and easily maintainable.
 - 1.2.2.7.1.3 Coordination with other disciplines such as architecture, interior design, and lighting design to ensure a coordinated and integrated wayfinding design.
 - 1.2.2.7.1.4 Readability and universal messages that intuitively meet the needs of the District.
 - 1.2.2.7.1.5 Code Compliance.
 - 1.2.2.7.1.6 Exterior and site wayfinding that identifies the Project, main entry, vehicular access, pedestrian access, property boundaries, and directions on surrounding City streets.
 - 1.2.2.7.1.7 Interior wayfinding that identifies the Project identity, department identification, room identification, and staff specific signage.

1.2.2.7.1.8 Enhanced environmental graphics that consider appropriate application of electronic media, interactive technologies, public artwork and architectural solutions to address wayfinding challenges.

1.2.2.7.2 The Design Builder will submit its design for signage and wayfinding to the District in accordance with the provisions of this Section.

1.2.2.8 Design Builder's Interior Design Services.

1.2.2.8.1 The Design Builder shall provide all Interior Design services for the Project.

1.2.3 Coordination of Architectural and Engineering Subconsultants/Other Contractors

1.2.3.1 Design Builder shall fully coordinate all architectural and engineering disciplines and subconsultants involved in completing the Work, including but not limited to, all subconsultants employed by Subcontractors or suppliers. Design Builder's subconsultants of all tiers shall fully coordinate with Design Builder and all architectural and engineering disciplines and subconsultants involved in completing the Work.

1.2.3.1.1 Design Builder shall require its subconsultants to agree in their subcontracts to coordinate with Design Builder and other subconsultants.

1.2.3.1.2 See Section 01 31 19 (Project Meetings) for minimum meeting requirements.

1.2.4 Project Master Schedule

1.2.4.1 Design Builder shall complete or cause to be completed all services required under this Agreement in accordance within Contract Time as defined in Article 9 of Section 00 50 00 (Agreement) as well as all approved project schedules and updates thereto.

1.2.4.2 Design Builder shall provide District with a design and construction schedule that outlines dates and time periods for the delivery of Design Builder's services and requirements for information from the District for the performance of its services. The Project Master Schedule will include activities for completing the project design documents (through release for construction), significant construction milestones, construction submittals and long lead item procurement, dates for decisions by District affecting schedule, and utility interruptions affecting Project operations. For more detailed information refer to Section 00 50 00 (Agreement).

1.2.4.3 The Project Master Schedule shall be updated monthly, and shall meet the following requirements:

1.2.4.3.1 The schedule shall fit within and coordinate with the Milestone Schedule in Exhibit B of Section 00 50 00 (Agreement) including any and all design interfaces.

1.2.4.3.2 The schedule shall be in fully operational Primavera® (latest edition) computer software format.

1.2.4.4 Design Builder shall adjust and cause its retained subconsultants and Subcontractors to adjust activities, personnel levels, and the sequence, duration and relationship of services to be performed in a manner that will comply with the approved schedules.

1.2.4.5 Design Builder has no restraints on when it may bid or assign work to Subcontractors.

1.2.5 Deliverables Required Under This Agreement - General

All deliverables required under this Agreement shall be submitted in full compliance with the Contract Documents, shall be submitted in at least triplicate (or such greater number as the District may reasonably request) and, when contained on electronic media, shall be submitted in printed form as well as on electronic media when requested by the District. In the event of a conflict between the electronic version and hard copy versions of Design Builder's documents, the hard copy shall govern.

DBE shall provide interior and exterior color boards and materials for District approval. Final presentation shall include both interior and exterior elevations for approval from several vantage points.

Deficiencies in deliverables and modifications to conform to program requirements and modifications to achieve acceptability of deliverables to District, shall be promptly performed as part of the Stipulated Sum.

1.3 PROPOSAL & RECONCILIATION PHASE

1.3.1 Proposal Phase Documents

In response to the Request for Proposal the Design Builder shall submit Proposal Phase Documents as required by Section 00 10 00 (Request for Proposal). Upon selection by PCCD, DBE shall work with the District to Reconcile and finalize scope of Work as specified in Section 00 26 40 (Rules and Procedures for Discussions and Negotiations).

1.4 DESIGN CONFIRMATION PHASE

1.4.1 Period of Service

1.4.1.1 After reconciliation of the Design Builder's Proposal, and upon written authorization from the District, Design Builder shall proceed with the performance of the services called for in the Design Confirmation Phase, as described in Section 00 50 00 (Agreement). The intent of the Design Builder's Design Confirmation Phase is to obtain District approval for design revisions, refinements, and concept elaborations produced by the Design Builder prior to Construction Document

Production. Design Builder may elect to submit Design Confirmation Documents incrementally by major building phases, components, or areas to facilitate economy of schedule provided overall design concept is clear and adhered to.

- 1.4.1.2 Design Builder shall submit deliverables required to execute and manage the Design Confirmation Phase including a revised detailed Cost Estimate with breakdown of all Project Costs.
- 1.4.1.3 Design Builder shall at the outset of this Phase make full written disclosure to District, and obtain District's express written approval of, any proposed innovative, unique, proprietary or sole source design features. District retains full discretion to disapprove such features.

1.5 CONSTRUCTION DOCUMENTS PHASE

1.5.1 Period of Service

- 1.5.1.1 After acceptance by the District of the requirements of the Design Confirmation Phase, and upon written authorization from the District, Design Builder shall proceed with the performance of the services called for in the Construction Documents Phase.
- 1.5.1.2 Design Builder shall submit the deliverables required by the Construction Documents Phase, within the period approved and required in the Project Milestone Schedule.

1.5.2 Construction Documents Design Builder shall prepare final Construction Documents to show the work to be furnished and performed by Design Builder. The Construction Documents shall become a part of the Contract Documents. Construction Documents shall set forth in detail the requirement for construction of all work to be performed by Design Builder. Construction Documents shall not supersede the Contract Documents where the Contract Documents contain a more stringent requirement. Construction Documents shall consist of all site, architectural, structural, MEP and specialty design drawings, specifications, calculations and details to obtain all regulatory approvals and construct the project.

1.5.2.1 Architectural

- 1.5.2.1.1 Completed site plan.
- 1.5.2.1.2 Completed floor plans, elevations, and sections.
- 1.5.2.1.3 Architectural details and large blow-ups completed.
- 1.5.2.1.4 Finish, door, and hardware schedules completed, including all details.
- 1.5.2.1.5 Site utility plans completed.
- 1.5.2.1.6 Fixed equipment details and identification completed.
- 1.5.2.1.7 Reflected ceiling plans completed.

1.5.2.2 Structural

- 1.5.2.2.1 Structural floor plans and sections with detailing completed.
- 1.5.2.2.2 Structural calculations completed.
- 1.5.2.3 Mechanical
 - 1.5.2.3.1 Large scale mechanical details completed including fire sprinkler system.
 - 1.5.2.3.2 Mechanical schedules for equipment completed.
 - 1.5.2.3.3 Completed mechanical schematic for environmental cooling and exhaust equipment.
 - 1.5.2.3.4 Complete energy conservation calculations and report necessary for compliance with California Title 24 energy requirements.
- 1.5.2.4 Electrical
 - 1.5.2.4.1 Lighting and power plan showing all switching and controls. Fixture schedule and lighting details completed.
 - 1.5.2.4.2 Distribution information on power consuming equipment, including lighting, power, signal and communication device(s) branch wiring completed.
 - 1.5.2.4.3 All electrical equipment schedules completed.
 - 1.5.2.4.4 Low Voltage and special system component and distribution plans completed including Fire Alarm system.
 - 1.5.2.4.5 Electrical load calculations completed.
- 1.5.2.5 Civil
 - 1.5.2.5.1 All site plans, site utilities, parking and roadway systems completed.
- 1.5.3 Attend Required Meetings Attend meetings with community, representatives of the District and its designated consultants and appropriate governmental agencies and provide information and diagrams to fully describe the project.
- 1.5.4 Deliverables Contractor shall submit one (1) electronic copy of all milestone documents, including 100% DD, 50% CD & 100% CD, and two (2) hard copies to District.
- 1.5.5 Specifications shall be prepared in conformance with the most current edition available of Master Format of the Construction Specification Institute. Design Builder shall have complete responsibility to secure timely review and approval by all authorities with jurisdiction, including but not limited to the Division of the State Architect. It is the intent of the District to work in close coordination to assist the Design Builder in the plan review process to support a timely review and approval process schedule.

- 1.5.6 The same architectural and engineering team (and team personnel) that prepare documents submitted to authorities with jurisdiction shall complete the Construction Documents.
- 1.5.7 Compliance with Codes, Regulations and Requirements Prepare Construction Documents in full compliance with the Contract Documents, applicable building codes, ordinances, District standards, governmental regulations and private restrictions, applicable to the Work.
- 1.5.8 Make full written disclosure to District, and obtain District's express written approval of, any proposed innovative, unique, proprietary or sole source design features.
- 1.5.9 Warranty Design Builder warrants to District that the final design, as expressed in the Construction Documents: :
 - 1.5.9.1 Will be constructible, workable, serviceable and within the Design Builder's detailed estimate of costs and schedule;
 - 1.5.9.2 Will comply in all respects with the requirements of the Contract Documents (Certificate of Warranty) and (Certificate of Guarantee Fire and Life Safety) listed in Section 00 45 00.
 - 1.5.9.3 Will not call for the use of hazardous or banned materials.
 - 1.5.9.4 Will fully comply with applicable building codes, ordinances, standards, governmental regulations and private restrictions, applicable to the Work.
- 1.5.10 Cost Estimate The Design Builder shall submit to the District an updated Cost Estimate and identify cost changes since the Proposal Estimate (providing one (1) electronic copy on a). This estimate shall consist of unit costs applied to the Element Level (Level 3 National Institute of Standards and Technology Uniformat II Classification) items and quantities of work. This estimate shall be organized in a format acceptable to the District. The District will use this estimate for cost reconciliation and design change order reviews.

1.6 CONSTRUCTION PHASE

- 1.6.1 Upon District's acceptance of Design Builder's Construction Documents for technical divisions or other portions of the Work as Design Builder and District may agree, Design Builder may commence construction of the Work shown.
- 1.6.2 General Administration of Construction Design Builder's architectural, design, and engineering, and other subconsultants, including the industrial hygienist, shall make regular visits to the site at intervals appropriate to the various stages of construction as necessary to assure that construction conforms to the final design of the Construction Documents as approved.
- 1.6.3 Quality Control and Reporting Design Builder's architectural, design, and engineering, and other subconsultants, including the industrial hygienist, shall participate fully in Design Builder's required quality control program and shall have a duty to advise Design Builder and District in writing of any observations of defective work, work not in conformance with Construction Documents, and lack

of progress consistent with the schedule of work in areas associated with their services. See Section 01 45 00 (Quality Control).

- 1.6.4 Design Builder's architectural, design, and engineering subconsultants, including the industrial hygienist, shall establish and maintain to the satisfaction of District, a computer database compatible with databases maintained by District. The Design Builder's database shall maintain complete and accurate records regarding its activities related to fulfilling the requirements of Section 01 45 00 (Quality Control). Design Builder shall make such database available to District at all reasonable times and turn over the database in both hard and electronic form to District upon completion or termination of this Agreement.
- 1.6.5 Together with District, Design Builder and Design Builder's architectural, design, and engineering subconsultants, shall visit the Project to observe any apparent defects in the construction, correct such deficiencies, and supply information as needed regarding replacement, correction, or diminished value of defective work.
- 1.6.6 Design Builder shall provide to District for District's approval two (2) copies of a color schedule, samples of types and size acceptable to the District of textures and finishes of all materials in the Work at the Project. Actual materials to be used in the construction of the building shall be mounted on a board(s) suitable for display purposes for faculty, staff and the community to observe. Provide separate color boards for interior and exterior finishes.

1.7 OPERATION/PROJECT CLOSE-OUT PHASE

- 1.7.1 Operation/Close Out During the Operation/Project Close-Out Phase, Design Builder and Design Builder's architectural, design, and engineering subconsultants shall, when requested by District, provide all necessary architectural, design and engineering services, including services of its architectural, design and engineering subconsultants, for:
 - 1.7.1.1 Refining, adjusting and correcting of any equipment or systems.
 - 1.7.1.2 Start-up, testing and placing in operation all equipment and systems. See Section 01 35 50 (CALGreen Environmental Requirements).
 - 1.7.1.3 Completion of punch list work and observation of any apparent defects in the completed construction, correction of such deficiencies, and supply information as needed regarding replacement, correction, or diminished value of defective work.
 - 1.7.1.4 Training District's staff to operate and maintain all equipment and systems. Training shall be professionally videotaped with two (2) copies provided to District for their use.
 - 1.7.1.5 Assisting District in developing systems and procedures for control of the operation and maintenance of and record keeping for the Project.
 - 1.7.1.6 Preparation of electronic record sets and sets of reproducible record prints or Drawings showing those changes made during the construction process, based on the marked-up prints, Drawings and other data.

1.8 DESIGN BUILDER'S OBLIGATION FOR FINISHED CONSTRUCTION

- 1.8.1 District's right to review Design Builder's design including, but not limited to, Construction Documents, shop drawings, samples and submittals, as specified in the Contract Documents, shall not relieve Design Builder of its responsibility for a complete design and construction complying with the requirements of the Contract Documents; but rather, such review shall be in furtherance of the District's monitoring and accepting the design as developed and issued by the Design Builder, consistent with these Contract Documents. Design Builder's responsibility to design and construct the Project in conformance with the Contract Documents including, but not limited to, the applicable performance standard and any fully executed change orders, shall be absolute. Such duty may not be altered or diminished by any action other than a signed change order.
- 1.8.2 Auto CAD, Revit, and Other Electronic Data (BIM) Provide all electronic files of all Construction Documents drawings including as-bid, as-built, and all record Drawings. Prepare electronic record sets and sets of reproducible record prints or Drawings showing those changes made during the construction process. Electronic data shall conform to District requirements for compatibility with District equipment and software.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION (Not used)

END OF SECTION

SECTION 01 14 00
WORK RESTRICTIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

1.1.1. The Contract Documents, including Section 00 50 00 (Agreement) and other Division 0 and 1 Specification Sections, apply to this Section.

1.2 USE OF PREMISES

1.2.1 Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of site beyond areas in which the Work is indicated.

1.2.1.1 Limits: Confine constructions operations to Limit of Work as shown in the Bridging Documents.

1.2.1.2 District Occupancy: District will not use or occupy any of the spaces within the locker room area of work. .

1.2.1.3 Driveways, Entrances and Parking: Keep driveways, entrances and parking serving adjacent properties available for access and emergency vehicles at all times. Do not use these areas for parking or storage of materials.

1.2.1.3.1 Schedule deliveries to minimize impact to adjacent properties.
And

1.2.1.3.2 Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

1.2.2 Use of Existing Building: Maintain existing building in a weather-tight condition throughout construction period. Immediately repair damage caused by construction operations. Protect building and its occupants during construction period.

1.3 OCCUPANCY REQUIREMENTS

1.3.1 Full District Occupancy: District will occupy spaces adjacent to and above the project site, as indicated in the criteria documents, and portions of existing adjacent buildings and circulation spaces during entire construction period. Cooperate with District during construction operations to minimize conflicts and facilitate District usage. Perform the Work so as not to interfere with District's operations.

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

- 1.3.2.1 District will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before District occupancy.
- 1.3.2.2 Obtain a Certificate of Occupancy from authorities having jurisdiction before District occupancy.
- 1.3.2.3 Before partial District occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, see Section 01 77 00 (Cleaning and Closeout Procedures) for requirements.
- 1.3.2.4 On occupancy, District will assume responsibility for maintenance and custodial service for occupied portions of building.
- 1.3.2.5 Prior to occupancy for each phase Design Builder shall satisfy all of the requirements as set forth in Section 01 77 00 (Cleaning and Closeout Procedures).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 14 10

CONSTRUCTION MANAGEMENT PLAN

PART 1 - GENERAL

1.1 ENVIRONMENTAL CONTROLS

1.1.1 Noise: All work shall be performed with a minimum of noise or disruption to normal activities in the surrounding areas. Design Builder will allow up to twenty-one (21) Day notice for any work to be done outside the hours of Work allowed by Peralta Community College District.

1.1.2 The following noise control procedures shall be employed:

- 1.1.2.1 Maximum increase in noise shall be limited to approximately 15db over ambient and shall not exceed regulatory standards for noise.
- 1.1.2.2 The on-site construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process shall be established prior to construction commencement that will allow for resolution of noise problems that cannot be immediately solved by the site supervisor.
- 1.1.2.3 All noise-producing project equipment and vehicles using internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
- 1.1.2.4 All mobile or fixed noise-producing equipment used on the project, which is regulated for noise output by a local, state, or federal agency, shall comply with such regulation while in the course of project activity.
- 1.1.2.5 Electrically-powered equipment instead of pneumatic or internal combustion powered equipment shall be used, where feasible and needed to control excessive noise.
- 1.1.2.6 Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.

- 1.1.2.7 Construction site and access road speed limits shall be established and enforced during the construction period.
- 1.1.2.8 The hours of material transport shall be restricted to the periods and days permitted by both this contract and local noise or other applicable ordinance.
- 1.1.2.9 The use of noise producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only.
- 1.1.2.10 No project related public address or music system shall be audible at any adjacent noise-sensitive receptor.

1.1.3 Dust: Dust control is a critical activity. The Design Builder shall prepare a submittal that identifies source air pollution and related pollution reduction measures. The following dust control measures shall be employed:

- 1.1.3.1 Implement fugitive dust control measures as provided in Bay Area Air Quality Management District (BAAQMD).
- 1.1.3.2 Develop a staging area, vehicle and truck routes, and a daily meeting to assure all applicable control measures are established for that particular workday.
- 1.1.3.3 Dust barriers shall be provided by the Design Builder as necessary to contain dust within the construction site.
- 1.1.3.4 If necessary, install a water misting system along fence perimeter or any other necessary area to prevent fugitive dust from creating a.
- 1.1.3.5 Reduce the use of diesel fuel powered equipment and use equipment with alternative fuel whenever practical to minimize diesel exhaust emissions in areas close proximity to the site.
- 1.1.3.6 Turn off equipment when not in use for long periods of time. No idling of diesel-fueled equipment for durations longer than five minutes.
- 1.1.3.7 Control fugitive dust at active soil grading/excavation areas, using water in a manner that would not impact soil compaction. Continuous wet-down may be required in the area of construction activity.

- 1.1.3.8 Use ground-covering such as mulch, wood chips, straws, hydro-seeding, surfactants, or plastic sheeting to cover inactive exposed areas to minimize fugitive dust.
- 1.1.3.9 Provide drainage for erosion control measures.
- 1.1.3.10 Use sand bags, as necessary, along site perimeter to keep soil on site.
- 1.1.3.11 Provide gravel entry way into construction site entrance to reduce/eliminate mud and sediment carried off site by vehicles.
- 1.1.3.12 Cover top of haul trucks to eliminate wind-blown fugitive dust.
- 1.1.3.13 Schedule haul trucks and material delivery trucks to prevent traffic congestion. Set up truck queuing area and have staff communicate via cell phone for efficiency.
- 1.1.3.14 As necessary, use street sweepers along travel routes in general vicinity of project area.
- 1.1.3.15 All vehicle routes are to be watered for dust control. All existing roadway and parking surfaces impacted by construction activity are to be swept and kept free of debris and dust. All areas within the construction site are to be broom swept as required to keep dust and debris to a minimum.
- 1.1.3.16 Limit the number of haul trucks on site and establish a haul route. Install a gravel or base road on site for loading trucks. Haul route shall be reviewed and approved by District.
- 1.1.3.17 Place on-site portable toilets away from adjacent properties.
- 1.1.3.18 All stockpiles shall be kept moist throughout the day to minimize particulate matter emissions. Wet down stockpiles on a regular basis including prior to end of work day.
- 1.1.3.19 Haul roads shall be paved, lined with gravel or base material, or kept moist to minimize particulate matter emissions.
- 1.1.3.20 Where practical, use paddle-wheel scrapers instead of traditional scrapers to minimize fugitive dust and reduce exhaust emissions.

- 1.1.3.21 Handling of soil shall be kept to a minimum.
- 1.1.3.22 Provide a boundary/zone where equipment shall not enter and if necessary, equipment shall operate on alternative fuel to reduce diesel particulate matter.

1.1.4 Odors: When odors are a concern, arrangements shall be made by the Design Builder for their containment or control. Where this is not feasible, specific arrangements should be made to minimize disturbance to surrounding properties. Where controllable, fumes and odors shall not be allowed to migrate. The Design Builder shall immediately notify the District's Representative of any migrating odors.

1.1.5 Vibrations: The impacts of vibration activities will be limited. If vibration becomes an impact to surrounding properties, the Design Builder shall stop operations, reschedule and/or implement the following with the approval of the District Representative:

- 1.1.5.1 Route heavily loaded trucks and equipment away from surrounding residential properties if possible.
- 1.1.5.2 Phase earthmoving and ground-impacting operations so as not to occur in the same time period, to the extent practicable. The total vibration level produced could be less when each vibration source operates separately.
- 1.1.5.3 Avoid vibratory rollers and packers near vibration-sensitive areas.

1.1.6 Environmental Mitigation Measures: Design Builder shall become familiar with the full text of the project's Environmental Impact Report/Negative Declaration Report and take responsibility for implementation of applicable mitigation measures. Questions about which items are applicable to the Design Builder shall be directed to the District's Representative.

1.2 SHIPMENTS AND MATERIALS

1.2.1 Equipment and materials shall not be shipped to the site unless specific arrangements are made for receipt and acceptance of these items. When such shipments are authorized, they are the total responsibility of the Design Builder. The District accepts no responsibility for the receipt, storage, or protection of the Design Builder's materials and equipment.

1.3 SALVAGE AND DISPOSAL

- 1.3.1 All existing property of the District that is removed from the construction site and has been identified to be salvaged by the District shall be delivered to a secure site as specified by the District's Representative.
- 1.3.2 Construction debris, or material that has no redeemable value, is to be placed in Design Builder-furnished refuse bins for safe and legal removal

from the premises. District refuse bins may not be utilized unless so authorized by the District.

1.4 PARKING

- 1.4.1 The District's Representative will meet with the Design Builder to determine parking requirements.
- 1.4.2 The primary parking and storage areas shall be designated.
- 1.4.3 Design Builder and related personnel shall park in authorized areas only.

1.5 SANITARY

- 1.5.1 Design Builder shall provide temporary toilet facilities adjacent to areas of Work. The Design Builder will not be allowed to use project site restroom facilities being constructed.
- 1.5.2 Design Builder shall submit proposed location of temporary toilet(s) to the District's Representative for approval.
- 1.5.3 Construction personnel will not be allowed to use restroom facilities being constructed for personal or equipment clean-up.
- 1.5.4 Sanitary Facilities shall be in accordance with OSHA regulations.

1.6 FOOD

- 1.6.1 Construction personnel shall police their own areas during breaks. All cups, cans, paper, wrappers, and discarded food must be placed in trash receptacles at the end of each break.
- 1.6.2 Design Builder shall submit the proposed location of any break and eating areas to the District's Representative for approval.
- 1.6.3 Construction personnel are not allowed to have food within the project, whether those facilities exist or are under construction.

1.7 **ITEMS to be included in DBE Scope** in RFP Proposal shall include, but are not limited to the following:

- 1.7.1 Offsite parking for DBE administrative, management and Supervisory staff, craft labor included in general conditions (i.e. clean-up and safety workers).
- 1.7.2 Temporary toilets and hand wash stations, compliant with all COVID-19 requirements.
 - 1.7.2.1 Refer section 01 52 00 for further detail on items to be included
- 1.7.3 Temporary barricades, fencing, gates to protect all students, faculty, staff and general public from construction activities. Barricades shall be lit as necessary for safety and security and shall be continuously maintained.

1.7.4 General clean-up of construction site on a daily basis, including debris boxes and off-site removal of trash.

1.7.5 Final clean-up – removal of all debris, construction related items, packaging, scraps etc., clean all surfaces of construction dust, materials.

1.7.6 COVID-19 costs, as required by AHJ, for temperature taking, reporting, sign-n sheets, sanitization of work areas, tools etc.

1.8 SMOKING AND TOBACCO

1.8.1 Smoking, and chewing tobacco are not permitted on the Project site.

1.8.2 Smoking and chewing tobacco are not permitted within the facilities during or after construction.

1.9 SECURITY

1.9.1 Comply with requirements of Article 14 of Section 00 50 00 (Agreement).

1.9.2 All personnel must obey and act immediately upon any request by District security or law enforcement personnel.

1.9.3 A list of emergency phone numbers will be provided by the District Representative.

1.10 SAFETY

1.10.1 General

1.10.1.1 Watch for guests, invitees, and unauthorized personnel at all times.

1.10.1.2 Work only where there is a positive barrier separation, with “green screen” between construction activities and others.

1.10.1.3 Clean up all areas immediately in occupied areas.

1.10.1.4 Do not drape cords across corridors. All cords must be attached to the ceiling or taped to the floor (use tape with non-marring adhesive).

1.10.1.5 Maintain a minimum of 8'-0" clear within all corridors.

1.10.1.6 Do not leave materials or equipment in the corridor.

1.10.2 Safety equipment and consideration should include, but are not limited to:

1.10.2.1 Anyone known to be under the influence of alcohol or drugs shall be dismissed from the Project at once and not be allowed to return.

- 1.10.2.2 Offensive language is not permitted in any area where it may be overheard by surrounding properties.
- 1.10.2.3 Provide adequate emergency first aid equipment.
- 1.10.2.4 Post location and emergency phone numbers for local medical care.
- 1.10.2.5 Monitor safe ladder usage.
- 1.10.2.6 Provide exhaust controls for equipment.
- 1.10.2.7 Monitor noise levels and establish safe limitations.
- 1.10.2.8 Ensure adequate ventilation for air contaminants.
- 1.10.2.9 Insist on personal protective equipment, such as hard hats, safety shoes, and eye, ear, and face protection equipment.
- 1.10.2.10 Safety nets, belts, and lifelines shall be used, as appropriate.
- 1.10.2.11 Provide adequate emergency fire protection equipment.
- 1.10.2.12 Post location and emergency phone numbers for local fire departments.
- 1.10.2.13 Provide safe storage for all flammable and combustible materials.
- 1.10.2.14 Insist on safe and proper use of hand power tools and electrical drop cords.
- 1.10.2.15 Operation of cranes, derricks, and hoists should be in accordance with manufacturer's recommendations and appropriate ANSI and CAL-OSHA regulations.
- 1.10.2.16 All construction operations and personnel are subject to CAL-OSHA and applicable District Environmental Health & Safety regulations.
- 1.10.2.17 Provide adequate barricades and safety lighting at all open trenches adjacent to public access.
- 1.10.2.18 Properly fence entire confines of project site so as to avoid public access or unauthorized personnel.
- 1.10.2.19 All wall, floor, and ceiling penetrations shall be sealed to maintain fire and smoke ratings in accordance with CBC, NFPA 99 and Life Safety Code.

- 1.10.2.20 All emergency exit passages must be maintained free of obstructions.
- 1.10.2.21 Provide barricades and fencing in accordance with Section 00 50 00 (Agreement) or applicable law.

1.10.3 Fire Prevention During Welding, Cutting, and Other Hot Work

- 1.10.3.1 All hot work shall be in accordance with industry standards and CAL-OSHA requirements.
- 1.10.3.2 Hot work includes welding, heat treating grinding, thawing pipe, powder-driven fasteners, hot riveting, and similar applications producing a spark, flame, or heat.
- 1.10.3.3 The Design Builder shall ensure that only approved apparatus, such as torches, manifolds, regulators, or pressure-reducing valves, and acetylene generators, are used.
- 1.10.3.4 The Design Builder shall ensure that all individuals involved in hot work are:
 - 1.10.3.5 Trained in the safe operation of their equipment and the safe use of the process.
 - 1.10.3.6 Have an awareness of the inherent risks involved and understand the emergency procedures in the event of a fire.
 - 1.10.3.7 Are aware if any special risks, such as flammable materials or hazardous conditions at the hot work site.

1.10.4 Project Inspector

- 1.10.4.1 Provision of inspectors by the District, if any, pursuant to provisions of this section shall be subject to following:
 - 1.10.4.1.1 Design Builder shall allow inspectors full access to project at all times Work is in progress.
 - 1.10.4.1.2 Design Builder shall not take any direction, approvals or disapprovals from inspectors.
 - 1.10.4.1.3 Design Builder shall not rely on inspectors to ensure Work is completed in accordance with Contract documents.

- 1.10.4.2 Acts or omissions of any inspector (including, without limitation, inspector's failure to observe or report deficiencies in Design Builder's Work) shall not relieve Design Builder from its responsibility to complete Work in accordance with Contract documents.

1.10.5 Directory For Assistance

A list of emergency phone numbers will be provided by the Engineering Department Service Center or the District's Representative.

1.11 PCCD COVID-19 Protocol

1.11.1 DBE and all vendors (firm/company/contractor) should follow the Alameda County Health Department's mandated COVID-19 workplace safety and health guidelines. Workers working under the Contract shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on the safety of persons or property, or their protection from damage, injury or loss. Vendors shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work.

DBE shall include all costs from said COVID-19 compliance in their RFP Agreement proposal and in subsequent trade bid packages, including all direct cost impacts as well as indirect impacts such as loss of efficiency, vertical transportation, social distancing, sanitizing of tools, equipment and work areas, personal protective equipment, temperature taking, sign-in sheets, tool box meetings, reporting, documentation etc..

Refer <https://safe.peralta.edu/> for the most up-to-date District information and resources regarding COVID-19 for students, faculty/staff, and the community.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF DOCUMENT

SECTION 01 23 00

ALTERNATES

PART I – ALTERNATES

1.1 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. Request for Proposals
- B. Summary of the Work

1.2 DESCRIPTION

- A. The following items of work include proposed modifications to, substitutions for, to and/or deletions from the various parts of the Work specified in other Sections of the Specifications. The acceptance or rejection of any of the alternates is strictly at the option of the District subject to District's acceptance of Contractor's stated prices contained in this Proposal.

1.3 GENERAL

- A. Where an item is omitted, or scope of Work is decreased, all Work pertaining to the item whether specifically stated or not, shall be omitted and where an item is added or modified or where scope of Work is increased, all Work pertaining to that required to render same ready for use on the Project in accordance with intention of Drawings and Specifications shall be included in an agreed upon price amount.

1.4 BASE BID

The Base Bid includes all work required to construct the Project completely and in accordance with the Contract Documents.

1.5 ALTERNATES

- A. Alternate No. 1:** Scope of work to construct partitions, doors, and window systems that separate rooms. complete all finishes within rooms. (Listed in Criteria Doc Drawings as Alternate #1)

The above Alternate descriptions are general in nature and for reference purposes only. The Contract Documents, including, without limitation, the Pre-Award Design-Build Criteria / Bridging Documents, Drawings and Specifications, must be referred to for the complete scope of Work.

END OF SECTION

SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

1.1.1 This section describes requirements for job site administration, including:

- 1.1.1.1 District's Representative
- 1.1.1.2 Design Builder's Project Management Team.

1.1.2 Related Sections.

- 1.1.2.1 Section 00 50 00 (Agreement)
- 1.1.2.2 Section 01 11 13 (Work Covered by Contract Documents)
- 1.1.2.3 Section 01 33 00 (Submittal Procedures)
- 1.1.2.4 Section 01 70 00 (Execution and Closeout Procedures)

1.2 DISTRICT'S MANAGEMENT TEAM

1.2.1 The District shall be represented on this Contract by Leigh Sata serving as District's Representative, who will act personally or through authorized designees. The District has designated Keith Kajiya, AECOM PCCD Bond Program Manager to represent the District in carrying out the duties of District. The District may delegate all or a portion of the District's Representative's duties to a Construction Manager, Stan Wong, Swinerton Management & Consulting or other District Representative, which shall then perform all or a portion of the District's Representative's duties specified herein.

1.2.2 Functions of the District's Representative include, but are not limited to, the following:

- 1.2.2.1 The District's Representative functions as the primary point of contact with the Design Builder in all matters concerning the Contract, monitoring the Design Builder's performance in all respects to ascertain that the Work is performed in accordance with all of the requirements of the Contract.
- 1.2.2.2 The District's Representative is the focal point of contact with the Design Builder regarding clarification of discrepancies and resolution of questions of fact that arise during performance of the Work under the Contract. The District's Representative also performs this role with regard to all agency and utility construction interfaces with the Work under this Contract.
- 1.2.2.3 The Design Builder is required by the Contract to provide formal notice of any and all potential claims arising during the performance of the Work. The District's Representative will administer the processing and resolution of any such claims in accordance with the requirements of the Contract.

- 1.2.2.4 All contractual correspondence, including submittals, shall be directed and processed through the District's Representative unless otherwise specifically directed in the Contract. Any required or requested communications between the Design Builder and District, the District's Representative, or any other representative of District, will be coordinated by the District's Representative.

1.3 DESIGN BUILDER'S PROJECT MANAGEMENT TEAM

- 1.3.1 The Design Builder shall staff the Project with a management team qualified and experienced in construction of a public works project of this value, nature and complexity including the individuals identified by Design Builder in its Proposal. This team shall possess the competency, skills and authority specified in Section 00 50 00 (Agreement).

- 1.3.1.1 The Design Builder shall submit to the District prior to Notice to Proceed, the names, detailed project experience, references, and proposed project position for each team member. Key team members shall have appropriate experience in the proposed position.

- 1.3.1.2 The Design Builder shall not replace members of the Design Builder's management team without prior written approval of the District. If, during the course of the Project, the Design Builder finds it necessary to replace a member of the Project Management Team, the name, qualifications, and experience of the proposed replacement shall be submitted to District for approval.

- 1.3.2 The Project Management Team shall be composed of members with the necessary skills and be sufficient in number to handle all duties normal to a project of this scale and complexity. Special attention shall be given to the responsibility of the Project Management Team for coordination and scheduling.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 31 19

PROJECT MEETINGS

PART 1 - GENERAL

1.1 SUMMARY

1.1.1 This section describes the required project meetings for this work. These meetings include:

- 1.1.1.1 Design and Preconstruction Conferences.
- 1.1.1.2 Coordination Meetings
- 1.1.1.3 Progress Meetings
- 1.1.1.4 Scheduling Meetings.
- 1.1.1.5 Quality Control Meetings
- 1.1.1.6 Special Meetings.

1.1.2 Related Sections.

- 1.1.2.1 Section 00 50 00 (Agreement)
- 1.1.2.2 Section 01 11 00 (Work Covered by Contract Documents)
- 1.1.2.3 Section 01 11 20 (Design Services and Deliverables)
- 1.1.2.4 Section 01 33 00 (Submittal Procedures)

1.2 DESIGN & PRECONSTRUCTION CONFERENCE

1.2.1 District will call for and administer Design and Preconstruction Conferences at times and places to be announced. A Design Confirmation Conference will occur as soon after issuance of the Notice to Proceed as can be reasonably scheduled. Preconstruction Conferences will be scheduled no later than 30 days prior to the start of construction of the Work.

1.2.2 Design Builder, all Subconsultants and major suppliers shall attend the Design Confirmation Conference(s). Agenda will include, without limitation, the following items:

- 1.2.2.1 Design Builder and District Coordination and Meeting Procedures
- 1.2.2.2 Design Builder's Design Confirmation Plan with Subconsultants
- 1.2.2.3 Design Builder's Initial CPM Schedule for Design and Construction
- 1.2.2.4 Design Builder's Schedule of Values (including design activities)
- 1.2.2.5 Design Builder's Schedule of Deliverables and Agency Submittals

1.2.3 Design Builder, all Subcontractors, and all major suppliers shall attend the Preconstruction Conference(s). Agenda will include, without limitation, the following items:

- 1.2.3.1 Schedules
- 1.2.3.2 Personnel and vehicle permit procedures
- 1.2.3.3 Use of premises/Limits of Work
- 1.2.3.4 Location of the Design Builder's on-site facilities

- 1.2.3.5 Security
- 1.2.3.6 Site specific safety plan
- 1.2.3.7 Housekeeping
- 1.2.3.8 Design Builder's Quality Control Program
- 1.2.3.9 Submittals
- 1.2.3.10 Inspection and testing procedures, on-site and off-site
- 1.2.3.11 Utility shutdown procedures
- 1.2.3.12 Control and reference point survey procedures
- 1.2.3.13 Injury and Illness Prevention Program
- 1.2.3.14 Design Builder's Updated CPM Schedule
- 1.2.3.15 Design Builder's Schedule of Values
- 1.2.3.16 Design Builder's Schedule of Submittals

1.2.4 District will distribute copies of minutes to attendees. Attendees shall have five (5) Business Days to submit comments or additions to minutes. Minutes will constitute final project record of results of any conference.

1.3 COORDINATION MEETINGS

1.3.1 Design Phase Coordination

- 1.3.1.1 District will be available to participate in Design Confirmation meetings or workshops as deemed necessary by the Design Builder.
- 1.3.1.2 Design Builder shall conduct at least biweekly design coordination meetings with all subconsultants employed by the Design Builder. Design Builder shall invite the District or its representative to participate in these meetings.

1.3.2 Construction Phase Coordination

- 1.3.2.1 District will be available as necessary to participate in Construction Phase Coordination Meetings.
- 1.3.2.2 Design Builder Construction Phase Coordination shall be integrated with the Design Builder's Quality Control Program, see Section 01 45 00 (Quality Control).
- 1.3.2.3 Design Builder shall conduct at least monthly Construction Phase Coordination Meetings with all Subcontractors employed by Design Builder. Design Builder shall invite District's representative to attend these meetings. Design Builder shall invite District to attend Design Builder's Quality Control Meetings.

1.4 PROGRESS MEETINGS

- 1.4.1 District will schedule and administer Progress Meetings throughout the duration of Design and Construction Work. Progress meetings will be held weekly unless otherwise directed by District.
 - 1.4.1.1 Design Phase Progress Meetings shall be held at the offices of the Design Builder's Architect or at the Office of the District as is mutually

agreed upon in advance by Design Builder and District Representative to be most advantageous for completing the Work.

- 1.4.1.2 Construction Phase Meetings shall be held at the Design Builder's Site office unless otherwise agreed between Design Builder and the District.
- 1.4.1.3 District will prepare an agenda and distribute it to the Design Builder and any Inspector in advance of the meeting.
- 1.4.1.4 District will preside at and conduct the meeting.
- 1.4.1.5 District will record and distribute minutes to the Design Builder, Inspectors, all other participants, and those affected by decisions made at a meeting, within five (5) Business Days after each meeting. Attendees shall have five (5) Business Days to submit comments or additions to the minutes. Minutes will constitute final project record of results of meeting.

1.5 SCHEDULING MEETINGS

1.5.1 Initial Schedule Review

- 1.5.1.1 Design Builder shall meet with the District and conduct initial review of the Design Builder's draft: Design Schedule, Design Deliverables Schedule, Shop Drawing and Sample Submittal Schedule, Schedule of Values, and Progress Schedule.
- 1.5.1.2 An authorized representative in the Design Builder's organization, designated in writing and who will be responsible for working and coordinating with District relative to preparation and maintenance of Progress Schedule, shall attend the initial review meeting.

1.5.2 Schedule Update Meetings

- 1.5.2.1 District will administer scheduling update meetings monthly and will distribute minutes of scheduling meetings to attendees. Details for Schedule Update Meetings shall conform to the description provided in Section 00 50 00 (Agreement).

1.6 QUALITY CONTROL MEETINGS

- 1.6.1 Design Builder shall conduct at a minimum weekly Quality Control Meetings as part of the Design Builder's Quality Control Program, see Section 01 45 00 (Quality Control).
- 1.6.2 Design Builder's attendees at Quality Control Meetings shall at a minimum include:
 - 1.6.2.1 Design Builder's Quality Control Manager
 - 1.6.2.2 Design Builder's Commissioning Coordinator; as required
 - 1.6.2.3 Design Builder's Safety Officer
 - 1.6.2.4 Subcontractors actively working on Site or preparing to mobilize.

- 1.6.2.5 Representatives of manufacturers and fabricators; as required
- 1.6.2.6 Design Builder's Architect
- 1.6.2.7 Subconsultant Engineers as activities dictate.

1.6.3 District's attendees at Quality Control Meetings shall at a minimum include:

- 1.6.3.1 District's Representative
- 1.6.3.2 District's Inspector of Record

1.6.4 Quality Control Meetings agendas shall include at a minimum:

- 1.6.4.1 Submittal Review, including approval status and schedule
 - 1.6.4.1.1 Product Data and Material Safety Data Sheets (MSDS)
 - 1.6.4.1.2 Shop Drawings & Coordination Documents
 - 1.6.4.1.3 Substitutions and Modifications Requests
 - 1.6.4.1.4 Manufacturer's Installation Requirements & Instructions
 - 1.6.4.1.5 Manufacturer's Operating Requirements & Instructions
- 1.6.4.2 Distribution of Testing and Inspection Reports
- 1.6.4.3 Review of In-progress activities for compliance and timeliness.
- 1.6.4.4 Coordination of Upcoming Testing, Inspection and Observation Procedures & Requirements
- 1.6.4.5 Summary of activity successes, deficiencies, and corrective measures

1.7 SPECIAL MEETINGS

- 1.7.1 Preparatory Meetings as activities dictate for Testing, Inspection and Observation.
- 1.7.2 Commissioning Meetings per approved Commissioning Plan and Schedule.
 - 1.7.2.1 Pre-Commissioning Planning
 - 1.7.2.2 Commissioning Plan Review
 - 1.7.2.3 Commissioning Scheduling and Procedures
- 1.7.3 Community Meetings as directed by District.
- 1.7.4 Ad Hoc Meetings as directed by District.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

PROJECT MANAGEMENT SOFTWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- 1.1.1 All Contract Documents apply to the work of this section.
- 1.1.2 This section contains general information that applies to all work performed under the Contract, and is made inherently a part of each specification section.

1.2 GENERAL PROJECT MANAGEMENT

- 1.2.1 The District hereby directs Design Builder to use the Project's Internet/Web-based project management software to track and manage the Project.
- 1.2.2 Use of this project management software will not replace or change any contractual responsibilities of the project team members.
- 1.2.3 Each Project Team Member of the Design Builder: Superintendent, Project Engineer, Scheduler, and Project Manager, etc., shall have access to the Internet and an Internet e-mail address in order to communicate with various project team members. The Design Builder shall provide immediately upon receipt of the Notice to Proceed confirmation of these conditions and the names, positions, and e-mail addresses to the District.

1.3 SOFTWARE AND HARDWARE REQUIREMENTS

- 1.3.1 The Design Builder is required to provide at both the field office and home office locations from where this project is managed, the computer hardware, software and high speed Internet access that meet the requirements of the Web- Based project management software. This Software is intended to be a web-based application that does not require the Design Builder to purchase. The Design Builder will be given the ability to create additional user logins so that it may give access to those it determines to be necessary at no additional cost. Design Builder's access to the Locker Room Renovation Project Web-Based database will be limited to in accordance with permission levels configured by the District.
- 1.3.2 The District shall provide the Design Builder with Web-Based software training (if required). The anticipated training will take place after the Notice to Proceed has been issued and will be held in Oakland, California. The District will pay for the training course only for up to twenty (20) Design Builder staff members. Training for Design Builder is expected to be completed in up to two separate half day sessions. Training for additional staff can be arranged directly with Web-Based Software team at additional cost to the Design Builder.
- 1.3.3 The administrator for this project is the District's Representative or authorized designee.
- 1.3.4 The Design Builder shall provide an adequate number of trained users to properly manage the Project in accordance with the Project schedule. The

Design Builder shall have Internet access through an Internet service provider of its choice at its cost.

1.3.5 Software requirements are as follows:

1.3.5.1 A 32-bit operating system such as Windows XP or above with Service Pack 2 or above

1.3.5.2 Internet Explorer Version 7.0 or above

1.3.6 Hardware requirements are as follows:

1.3.6.1 Pentium based (or equivalent) workstation or laptop

1.3.6.2 32 megs of RAM minimum; ideally 128 megs of RAM or above

1.3.6.3 A connection to the Internet (128 kb/s or above)

1.3.7 More information on Web-Based Project Management software information will provide later in design phase.

1.4 SYSTEM MANAGEMENT AND USE

1.4.1 The District's Representative will administer the Web-Based Project Management Software user account.

1.4.2 All costs associated with using this system, including computer hardware and internet service are the responsibility of the Design Builder.

1.5 USE BY SUBCONTRACTORS

1.5.1 The District encourages the Design Builder to utilize Web-Based project management software for communicating with its Subcontractors. The Design Builder shall inform all Subcontractors of the purpose of the project management system and how it can assist them in obtaining information for the project.

1.6 COMMUNICATION PROCESS

1.6.1 The District's Representative will outline and detail communication, correspondence and coordination procedures at the initial Project Team meeting.

1.6.2 Most Project communication will take place in the Web-Based project management system by creating and distributing documents directly within the system, or by entering manually in the system dates and descriptions of items to track over time. All documents requiring formal signatures will be printed, and their hard copies signed and distributed.

1.6.3 The official submittal log will be maintained within Web-Based project management system. The Design Builder will use the Web-Based project management transmittal format for each submittal transmittal; however, the Design Builder will distribute prints, documents, reports, samples, etc. in the traditional manner, outside the system. The Web-Based project management system will be used to track and expedite processing of these items.

1.6.4 Design Builder will be required to maintain all current drawings within Web-Based project management system, including but not limited to the Program Verification and Design Development process as well as the development of the

Construction Documents. The Design Builder will be able to control administration of the drawings which includes but is not limited to: the ability to create a custom folder structure; folder-level permissions; auto-notifications for certain events (e.g., delete, check out) using Web-Based project management messaging system and the user's email address; auto-detection and uploading of a drawing's reference files; detailed history for a document, including revisions and access logs; check-in and check-out capabilities; view and markup capabilities.

1.6.5 Design Builder will be required to utilize modules including but not limited to: daily reports; meeting minutes; punch lists; requests for information (RFI); change items; cost events; and owner change order within the Web-Based project management system. The Design Builder can enter a RFI and the Architect/Engineer respond to the RFI completely within the Web-Based project management system without creating a hard copy. Support documentation in hard copy format for any document in Web-Based system may be scanned into an electronic file and attached in Web-Based system to documents.

1.6.6 Design Builder is required to use a digital camera in order to photo-document job progress and upload the associated images taken on a regular basis to the Web-Based system. Each report required under Section 00 50 00 (Agreement) should be accompanied by progress photograph(s). Cost for digital camera to be borne by Design Builder.

1.7 ARCHIVING

1.7.1 District may, at its cost and expense, obtain backups (on CDs or otherwise) of documents in Web-Based system. In the event of any dispute as to what items are the true and correct project records, items contained on the backups will control.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 Project Management Application is an Internet-Accessed Centralized Database of project information and consists of several separate modules or master file divisions for ease of organization. Available file divisions include but are not limited to: Correspondence, Daily Reports, RFI's, Transmittals, Submittals, Meetings, Documents, Drawings, Specifications, Punch Lists, Reports, Project Photos, Project Team, Schedule of Values, change items, cost events, owner change orders, owner request for proposals, etc.

3.2 The District shall provide the Design Builder with access to the Locker Room Renovation Project in Web-Based software described in paragraph 1.3.1 above. Each major team member for the Design Builder (i.e. project manager, superintendent, architect, etc.) must have access to Web-Based software and the required training to access the system. The Design Builder shall insure that all major team members on this project have Internet access available and access to Web-Based system during the duration of this Project.

- 3.3 Major Subcontractors are encouraged to utilize Web-Based project management software for the duration of their scope of work from commencement to completion of their scope of work. Major Subcontractors as a minimum shall be defined as sitework, mechanical, electrical, plumbing, structural, civil, landscape, telecommunications, concrete/masonry, security, storefront/windows, metal panels, drywall, roofing, and others deemed beneficial by the Design Builder.

All other Subcontractors and suppliers shall utilize email or fax for submission of documents to the Design Builder.

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

Design Builder and District will jointly develop a list of submittals and shop drawings that are to be submitted to the District. Upon completion of the list, Design Builder will provide District with a preliminary schedule of shop drawings and submittals, which will list each submittal in order by specification section and the times for submitting, reviewing, and processing such submittal.

1.1.1 This section describes general requirements for submittals for the Construction Phase of the Work :

- 1.1.1.1 Procedures
- 1.1.1.2 Schedule of Shop Drawing and Sample Submittals
- 1.1.1.3 Safety Plan
- 1.1.1.4 Progress Schedule
- 1.1.1.5 Product Data
- 1.1.1.6 Shop Drawings
- 1.1.1.7 Samples
- 1.1.1.8 Quality Control Submittals
 - 1.1.1.8.1 Engineering Data
 - 1.1.1.8.2 Test Reports
 - 1.1.1.8.3 Certificates
 - 1.1.1.8.4 Manufacturers' Instructions
- 1.1.1.9 Machine Inventory Sheets
- 1.1.1.10 Operations and Maintenance Manuals
- 1.1.1.11 Computer Programs
- 1.1.1.12 Project Record Documents
- 1.1.1.13 Delay of Submittals

1.1.2 Related Sections

- 1.1.2.1 Section 00 50 00 (Agreement)
- 1.1.2.2 Section 01 11 13 (Work Covered by Contract Documents)
- 1.1.2.3 Section 01 11 20 (Design Services and Deliverables)
- 1.1.2.4 Section 01 31 91 (Project Meetings)
- 1.1.2.5 Section 01 45 00 (Quality Control)
- 1.1.2.6 Section 01 60 00 (Product Requirements)
- 1.1.2.7 Section 01 77 00 (Cleaning and Closeout Procedures)
- 1.1.2.8 Section 01 91 00 (Commissioning Requirements)

1.1.3 For Design Phase Deliverable Requirements, see Section 01 11 20 (Design Services and Deliverables).

1.2 PROCEDURES

- 1.2.1 Submit five (5) sets in addition to required quantities for Design Builder team members, Schedule of Shop Drawing and Sample Submittals, Safety Plans, Progress Schedule, Product Data, Shop Drawings, Samples, Quality Control Data, Machine Inventory Sheets, Operations and Maintenance Manuals, Computer Programs, and Project Record Documents required by the Contract Documents. In lieu of physical copies of paper submittals, the Design Builder may request to submit electronic copies.
- 1.2.2 Transmit each item with a standard letter of transmittal in form approved by District. Address to both District's Representative and Inspector of Record. One copy will be returned to Design Builder only when District action is required, generally where variations to the approved Contract Documents are desired.
- 1.2.3 Identify Design Builder, Subcontractor, subconsultant, major supplier, pertinent drawing sheet and detail number, and specification section number as appropriate. Provide space for District approval.
- 1.2.4 Where manufacturers' standard drawings or data sheets are used, they shall be marked clearly to show those portions of the data which are applicable to this Project.
- 1.2.5 Submit Shop Drawings, Samples, Product Data and other submittals (collectively, "Submittals") to District for review and action in accordance with accepted Schedule of Submittals. Also see Section 01 45 00 (Quality Control). It is the intent that during the construction phase routing of Submittals to the District is informational for purposes of coordination and communication to the District's Representatives and Inspector of Record, except where such submittals represent deviations or substitutions from the approved construction documents then requiring District's review and approval.
- 1.2.6 The data shown on all Submittals shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to show District the materials and equipment Design Builder proposes to provide and to enable District to review the information for the limited purposes specified below. Samples shall be identified clearly as to material, supplier, pertinent data such as catalog numbers and the use for which it is intended and otherwise as District may require to enable District to review the submittal. The number of each Sample to be submitted will be as specified in the Specifications.
- 1.2.7 At the time of each submission, Design Builder shall give District specific written notice of all variations, if any, that the Submittal may have from the requirements of the approved Contract Documents, and the reasons therefore. This written notice shall be in a written communication separate from the Submittal. In addition, Design Builder shall cause a specific notation to be made on each Submittal submitted to District for review and approval of each such variation.
- 1.2.8 If District accepts such variation, it shall issue an appropriate Contract Modification with return to Design Builder of a reviewed set of the Submittal.

- 1.2.9 Submittal coordination and verification is the responsibility of Design Builder and its Subcontractors. Before submitting each Submittal, Design Builder and its Subcontractors shall have determined and verified:
- 1.2.9.1 All field measurements (where possible), quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar information with respect thereto;
 - 1.2.9.2 All materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the Work; and
 - 1.2.9.3 All information relative to Design Builder's sole responsibilities and of design and means, methods, techniques, sequences and procedures of construction and safety precautions and programs incident thereto.
- 1.2.10 Design Builder shall also have reviewed and coordinated each Submittal with other Submittals and with the requirements of the Work and the Contract Documents.
- 1.2.11 Design Builder's submission to District of a Submittal will constitute Design Builder's representation that it has satisfied its obligations under the Contract Documents, and as set forth immediately above, with respect to Design Builder's review and approval of that Submittal.
- 1.2.12 Designation of work "by others", if shown in Submittals prepared by a Subcontractor, subconsultant or supplier, shall mean that work will be the responsibility of the Design Builder or another Subcontractor rather than the Subcontractor, subconsultant or supplier that has prepared submittals.
- 1.2.13 Prior to submitting to District, each of Design Builder's Submittals must be reviewed by the Design Build Architect and/or its Subconsultants and marked with actions defined as follows:
- 1.2.13.1 **NO EXCEPTIONS TAKEN** - Accepted subject to its compatibility with future Submittals and additional partial Submittals for portions of the Work not covered in this Submittal. Does not constitute approval or deletion of specified or required items not shown on the Submittal.
 - 1.2.13.2 **MAKE CORRECTIONS NOTED (NO RESUBMISSIONS REQUIRED)** - Same as 1. above, except that minor corrections as noted shall be made by Design Builder.
 - 1.2.13.3 **AMEND AND RESUBMIT** - Rejected because of major inconsistencies or errors that must be resolved or corrected by Design Builder prior to subsequent review by District.

- 1.2.13.4 REJECTED - RESUBMIT - Submitted material does not conform to Drawings and Specifications in major respects, e.g., wrong size, model, capacity, or material.
 - 1.2.13.5 NOT REVIEWED - Submitted material has not been reviewed and is being returned to be acted upon by Design Builder without review by District.
 - 1.2.13.6 DISTRICT REVIEW & ACCEPTANCE REQUIRED - Submitted material meets Design Builder's general acceptance but, constitutes a variation from the approved Contract Documents thus requiring District-specific review and acceptance. District's reviewed submittal will be returned to Design Builder with actions as defined in 1 through 5 above.
- 1.2.14 It shall be Design Builder's responsibility to copy, conform and distribute reviewed Submittals in sufficient numbers for Design Builder's files, Subcontractors and vendors.
- 1.2.15 After District's review of a Submittal, revise and resubmit as required. Identify changes made since previous Submittal.
- 1.2.15.1 Begin no fabrication or work that requires Submittals until return of Submittals not requiring re-submittal.
 - 1.2.15.2 Normally, Submittals will be processed and returned to Design Builder within fifteen (15) Business Days of receipt and shall be processed by District so as not to delay Design Builder's performance.
- 1.2.16 Distribute copies of reviewed Submittals to concerned persons. Instruct recipients to promptly report any inability to comply with Submittals.
- 1.3 SCHEDULE OF SHOP DRAWING AND SAMPLE SUBMITTALS
- 1.3.1 Submit preliminary Schedule of Shop Drawing and Sample Submittals as required by Section 00 50 00 (Agreement).
 - 1.3.2 The Schedule of Shop Drawing and Sample Submittals will be used by District to schedule activities relating to review of submittals that may need District approval. District will review any shop drawing or submittal that constitutes substitution of products, systems or other deviation from approved Construction Documents. Schedule of Shop Drawing and Sample Submittals shall indicate a spreading out of Submittals and early Submittals of long lead-time items and of items that require extensive review.
 - 1.3.3 Schedule of Shop Drawing and Sample Submittals shall be reviewed by District and shall be revised and resubmitted until accepted by District.

1.4 SAFETY PLAN

- 1.4.1 Submit five (5) copies of a Safety Plan, compliant with Article 11 of Section 00 50 00 (Agreement), specific to this Contract to District no later than thirty (30) Days after District's approval of completed Construction Documents for either the entire Project or the first accepted phase of work as may be defined by Design Builder.
- 1.4.2 One (1) copy of the accepted Safety Plan will be returned to Design Builder.
- 1.4.3 No on-site work shall commence until the Safety Plan has been reviewed and accepted by District. Acceptance of the Safety Plan shall not affect Design Builder's responsibilities for maintaining a safe working place and instituting safety programs in connection with project. Neither the District nor any of its representatives assume any responsibility for Design Builder's safety related obligations. Design Builder shall have sole responsibility for safety on and off the Site.

1.5 PROGRESS SCHEDULE

- 1.5.1 See Section 00 50 00 (Agreement) for schedule and report requirements.
- 1.5.2 Submit one (1) operating electronic version on compact disk and five (5) print copies of the schedule at each of the following times:
 - 1.5.2.1 Original Project Master Schedule at least five (5) Days prior to the Design Conference or within fourteen (14) Days of Notice to Proceed, whichever is earliest.
 - 1.5.2.2 Detailed Design Schedule at least five (5) Days prior to the Design Conference or within fourteen (14) Days of Notice to Proceed, whichever is earliest.
 - 1.5.2.3 Detailed Construction Schedule a minimum of ten (10) Days prior to the Pre-Construction Conference outlined in Section 01 31 00 (Project Meetings) or within forty (40) Days prior to start of construction, whichever is earliest.
 - 1.5.2.4 Construction Progress Schedule updates monthly, submitted with each Pay Application.
- 1.5.3 Submit copies of the reports as required by Section 00 50 00 (Agreement).

1.6 PRODUCT DATA

- 1.6.1 Within sixty (60) Days after District's approval of completed Construction Documents for the Project submit five (5) hard copies and one (1) electronic copy of the complete list of major products proposed for use, with name of the manufacturer, trade name, and model number for each product.

- 1.6.2 For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.
- 1.6.3 Tabulate products by specification section number.
- 1.6.4 Supplemental Data:
 - 1.6.4.1 Submit number of copies that Design Builder requires, plus five (5) hardcopies and one (1) electronic copy that will be retained by District.
 - 1.6.4.2 Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to the Project.
- 1.6.5 Provide copies for Project Record Documents described in Section 01 77 00 (Cleaning and Closeout Procedures).

1.7 SHOP DRAWINGS

- 1.7.1 Submit electronically or in hardcopy format as approved by District. Minimum Sheet Size: 8-1/2 inches by 11 inches. All others: Multiples of 8-1/2 inches by 11 inches, 34 inches by 44 inches maximum.
- 1.7.2 For Shop Drawings submitted in hardcopy format, submit the number of copies which Design Builder requires, plus five (5) copies which will be retained by District.
- 1.7.3 For Shop Drawings submitted in hardcopy format, the original sheet will be marked with District's review comments and returned to Design Builder when required as outlined in paragraph 1.2 above.
- 1.7.4 Mark each copy to identify applicable products, models, options, and other data; supplement manufacturers' standard data to provide information unique to the Work.
- 1.7.5 Include manufacturers' installation instructions when required by Specification section.

1.8 SAMPLES

- 1.8.1 Submit full range of manufacturers' standard colors, textures, and patterns when District's selection is required as outlined in paragraph 1.2 above.
- 1.8.2 Submit samples to illustrate functional and aesthetic characteristics of each product, with integral parts and attachment devices. Coordinate Submittal of different categories for interfacing work.
- 1.8.3 Include identification on each sample, giving full information.
- 1.8.4 Submit five (5) samples unless otherwise specified.

1.8.5 Sizes: Unless otherwise specified, provide the following:

- 1.8.5.1 Paint Chips: Manufacturers' standard
- 1.8.5.2 Flat or Sheet Products: Minimum 6 inches square, maximum 12 inches square
- 1.8.5.3 Linear Products: Minimum 6 inches, maximum 12 inches long
- 1.8.5.4 Bulk Products: Minimum 1 pint, maximum 1 gallon

1.8.6 Full size samples may be used in the Work upon approval.

1.9 QUALITY CONTROL SUBMITTALS

1.9.1 Design Data: Submit electronically or in hardcopy format as approved by District. When submitted in hardcopy format, submit five (5) copies. One (1) copy shall be marked with District's review comments and returned to Design Builder when required as outlined in paragraph 1.2 above.

- 1.9.1.1 Indicate that the design data conforms to or exceeds the requirements of the Contract Documents.
- 1.9.1.2 Submit supporting reference data, affidavits, and certifications as appropriate.
- 1.9.1.3 Identify conflicts with test reports, certificates, manufacturer's instructions or specific aspect(s) of the Contract Documents.

1.9.2 Test Reports: Submit electronically or in hardcopy format as approved by District. When submitted in hardcopy format, submit five (5) copies. One (1) copy will be marked with District's review comments and returned to Design Builder when required as outlined in paragraph 1.2 above.

- 1.9.2.1 Indicate that the material or product conforms to or exceeds specified requirements.
- 1.9.2.2 Reports may be from recent or previous tests on material or product, but must be acceptable to District. Comply with requirements of each individual Specification.

1.9.3 Certificates: Submit electronically or in hardcopy format as approved by District. When submitted in hardcopy format, submit five (5) copies. One (1) copy will be marked with District's review comments and returned to Design Builder when required as outlined in paragraph 1.2 above.

- 1.9.3.1 Indicate that the material or product conforms to or exceeds specified requirements.
- 1.9.3.2 Submit supporting reference data, affidavits, and certifications as appropriate.

1.9.3.3 Certificates may be recent or from previous test results on material or product, but must be acceptable to District.

1.9.4 Manufacturers' Instructions: Submit electronically or in hardcopy format as approved by District. When submitted in hardcopy format, submit five (5) copies. One (1) copy will be marked with District's review comments and returned to Design Builder when required as outlined in paragraph 1.2 above.

1.9.4.1 Include manufacturers' printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing.

1.9.4.2 Identify conflicts between manufacturers' instructions and Contract Documents.

1.10 MACHINE INVENTORY SHEETS

1.10.1 Not applicable.

1.11 OPERATIONS AND MAINTENANCE MANUALS

1.11.1 Refer to Section 01 77 00 (Cleaning and Closeout Procedures) for Operation and Maintenance Manual submittal requirements.

1.12 COMPUTER PROGRAMS

1.12.1 When any equipment requires operation by computer program(s), submit a copy of the program on appropriate compact disc plus all user manuals and guides for operating the programs and making changes in the programs for upgrading and expanding the databases. Programs must be Windows XP compatible, or newer, or in a form otherwise acceptable to District. Provide required licenses to District at no additional cost.

1.13 PROJECT RECORD DOCUMENTS

1.13.1 Submit one (1) copy of each of the Project Record Documents listed in Section 01 77 00 (Cleaning and Closeout Procedures).

1.14 DELAY OF SUBMITTALS

1.14.1 Delay of Submittals by Design Builder is considered avoidable delay and Design Builder will not be entitled to an adjustment of the Contract Time due to delays attributed to late Submittals. Liquidated damages incurred because of late Submittals will be assessed to Design Builder.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

CALGREEN ENVIRONMENTAL REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

1.1.1. Section includes: Comply with CALGreen environmental requirements related to energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality.

1.1.1.1. Nonresidential Projects: Comply with specific CALGreen requirements for nonresidential projects.

1.2 ENVIRONMENTAL REQUIREMENTS

1.2.1 Mandatory Measures: Comply with CALGreen Mandatory Measures applicable to Project.

1.2.1.1 Design team and construction team are each required to participate to maximum degree possible to achieve CALGreen environmental requirements.

1.2.1.2 Bridging Documents are not intended to limit alternative means of achieving environmental requirements.

1.2.1.2.1. Suggestions from Design/Build Contractor, subcontractors, suppliers, and manufacturers for achieving environmental requirements are encouraged; team approach is also encouraged.

1.2.1.3. Voluntary Tiers: Construction team is encouraged to achieve enhanced Voluntary Tier levels by incorporating additional measures as defined in CALGreen Appendixes.

1.2.1.3.1 Design/Build team is required to achieve Mandatory Measures and to achieve as much as possible without unacceptable cost impact or schedule impact on Project.

1.2.2 Requirements: Design/Build team is required to review CALGreen requirements relative to Nonresidential Projects.

1.2.2.1. Energy Efficiency: Comply with California Energy Commission requirements.

1.2.2.2. Water Efficiency and Conservation: Comply with requirements for both indoor and outdoor water use.

1.2.3 Material Conservation and Resource Efficiency:

1.2.3.1. Nonresidential Projects: Provide weather-resistant exterior wall and foundation envelope including prevention of landscape irrigation

spray on structures (if any), and prevent water intrusion at exterior entries.

1.2.3.2. Construction Waste: Provide construction waste management plan as defined by CALGreen with at least 50% of construction waste diverted from landfill by recycling or salvage for reuse.

1.2.3.3. Nonresidential Project Building Maintenance and Operation: Provide for commissioning requirements as required by CALGreen including but not limited to testing, documentation and training, testing and adjusting.

1.2.4 Nonresidential Projects Environmental Quality:

1.2.4.1. Mechanical Equipment Pollution Control: Cover duct and related air distribution component openings to prevent dust and debris accumulation.

1.2.4.2. Finish Material Pollution Control: Comply with CALGreen requirements for volatile organic compound (VOC) emissions including but not necessarily limited to following (as applicable):

- (1) Adhesives, sealants and caulks.
- (2) Paints and coatings.
- (3) Carpet systems including carpet, carpet cushion, and adhesives.
- (4) Resilient flooring systems.
- (5) Composite wood products formaldehyde limitations.

1.2.4.3. Filters: Comply with requirements for mechanically ventilated buildings to have air filtration media for outside and return air prior to occupancy.

1.2.4.4. Environmental Tobacco Smoke (ETS) Control: Comply with CALGreen requirements for ETS.

1.2.4.5. Interior Moisture Control: Comply with California Building Code requirements and CALGreen requirements for vapor retarder at concrete slab foundations and capillary break (aggregate base).

1.2.4.6. Building Material Moisture Content: Do not use water damage building materials, remove and place wet and high moisture content insulation, and do not enclose wall or floor framing when moisture content exceeds 19%.

1.2.4.7. Indoor Air Quality: Comply with CALGreen requirements for outside air delivery and carbon dioxide monitoring.

1.2.4.8. Environmental Comfort: Comply with CALGreen requirements for whole acoustical control and interior sound control.

1.2.4.9. Outdoor Air Quality: Comply with CALGreen requirements for reduction of greenhouse gases and ozone depletion.

1.2.5 Planning and Design: Construction team shall coordinate with Design Team regarding Project Planning and Design methods related to CALGreen requirements related to Project design and shall comply with requirements related to construction.

1.3 QUALITY ASSURANCE

1.3.1 Project Management and Coordination: Contractor to identify one person on Contractor's staff to be responsible for CALGreen issues compliance and coordination.

1.3.1.1. Experience: Environmental project manager to have experience relating to CALGreen building construction.

1.3.1.2. Responsibilities: Carefully review Contract Documents for CALGreen issues, coordinate work of trades, subcontractors, and suppliers; instruct workers relating to environmental issues; and oversee Project Environmental Goals.

1.3.1.3. Meetings: Discuss CALGreen Goals at the following meetings.

(1) Pre-construction meeting.

(2) Pre-installation meetings.

(3) Regularly scheduled job-site meetings.

1.3.2 CALGreen Issues Criteria: Comply with requirements listed in CALGreen and various Specification sections.

PART 2 - PRODUCTS

2.1 MATERIALS

2.1.1. General Issues: Do not use materials with moisture stains or with signs of mold or mildew.

2.1.1.1. Moisture Stains: Materials that have evidence of moisture damage, including stains, are not acceptable, including both stored and installed materials; immediately remove from site.

2.1.1.2. Mold and Mildew: Materials that have evidence of growth of molds or of mildew are not acceptable, including both stored and installed materials; immediately remove from site.

PART 3 - EXECUTION

3.1 PROTECTION

3.1.1. Environmental Issues: Protect interior materials from water damage; where interior products not intended for wet applications are exposed to moisture, immediately remove from site.

3.1.1.1 Protect installed products using methods that do not support growth of molds and mildews. Immediately remove from site materials with mold and materials with mildew.

END OF SECTION

REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- 1.1.1 This section includes regulatory requirements applicable to the Project.
- 1.1.2 Specific reference in the specifications to codes and regulations or requirements of regulatory agencies shall mean the latest printed edition of each adopted by the regulatory agency in effect at the date of award of the Design/Build Agreement, even if an earlier version was used in development of, and/or specified elsewhere in the Contract Documents, Request for Proposals or Criteria Documents.
- 1.1.3 Should any conditions develop not covered by the Contract Documents wherein the finished work will not comply with current codes, Design Builder shall address such conditions so that the finished work conforms to current codes.

1.2 REFERENCES TO REGULATORY REQUIREMENTS

- 1.2.1 Codes, laws, ordinances, rules and regulations referred to in the Contract Documents shall have full force and effect as though printed in full in these specifications. Codes, laws, ordinances, rules and regulations are not furnished to the Design Builder, because the Design Builder is assumed to be familiar with their requirements. The listing herein of applicable codes, laws and regulations, including those for hazardous waste abatement work, in the Contract Documents is supplied to the Design Builder as a courtesy and shall not limit the Design Builder's responsibility for complying with all applicable laws, regulations or ordinances applicable to the Work. Where conflict among the requirements or with these specifications exists, the most stringent requirements shall be used.
- 1.2.2 All of the Work shall conform to all applicable Federal, State, and local codes, laws, ordinances, rules and regulations.
- 1.2.3 Precedence:
 - 1.2.3.1 Where specified requirements differ from the requirements of applicable codes, ordinances and standards, the more stringent requirements shall take precedence.
 - 1.2.3.2 Where the Drawings, Plans or Specifications require or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, the Drawings, Plans and Specifications shall take precedence so long as such increase is legal.
 - 1.2.3.3 Where no requirements are identified in the Drawings, Plans or Specifications, Design Builder shall comply with all requirements of

applicable codes, ordinances and standards of governing authorities having jurisdiction.

1.2.3.4 The Project shall be governed by applicable regulations, including, without limitation, the State of California's Administrative Regulations for the Division of the State Architect - Structural Safety (DSA/SS), Chapter 4, Part 1, Title 24, CCR, and the most current version on the date the proposals are opened and as it pertains to school construction including, without limitation:

1.2.3.4.1 Test and testing laboratory per section 4-335.

1.2.3.4.2 Special inspections per section 4-333 ©

1.2.3.4.3 Verified reports per section 4-365 & 4-343 ©

1.2.3.4.4 Duties of the Architect and Engineers shall be per section 4-333 (a) and 4-341.

1.2.3.4.5 Duties of the Design Builder shall be per section 4-343.

1.2.3.4.6 Addenda and Change Orders per section 4-338.

1.3 CODES

1.3.1 Codes which apply to the Contract Documents include, but are not limited to, the following:

1.3.1.1 California Building Code (Title 15, Part 2, Title 24, C.C.R., including, without means of limitation, sections 16A, 102A.23, 308, 420A, 504-506, 904.2.6, 1019 and 1604)

1.3.1.2 California Electrical Code (Part 5, Title 24, C.C.R.)

1.3.1.3 California Mechanical Code (Part 3, Title 24, C.C.R.)

1.3.1.4 California Plumbing Code (Part 4, Title 24, C.C.R.)

1.3.1.5 California Elevator Safety Regulations (Part 7, Title 24, C.C.R.)

1.3.1.6 International Building Code

1.3.1.7 Uniform Plumbing Code

1.3.1.8 Uniform Mechanical Code

1.3.1.9 National Electrical Code

1.3.1.10 California Energy Code

1.3.1.11 California Fire Code

1.3.1.12 CALGreen Code

1.4 LAWS, ORDINANCES, RULES AND REGULATIONS

1.4.1 During prosecution of Work to be done under the Contract Documents, comply with applicable laws, ordinances, rules and regulations, including, but not limited to, the following:

1.4.2 Federal

1.4.2.1 Americans With Disabilities Act of 1990 ADAI

- 1.4.2.2 29 CFR, Section 1910.1001, Asbestos
- 1.4.2.3 40 CFR, Subpart M, National Emission Standards for Asbestos
- 1.4.2.4 Executive Order 11246
- 1.4.2.5 Federal Endangered Species Act
- 1.4.2.6 Clean Water Act
- 1.4.2.7 Federal Occupational Safety & Health Administration Act

1.4.3 State of California

- 1.4.3.1 California Code of Regulations, Titles 5, 8, 12, 13, 15, 17, 19, 20, 21, 22, 23 24 and 25
- 1.4.3.2 California Public Contract Code
- 1.4.3.3 California Health and Safety Code
- 1.4.3.4 California Government Code
- 1.4.3.5 California Labor Code
- 1.4.3.6 California Civil Code
- 1.4.3.7 California Code of Civil Procedure
- 1.4.3.8 CPUC General Order 95, Rules for Overhead Electric Line Construction
- 1.4.3.9 CPUC General Order 128, Rules for Construction of Underground Electric Supply and Communications Systems
- 1.4.3.10 California Occupational Safety and Health Administration (Cal OSHA)
- 1.4.3.11 Occupational Safety and Health Administration (OSHA): Hazard Communications Standards
- 1.4.3.12 California Endangered Species Act
- 1.4.3.13 Water Code
- 1.4.3.14 Fish and Game Code
- 1.4.3.15 California Education Code

1.4.4 State of California Agencies

- 1.4.4.1 State and Consumer Services Agency
- 1.4.4.2 Office of the State Fire Marshal
- 1.4.4.3 CalTrans
- 1.4.4.4 Department of Fish and Game
- 1.4.4.5 Division of the State Architect
- 1.4.4.6 Office of Public School Construction
- 1.4.4.7 State Allocation Board
- 1.4.4.8 California Department of Education

1.4.5 Local Agencies:

- 1.4.5.1 City of Oakland
- 1.4.5.2 City of Oakland Fire Marshal
- 1.4.5.3 Bay Area Air Quality Management District
- 1.4.5.4 EBMUD – East Bay Municipal Utility District

1.4.6 Other Requirements:

1.4.6.1 National Fire Protection Association (NFPA): Pamphlet 101, Life Safety.

1.4.6.2 The following NFPA Standards apply (latest edition):

NFPA Standard

13 Installation of Sprinkler Systems

14 Installation of Standpipes and Hose Systems

20 Installation of Centrifugal Fire Pumps

24 Installation of Private Fire Service Mains

50 Bulk Oxygen Systems

72 National Fire Alarm Code (as amended)

80 Fire Doors and Fire Windows

92A Smoke Control Systems

2001 Clean Agent Fire Extinguishing Systems

1.4.6.3 The Design Builder shall comply with Standard Specifications such as California Standard Specification, ASTM, ANSI, AASHTO, AISC, Commercial Standards, Federal Specifications, NFPA, NEMA, AWWA, UL, and the like.

1.4.6.4 References on the Drawings Plans or in the Specifications to “code” or “building code” not otherwise identified shall mean the codes specified in this Section 01 41 00 together with all additions, amendments, changes, and interpretations adopted by code authorities of the jurisdiction.

1.4.7 Design Builder shall provide access to all of the foregoing within twenty-four (24) hours and maintain a copy of each of the above documents in the Design Builder’s field office.

1.4.8 It shall be understood that manufacturers, producers, and their agents of materials are required either to have such specifications available for reference or to be fully familiar with their requirements as pertains to their project or material

1.4.9 Other Applicable Laws, Ordinances and Regulations:

- 1.4.9.1 Work shall be accomplished in conformance with all applicable laws, ordinances, rules and regulations of Federal, State and local governmental agencies and jurisdictions having authority over the Project.
- 1.4.9.2 Work shall be accomplished in conformance with all rules and regulations of public utilities and utility districts.
- 1.4.9.3 Where such laws, ordinances rules and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Time and Stipulated Sum.

1.4.10 Change Orders and Claims:

- 1.4.10.1 The Public Contract Code, including but not limited to § 7105(d)(2), and Government Code § 930.2 *et seq.*, apply to all contract procedures for changes, time extensions, change orders (time or compensation) and claims.
- 1.4.10.2 Any change, waiver, or omission to implement contract change order and claim procedures shall have no legal effect unless expressly authorized in a fully executed change order approved by District.

1.5 DEFERRED APPROVAL

- 1.5.1 Where noted in technical Specification sections, certain items of material may require deferred approval pending submittal of shop drawings. It is the District's intent to minimize the number of deferred submittals for this project. For these items, Contractor shall submit details and structural calculations for anchorage, to comply with State of California Code of Regulations Title 24, including Table 16-B. Calculations shall be made by a Structural Engineer registered in the State of California.

1.6 CONFLICTS

- 1.6.1 Between referenced regulatory requirements: Comply with the one establishing the more stringent requirement.
- 1.6.2 Between referenced regulatory requirements and the Contract Documents: Comply with the one establishing the more stringent requirement.

1.7 COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT

- 1.7.1 The Design Builder acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or through a Design Builder, must be accessible to the disabled public. The Design Builder shall provide the services specified in this Agreement in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. The Design Builder shall not discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agrees

that any violation of this prohibition on the part of the Design Builder, its employees, agents or assigns shall constitute a material breach of this Agreement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

REFERENCES

PART 1 - GENERAL

1.1 SUMMARY

- 1.1.1 This section includes reference standards, abbreviations, symbols and definitions used in the Contract Documents.
- 1.1.2 Material and workmanship specified by reference to number, symbol, or title of specific standard such as state standard, commercial standard, federal specifications, technical society, or trade association standard, or other similar standard shall comply with requirements of standards except when more rigid requirements are specified or required by applicable codes.
- 1.1.3 Standards referred to, except as modified herein, shall have full force and effect as though printed in the Contract Documents. Standards are not furnished to the Design Builder, since manufacturers and trades involved are assumed to be familiar with their requirements.

1.2 REFERENCE TO STANDARDS AND SPECIFICATIONS OF TECHNICAL SOCIETIES; REPORTING AND RESOLVING DISCREPANCIES

- 1.2.1 References to standards, specifications, manuals, or codes of any technical society, organization, or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code, or laws or regulations in effect at the time of opening of Proposals, except as may be otherwise specifically stated in the Contract Documents.
- 1.2.2 If during the performance of the Work, Design Builder discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such law or regulation applicable to the performance of the Work or of any such standard, specification, manual, or code or of any instruction of any supplier, report it in writing at once by submitting an RFI to District, and await District's instructions before proceeding.
- 1.2.3 Except as otherwise specifically stated in the Contract Documents or as may be provided by Change Order, RFP, CCD, or Supplemental Instruction, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - 1.2.3.1 The provisions of any such standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or
 - 1.2.3.2 The provisions of any such laws or regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such law or regulation).

- 1.2.4 No provision of any such standard, specification, manual, code, or instruction shall be effective to change the duties and responsibilities of District or Design Builder or any of Design Builder's consultants, agents, or employees, from those set forth in the Contract Documents, nor shall it be effective to assign to District or any of its consultants, agents, representatives or employees any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.
- 1.2.5 Comply with the applicable portions of standards and specifications published by the technical societies, institutions, associations, and governmental agencies referred to in the Contract Documents.
 - 1.2.5.1 Comply with referenced standards and specifications; latest revision in effect at the time of opening of Proposals, unless otherwise identified by date.
 - 1.2.5.1.1 Exception: Comply with issues in effect as listed in governing legal requirements.
- 1.2.6 Referenced Grades, Classes, and Types: Where an alternative or optional grade, class, or type of product or execution is included in a reference but is not identified in Drawings or in Specifications, provide the highest, best, and greatest of the alternatives or options for the intended use and prevailing conditions.
- 1.2.7 Jobsite Copies:
 - 1.2.7.1 Obtain and maintain at the Site copies of reference standards identified on Drawings and in Specifications in order to properly execute the Work.
 - 1.2.7.2 At a minimum, the following shall be readily available at the Site:
 - 1.2.7.2.1 Safety Codes: State of California, Division of Industrial Safety regulations.
- 1.2.8 Edition Date of References:
 - 1.2.8.1 When an edition or effective date of a reference is not given, it shall be understood to be the current edition or latest revision published as of the date of opening Proposals.
 - 1.2.8.2 All amendments, changes, errata and supplements as of the effective date shall be included.
- 1.2.9 ASTM and ANSI References: Specifications and Standards of the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI) are identified in the Drawings and Specifications by abbreviation and number only and may not be further identified by title, date, revision, or amendment. It is presumed that Design Builder is familiar with and has access to these nationally- and industry-recognized specifications and standards.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

ABBREVIATIONS**PART 1 - GENERAL**

1.1 Listed hereinafter are the various organizations or references which may appear in the Contract Documents, along with their respective acronyms and/or abbreviations:

AA	Aluminum Association
AAADM	American Association of Automatic Door Manufacturers
AABC	Associated Air Balance Council
AAMA	Architectural Aluminum Manufacturers Association
AAP	Affirmative Action Program
AASHTO	American Association of State Highway and Transportation Officials
ABMA	American Boiler Manufacturers Association
ABPA	American Board Products Association
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
ADAAG	Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities
AECOM	AECOM (District's Program Manager)
AED	Association of Equipment Distributors
AGA	American Gas Association
AGC	Association of General Contractors
AHJ	Authorities Having Jurisdiction
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association, Inc.
ANSI	American National Standards Institute (formerly American Standards Association)
APA	American Plywood Association
ARI	Air-Conditioning and Refrigeration Institute
ASHRAE	American Society of Heating, Refrigeration, and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWCI	Association of the Wall and Ceiling Industries
AWI	American Woodwork Institute
AWPA	American Wood- Preservers Association
AWPB	American Wood Preservers Bureau
AWS	American Welding Society
AWWA	American Water Works Association
BIL	Basic Insulation Level
BIM	Building Information Modeling
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	State of California, Department of Transportation
CBC	California Building Code
CCD	Construction Change Directive
CCR	California Code of Regulations
CEC	California Electric Code
CFR	Code of Federal Regulations
CGA	Compressed Gas Association

CISPI	Cast Iron Soil Pipe Institute
CLMFI	Chain Link Fence Manufacturers Institute
CMC	California Mechanical Code
CO	Change Order
CPC	California Plumbing Code
CPM	Critical Path Method
CPUC	California Public Utilities Commission
CRA	California Redwood Association
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards, U.S. Department of Commerce
CSA	Canadian Standards Association
CTI	Ceramic Tile Institute
DB	Design Build
DBE	Design Build Entity
DHI	Door and Hardware Institute
DSA	Division of State Architect (formerly known as the Office of the State Architect)
EPA	Environmental Protection Agency
FCI	Fluid Controls Institute
FFE	Furniture Fixtures and Equipment
FG	Flat Glass Marketing Association
FM	Factory Mutual
FS	Federal Specifications
GA	Gypsum Association
GANA	Glass Association of North America
HPMA	Hardwood Plywood Manufacturers Association
HVAC	Heating, Ventilating and Air Conditioning
I.D.	Identification
IACS	International Annealed Copper Standards
IAPMO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronic Engineers, Inc.
IES	Illuminating Engineering Society
ISA	Instrumentation Society of America
JATC	Joint Apprenticeship Training Committee
JV	Joint Venture
LBE	Local Business Enterprise
M.I.	Middle Initial
MIA	Masonry Institute of America
MIA	Marble Institute of America
MLSFA	Metal Lath/Steel Framing Association
MS	Military Specifications
MSDS	Material Safety Data Sheet
MSS	Manufacturers Standardization Society of the Valve & Fitting Industry
NAAMM	National Association of Architectural Metal Manufacturers
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NEC	National Electric Code
NEMA	National Electric Manufacturers Association
NESC	National Electrical Safety Code
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NIOSH	National Institute for Occupational Safety and Health

NIST	National Institute of Science and Technology (formerly the National Bureau of Standards)
NOFMA	National Oak Flooring Manufacturers Association
NSF	National Sanitation Foundation
NTMA	National Terrazzo & Mosaic Association
NWWDA	National Wood Windows and Doors Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCCD	Peralta Community College District
PCI	Pre-stressed Concrete Institute
PDI	Plumbing and Drainage Institute
PG&E	Pacific Gas and Electric Company
PM	Preventive Maintenance
PR	Proposal Request
PS	Product Standard, U. S. Department of Commerce
RFI	Request for Information
RFP	Request for Proposals
RFS	Request for Substitution
RSI	Request for Supplemental Information
SDI	Steel Deck Institute
SFM	State of California, Office of State Fire Marshal
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joint Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SMC	Swinerton Management & Consulting (District's Construction Manager)
SPIB	Southern Pine Inspection Bureau
SSPC	Steel Structures Painting Council
SWI	Steel Window Institute
TCNA	Tile Council of North America
TIE	Time Impact Evaluation
UBC	Uniform Building Code
UFC	Uniform Fire Code
UL	Underwriters' Laboratories, Inc.
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
USA	Underground Service Alert
USC	United States Code
WCLIB	West Coast Lumber Inspection Bureau
WDMA	Window and Door Manufacturers Association
WHI	Warnock Hersey International – a testing lab
WIC	Woodwork Institute of California
WWPA	Western Wood Products Association

1.2 Abbreviations in Specifications:

AWG	American Wire Gauge
accord	Accordance
Co.	Company
Corp.	Corporation
cm.	centimeter (centimeters)
cu.	Cubic
Div.	Division
dia.	Diameter

ft.	foot (feet)
g./gr.	gram (grams)
gal.	gallon (gallons)
gpd	gallons per day
gpm	gallons per minute
hr.	Hour
kg.	kilogram (kilograms)
in.	inch (inches)
Inc.	Incorporated
km.	kilometer (kilometers)
Kw	Kilowatt
l.	liter (liters)
lbs.	Pounds
m	meter (meters)
Mfg.	Manufacturing
Mg.	milligram (milligrams)
ml./mls.	milliliter (milliliters)
mm.	millimeter (millimeters)
No.	Number
o.c.	on centers
O.D.	outside diameter
psi	pounds per square inch
psf	pounds per square foot
sq.	Square
T & G	tongue and groove
U.S.	United States
yd.	yard (yards)

1.3 Abbreviations on Drawings:

Additional abbreviations, used only on drawings, are indicated thereon.

1.4 SYMBOLS

1.4.1 Symbols in Specifications:

:	“shall be” or “shall” - where used within sentences or paragraphs
#1	Number
1#	Pound
&	And
%	Percent
C	Centigrade
F	Fahrenheit
°	Degree
/	per, except where used to combine words; example: power/fuel, and in that case it means and
“	inch (inches)
‘	foot (feet)
@	At

1.4.2 Symbols on Drawings:

Symbols, used only on Drawings, are indicated thereon.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01 45 00

QUALITY CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- 1.1.1 This Section includes administrative and procedural requirements for the following:
 - 1.1.1.1 Quality assurance and quality control.
 - 1.1.1.2 Quality Control Plan.
 - 1.1.1.3 Special testing and inspection.
- 1.1.2 Materials to be furnished under the Contract Documents are subject to testing and inspection for compliance with the Drawings and Specifications. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Design Builder of responsibility for compliance with the Contract Document requirements.
 - 1.1.2.1 Specific quality assurance and control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 1.1.2.2 Specified tests, inspections, and related actions do not limit Design Builder's other quality assurance and control procedures that facilitate compliance with the Contract Document requirements.
 - 1.1.2.3 Requirements for Design Builder to provide quality assurance and control services required by District are not limited by provisions of this Section.
- 1.1.3 Related Sections include the following:
 - 1.1.3.1 Section 00 50 00 (Agreement) for developing a schedule of required tests and inspections.
 - 1.1.3.2 Section 01 43 39 (Mock-Ups) for the specific quality requirements associated with the construction and inspection of mock-ups.
 - 1.1.3.3 Section 01 73 29 (Cutting and Patching) for repair and restoration of construction disturbed by testing and inspecting activities.
 - 1.1.3.4 Divisions 2 through 33 Sections for specific test and inspection requirements.

1.2 DEFINITIONS

- 1.2.1 Quality Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- 1.2.2 Quality Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by District's Representative.
- 1.2.3 NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
- 1.2.4 NVLAP: A testing agency accredited according to the National Institute of Standards and Technology's (NIST's) National Voluntary Laboratory Accreditation Program.
- 1.2.5 Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- 1.2.6 Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to District's Representative, to establish product performance and compliance with industry standards.
- 1.2.7 Source Quality Control Testing: Tests and inspections that are performed at the source (i.e., a plant, mill, factory, or shop).
- 1.2.8 Field Quality Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- 1.2.9 Testing Agency: An entity engaged to perform specific tests, inspections, or both that is certified as meeting the requirements applicable to the Work. Testing laboratory shall mean the same as testing agency.
- 1.2.10 Testing, Inspection and Observation (TIO) Program: A program prepared for approval prior to issuance of the building permit that identifies the materials and tests to be performed on a project and the firm(s) and/or individual(s) responsible for performing those tests including, at a minimum, those required by applicable sections of the California Building Standards Code.
- 1.2.11 Installer/Applicator/Erector: Design Builder or another entity engaged by Design Builder as an employee or Subcontractor of any tier to perform a particular construction operation, including installation, erection, application, and similar operations.
- 1.2.12 Experienced: As used herein, an individual or entity that has successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction to work in California.

1.3 CONFLICTING REQUIREMENTS

- 1.3.1 General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to District's Representative for a decision before proceeding.
- 1.3.2 Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to District's Representative for a decision before proceeding.

1.4 QUALITY CONTROL PERSONNEL

- 1.4.1 Quality Control Manager: Provide a Quality Control Manager at the Site to manage and implement the Quality Control Plan. The duties and responsibilities of the Quality Control Manager will be to manage and implement the Quality Control Plan. The Quality Control Manager's duties and responsibilities include, but are not limited to:
- 1.4.1.1 Attending the Coordination and Detailing Activity (CDA) meetings, Weekly Construction Progress Meetings, Pre-installation Meetings, and Commissioning Meetings.
 - 1.4.1.2 Conducting Quality Control meetings, as necessary.
 - 1.4.1.3 Reviewing submittals.
 - 1.4.1.4 Preparing, monitoring and following through on Requests for Information, Change Orders, and Deferred Approvals.
 - 1.4.1.5 Preparing, coordinating and following through on Requests for Inspection.
 - 1.4.1.6 Ensuring testing is performed.
 - 1.4.1.7 Preparing required Quality Control certifications and documentation.
- No Work or testing may be performed unless the Quality Control Manager or a Designated Alternate Quality Control Manager is on the Site. The Quality Control Manager shall report directly to an officer of the Design Build firm who shall not be the same individual as, nor be subordinate to, the Project Manager or Superintendent.
- 1.4.2 Qualifications: The Quality Control Manager must be a graduate of a four year accredited college program in one of the following disciplines: engineering, architecture, construction management, engineering technology, building construction, or building science with a minimum of ten (10) years' experience as

a superintendent, inspector, Quality Control Manager, project manager, or construction manager on major and complex projects.

- 1.4.3 Other Quality Control Personnel: Provide additional quality control personnel (e.g., Quality Control Specialists, administrative support staff) as described in the Quality Control Plan and as required to implement the Quality Control Plan. The District, at its sole discretion, may require the Design Builder to assign additional quality control personnel to the Project if the District believes the Design Builder's assigned personnel are not capable of implementing the Quality Control Plan to the District's satisfaction. The Design Builder shall provide any additional personnel required by the District at no additional cost. Other active members of the Quality Control Program shall include a minimum of a full time architectural and engineering coordinator, Contractor's LEED Coordinator as defined in Section 01 35 00 (Sustainable Design Requirements, and Contractor's Commissioning Coordinator as defined in Section 01 81 00 (Commissioning Requirements). The Quality Control Manager and supporting members' responsibility is to ensure compliance with Contract Documents and is a requirement of the Contractor Quality Control Program.

1.5 SUBMITTALS

- 1.5.1 Qualification Data: For testing agencies specified in Article 1.6 (Quality Assurance) below to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

1.5.1.1 Testing, Inspection and Observation Program: Prepare according to the requirements contained in Section 7-141 of the California Building Standards Administrative Code (Part 1, Title 24, CCR). Submit to District Representative for approval prior to issuance of the building permit.

- 1.5.2 Reports: Reports of all tests made shall be provided regardless of whether test results indicate that the material tested is satisfactory or unsatisfactory. Samples taken but not tested shall also be reported. Prepare and submit certified written reports that include the following:

1.5.2.1 Date of issue.

1.5.2.2 District's Project title and number.

1.5.2.3 Name, address, and telephone number of testing agency.

1.5.2.4 Dates and locations of samples and tests or inspections.

1.5.2.5 Applicable Construction Drawing, detail, and Specification numbers.

1.5.2.6 Names of individuals making tests and inspections.

1.5.2.7 Description of the Work and test and inspection method.

1.5.2.8 Identification of product and Specification Section including specified design strength or other applicable criteria.

- 1.5.2.9 Complete test or inspection data.
 - 1.5.2.10 Test and inspection results and an interpretation of test results.
 - 1.5.2.11 Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 1.5.2.12 Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 1.5.2.13 A statement that the material or materials were sampled and tested according to the requirements of the California Code of Regulations, Title 21 or 22 and 24.
 - 1.5.2.14 Name and signature of laboratory inspector.
 - 1.5.2.15 Recommendations on retesting and reinspecting, if any.
 - 1.5.2.16 Reports shall be prepared according to the requirements of a Testing, Inspection, and Observation Program ("TIO") and sections 7-141 and 7-151 of the California Building Standards Code, Part 1, Title 24, CCR. Copies of each report shall be submitted as follows:
 - 1.5.2.16.1 District Representative
 - 1.5.2.16.2 Architect of Record
 - 1.5.2.16.3 Structural Engineer of Record
 - 1.5.2.16.4 Design Builder (2 copies)
 - 1.5.2.16.5 Inspector of Record
- 1.5.3 Permits, Licenses, and Certificates: For District's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.
- 1.5.4 Quality Control Plan: Prepare a plan describing procedures and methods the Design Builder will utilize to control the quality of the Work. At a minimum the Quality Control Plan shall include:
- 1.5.4.1 An organizational structure description, including Quality Control supervision, and inspection reporting structure. Delineate personnel training and qualification activities.
 - 1.5.4.2 Plans and procedures for testing and inspections to verify attributes delineated in the Contract Documents, including those specified in referenced Codes and standards. Include documents that identify individual inspection or testing points and acceptance criteria, and include provisions for recording results and the responsible inspection/test personnel. This documentation shall be traceable to the particular material, items, processes or systems evaluated, including notification requirements.

- 1.5.4.3 Procedures for identifying and contractually invoking the applicable technical and quality requirements delineated in the Specifications on vendors supplying materials, parts and services.
- 1.5.4.4 Plans and procedures for receiving, inspecting and accepting materials and items. These shall include examination of physical condition and compliance with purchasing requirements, including markings for class type and grade, and conformance with supplied documentation. These shall also include provisions for:
 - 1.5.4.4.1 Identifying, controlling and processing non-conforming items, including notification to the District.
 - 1.5.4.4.2 Inspection of materials for authenticity to preclude counterfeit parts, for items and attributes of concern identified by District.
 - 1.5.4.4.3 Verifying for compliance and traceability, maintaining, and turnover to the District, certificates of conformance and mill certificates required by Contract Documents or codes or standards invoked, for materials received.
- 1.5.4.5 Provisions for identifying defective Work. Bring to District's attention, for consultation and possible relief, those cases where correction within the specified requirements may introduce a significant schedule penalty, personnel hazard, or compromise the quality of installed items, or is otherwise impractical.
- 1.5.4.6 Controls to assure that only the "Approved for Inspection" construction documents are utilized in the Work.
 - 1.5.4.6.1 This includes provisions for removing superseded versions from the work area, except where explicitly and prominently marked "Void - For Information Only"; such as to retain annotated installation data.
- 1.5.4.7 Detailed formal procedures or instructions for the performance of special processes, such as welding or concrete placement. These procedures/instructions and personnel performing special processes shall be qualified and certified as required by codes and standards invoked in the Contract Documents.
- 1.5.4.8 Controls providing for periodic calibration of testing and measurement equipment, including unique equipment identification and calibration tracking.
- 1.5.4.9 Maintain records documenting the implementation of the above activities, including tests, inspections, special process qualification and execution, vendor documentation and defective Work resolution. These records shall be indexed, protected and retrievable for final submission to District.

- 1.5.4.10 Identify all tests and inspections that Design Builder proposes to be conducted by the District.
- 1.5.4.11 Approval: The Quality Control Plan must be approved before the start of construction and shall reflect the requirements of the approved Testing, Inspection and Observation Program. The District reserves the right to require revisions to the Quality Control Plan that are necessary to ensure the specified quality of the Work. The District may interview Quality Control personnel at any time to verify their submitted qualifications.
- 1.5.4.12 Changes: The Design Builder shall submit any requested changes to the Quality Control Plan, including changes in personnel, to the District in writing. Proposed changes must be submitted at least seven (7) Days in advance of the desired effective date of the change. No change in the Quality Control Plan shall be implemented without the District Representative's written approval.

1.6 QUALITY ASSURANCE

- 1.6.1 General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- 1.6.2 Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance. Installers shall be qualified by the product or equipment manufacturer, if required for warranty or other performance guarantees.
- 1.6.3 Manufacturer Qualifications: A firm experienced in fabricating products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units as required to meet the Project schedule.
- 1.6.4 Fabricator Qualifications: A firm experienced in procuring and fabricating products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units as required to meet the Project schedule.
- 1.6.5 Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in California and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of systems, assemblies, or products that are similar to those indicated for this Project in material, design, and extent.
- 1.6.6 Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1.6.6.1 Requirement for specialists shall not supersede building codes and regulations governing the Work.

- 1.6.7 Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, including the requirements of ASTM D3666, D3740, E329, E543, and E548 as applicable; and with additional qualifications specified in individual Sections; and that is acceptable to District. All testing shall be performed under the supervision and control of a California registered professional engineer employed by the testing agency.
- 1.6.8 Factory-Authorized Service Representative Qualifications: An authorized representative of a manufacturer who is trained and approved by the manufacturer to inspect installation of the manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- 1.6.9 Preconstruction Testing: Where a testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
- 1.6.9.1 Design Builder's responsibilities include the following:
 - 1.6.9.1.1 Provide test specimens representative of proposed products and construction.
 - 1.6.9.1.2 Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - 1.6.9.1.3 Provide sizes and configurations of test assemblies to adequately demonstrate capability of products to comply with performance requirements.
 - 1.6.9.1.4 Build site-assembled test assemblies using installers who will perform same tasks for Project.
 - 1.6.9.1.5 When testing is complete, remove test specimens and assemblies; do not reuse products on Project.
 - 1.6.9.2 Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality assurance service to Design Builder, with a copy to the District. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

1.7 QUALITY CONTROL

- 1.7.1 District Responsibilities: Where quality control services are indicated as District's responsibility, District will engage a qualified testing agency to perform these services.
- 1.7.1.1 Specified inspection and testing shall be performed in accordance with Part 1, Title 24, Article 4, Paragraph 7-149, California Code of Regulations.

- 1.7.1.2 District will furnish Design Builder with names, addresses, and telephone numbers of testing agencies engaged and a description of the types of testing and inspections they are engaged to perform.
- 1.7.1.3 Payment for these services will be by the District.
- 1.7.1.4 Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Design Builder, and the Contract Sum will be adjusted by Change Order.
- 1.7.1.5 District's Project Inspector:
 - 1.7.1.5.1 A Project Inspector employed by the District in accordance with the requirements of the California Building Code will be assigned to the work. The Project Inspector's duties are specifically defined in CCR Title 24 Part 1.
 - 1.7.1.5.2 The Design Builder shall notify the Project Inspector a minimum of 2 working days in advance of execution of all Work that requires inspection.
 - 1.7.1.5.3 The Work in all stages of progress shall be subject to the personal continuous observation of the Project Inspector. He or she shall have free and safe access to any or all parts of the work at any time. The Design Builder shall furnish the Project Inspector reasonable facilities for obtaining such information as may be necessary to keep him fully informed respecting the progress and manner of the work and the character of the materials. Inspection of the work shall not relieve the Design Builder from any obligation to fulfill this Contract.
- 1.7.2 Design Builder's Responsibilities: Tests and inspections not explicitly assigned to District are Design Builder's responsibility
 - 1.7.2.1 Where services are indicated as Design Builder's responsibility, engage a qualified testing agency to perform these quality control services.
 - 1.7.2.1.1 Design Builder shall not employ same entity engaged by District.
 - 1.7.2.2 Notify testing agencies and the District Representative at least seventy-two (72) hours in advance of time when Work that requires testing or inspecting will be performed.
 - 1.7.2.3 Where quality control services are indicated as Design Builder's responsibility, submit a certified written report, in duplicate, of each quality control service to the District Representative.
 - 1.7.2.4 Testing and inspecting requested by Design Builder and not required by the Contract Documents are Design Builder's responsibility.

- 1.7.2.5 Submit additional copies of each written report directly to authorities having jurisdiction, when so directed by the District Representative.
- 1.7.2.6 Do not cover work before required tests and inspections are performed (refer to paragraphs 4.22 and 4.1 of section 00 50 00 (Agreement)).
- 1.7.3 Disqualified Material: Material shipped or delivered to the site by the Design Builder from the source of supply prior to satisfactorily passing required tests or inspections, or prior to the receipt of a notice from the District Representative that such testing or inspection is not required, shall not be incorporated into the Work.
- 1.7.4 Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 01 33 00 (Submittal Procedures).
- 1.7.5 Retesting/Reinspecting: Regardless of whether original tests or inspections were Design Builder's responsibility, provide quality control services, including retesting and reinspection, for construction that replaces Work that failed to comply with the Contract Documents (refer to paragraphs 4.22 of section 00 50 00 (Agreement)).
 - 1.7.5.1 If such additional tests or inspections establish that such portion of the Work fails to comply with the Contract Documents, all costs of such additional tests and inspections, and all other costs resulting from such failure, including compensation for District Representative and District's consultants shall be deducted from the Contract Sum by Change Order.
 - 1.7.5.2 In addition, the Design Builder shall pay for:
 - 1.7.5.2.1 Additional costs, including compensation for travel and daily living expenses that are beyond normal inspection costs, when the District's Testing Laboratory is required to conduct inspections outside of the San Francisco Bay area.
 - 1.7.5.2.2 Costs of retesting Work revised or replaced by Design Builder, where required tests were performed on original construction.
 - 1.7.5.2.3 Costs of retesting construction used as temporary facilities by the Design Builder.
 - 1.7.5.2.4 Costs of testing construction required by Design Builder's substitutions.
- 1.7.6 Testing Agency Responsibilities: Cooperate with District Representative and Design Builder in performance of duties. Provide qualified personnel to perform required tests and inspections:
 - 1.7.6.1 Notify District Representative and Design Builder promptly of irregularities or deficiencies observed in the Work during performance of services.

- 1.7.6.2 Determine the location(s) from which test samples will be taken and in which in-situ tests are conducted.
- 1.7.6.3 Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
- 1.7.6.4 Submit a certified written report, in duplicate, of each test, inspection, and similar quality control service through Design Builder.
- 1.7.6.5 Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
- 1.7.6.6 Do not perform any duties of Design Builder.
- 1.7.6.7 Submit two copies of a verified report to District Representative covering all tests and inspections that are required by the TIO Program during the progress of the Work. The report shall be furnished each time that the Work is suspended, covering the tests completed up to that time, at the completion of the Work, covering all tests, and as otherwise required by the TIO Program.
- 1.7.7 Associated Services: The Design Builder shall cooperate with agencies performing required tests, inspections, and similar quality control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1.7.7.1 Access to the Work.
 - 1.7.7.2 Incidental labor and facilities necessary to facilitate tests and inspections.
 - 1.7.7.3 Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 1.7.7.4 Facilities for storage and field curing of test samples.
 - 1.7.7.5 Delivery of specified quantities of representative samples of materials proposed for use as specified to testing agencies.
 - 1.7.7.6 Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - 1.7.7.7 Security and protection for samples and for testing and inspecting equipment at Site.
 - 1.7.7.8 Pursuant to paragraph 2.1.3 of section 00 50 00 (Agreement), the Design/Builder will be responsible for all inspection, review, and permit costs.
- 1.7.8 Coordination: Coordinate sequence of activities to accommodate required quality assurance and quality control services with a minimum of delay and to avoid the need to remove and replace construction to accommodate testing and inspecting.

- 1.7.8.1 Schedule times for tests, inspections, obtaining samples, and similar activities.
- 1.7.8.2 Do not cover any piping, wiring, ducts, or other installations until they have been inspected by the District's Inspector.

1.8 SPECIAL TESTS AND INSPECTIONS

- 1.8.1 Special Tests and Inspections: The District will engage a qualified special inspector to conduct special tests and inspections as required by law, or regulatory agencies having jurisdiction over the Work. The responsibilities of the Special Inspector are as follows:
 - 1.8.2 Verifying that manufacturer maintains detailed fabrication and quality control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 - 1.8.3 Notifying County's Representative promptly of irregularities and deficiencies observed in the Work during performance of its services.
 - 1.8.4 Submitting a certified written report of each test, inspection, and similar quality control service to County's Representative with copy to Design Builder.
 - 1.8.5 Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 - 1.8.6 Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 - 1.8.7 Retesting and re-inspecting corrected work, as needed.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.1 INSPECTION

- 3.1.1 The Design Builder shall provide access to the Work, including the facilities where the Work is in preparation, at all times for the purpose of inspection. The Design Builder shall maintain proper facilities and provide safe access for such inspection at all times.
- 3.1.2 The District shall have the right to reject materials and workmanship that are defective, or to require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the Site without charge to the District.
- 3.1.3 The District may make an examination of work already completed by requiring the Design Builder to remove or tear out such work at any time before final acceptance of the Work. Upon request, the Design Builder shall provide all facilities, labor and materials necessary to remove the portion of the Work designated by the District's Representative. If such work is found to be defective in any respect due to the fault of the Design Builder or its subcontractors, the Design Builder shall be responsible for all expenses of such examination and satisfactory reconstruction.

If such work is found to meet the requirements of the Contract Documents, the additional cost of labor and materials involved in the examination shall be allowed to the Design Builder.

3.2 QUALITY CONTROL REPORTS

3.2.1 Frequency: Reports are required for each day that Work is performed, for every seven (7) consecutive Days of no work, and on the last day of a no-work period. Account for each day throughout the life of the Contract. The reporting of Work shall be identified by Specification number and title and terminology consistent with the Contract Schedule. Design Builder Quality Control Reports shall be prepared, signed and dated by the Quality Control Manager and shall contain the following information:

3.2.1.1 Identify the part or parts of the Work that is the subject of the report.

3.2.1.2 Indicate, as applicable, that for the portion of the Work, the drawings and specifications were reviewed, submittals were approved, materials comply with approved submittals, materials are stored properly, preliminary work was done correctly, the testing plan was reviewed, and work methods and schedule were discussed.

3.2.1.3 Indicate, as applicable, that for this portion of the Work, the preliminary work was done correctly, samples have been prepared and approved, the workmanship is satisfactory, test results are acceptable, work is in compliance with the Contract Documents, and the required testing has been performed. Include a list of who performed the tests.

3.2.1.4 Results of off-site quality control work, if applicable, including actions taken.

3.2.1.5 List any rework items identified but not corrected by close of business.

3.2.1.6 List the rework items corrected from the rework items list along with the corrective action taken.

3.2.1.7 Include a "Comments" section in the report that contains pertinent information including directions received, quality control problem areas, deviations from the Quality Control Plan, construction deficiencies encountered, Quality Control meetings held, acknowledgement that as-built drawings have been updated, corrective direction given by the Quality Control Manager, and corrective action taken by the Design Builder.

3.3 TEST AND INSPECTION LOG

3.3.1 Prepare a sequentially numbered record of tests and inspection. Include the following:

3.3.1.1 Request for Inspection

3.3.1.2 Date test or inspection was conducted.

- 3.3.1.3 Description of the Work tested or inspected.
- 3.3.1.4 Applicable Construction Drawing and Specification numbers
- 3.3.1.5 Date test or inspection results were transmitted to District's Representative.
- 3.3.1.6 Identification of testing agency or special inspector conducting test or inspection.
- 3.3.2 Maintain log at Site. Post changes and modifications as they occur. Provide access to test and inspection log for District and its representatives' reference during normal working hours.
- 3.4 REPAIR AND PROTECTION
 - 3.4.1 General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 3.4.1.1 Comply with the Contract Document requirements for Section 01 73 00 (Cutting and Patching).
 - 3.4.2 Protect construction exposed by or for quality control service activities.
 - 3.4.3 Repair and protection are Design Builder's responsibility, regardless of the assignment of responsibility for quality control services.
- 3.5 CONCRETE TESTS AND INSPECTIONS
 - 3.5.1 Tests
 - 3.5.1.1 Notify Architect, District's Representative and testing agency of brand and type of cement and sources of aggregates in time for review, sampling and testing. Test cement in accordance with Title 24, 1928 B.1
 - 3.5.1.2 Aggregate: The District's testing agency will test at least one sample for every two hundred (200) cubic yards of aggregate. Aggregates from a known source of supply that have shown by actual service to produce concrete of the required quality will be tested only for gradation and deleterious substances.
 - 3.5.1.3 Obtain at least one set of samples for strength tests of each separate design mix of concrete placed each day. Frequency of sampling shall be not less than once per day, nor less than once for each fifty (50) cubic yards of concrete, nor less than once per 2,000 square feet of surface area for slabs or walls. Obtain one additional set of samples for testing at the start of concrete for each class of concrete, and whenever the mix or aggregate is changed.
 - 3.5.1.4 One set of samples consists of four cylinders.

- 3.5.1.5 Cylinders will be taken so as to represent as nearly as possible the batch of concrete from which they are taken. Sampling procedures shall conform to ASTM C 172.
- 3.5.1.6 Test cylinders shall be made and cured in compliance with ASTM C 31, except as modified hereinafter. Tests will comply with ACI 301 for strength, slump, and air entrainment tests.
- 3.5.1.7 Test cylinders from respective batches, one at age of seven (7) Days, and two at age twenty-eight (28) Days. The fourth cylinder shall be held in reserve and tested only at the direction of the Architect or District's Representative. Cylinder testing procedures shall conform to ASTM C 39 for strength.
- 3.5.1.8 Slump tests shall be taken as required by Testing Laboratory to certify compliance with the Contract Documents. Slump shall be tested in accordance with ASTM C 143.
- 3.5.1.9 Minimum compressive strength of test cylinders, in pounds per square inch, shall not be less than the specified required design strength.
- 3.5.1.10 If minimum strengths of test cylinder fall below those specified, Architect or District's Representative may require test cores from hardened concrete to be taken and tested. Each core test, if taken shall consist of three cores. The cost of such cores and tests shall be borne by the Design Builder. Cores shall be taken in accordance with ASTM C 42, from locations selected by the Architect or District's Representative. The Design Builder shall repair core holes with a non-shrinking natural aggregate grout.
 - 3.5.1.10.1 Concrete testing by coring shall be considered acceptable if the average strength of the three cores is equal to at least .85 of the minimum specified twenty-eight (28) day strength and if no single core strength is less than five hundred (500) psi below the twenty-eight (28) day strength.

3.5.2 Concrete Inspections

- 3.5.2.1 An authorized inspector from the testing agency shall be present at all times during placing of structural cast-in-place concrete. The inspector shall inspect and accept the accuracy of all reinforcing steel before concrete is placed. Concrete construction activities shall not proceed until inspections are complete and the inspected construction is approved.

3.5.3 Concrete Mix Designs

- 3.5.3.1 Refer to Volume 3 and 6, Division 3 (Concrete)

3.5.4 Concrete Plant Inspection

- 3.5.4.1 Structural concrete manufacturer(s) shall deliver a certificate in accordance with ASTM C 94, Section 15.1, and all items of Section

15.2 with the addition of type and brand of cement and admixtures, source and identification of aggregates to the Inspector with each mixer truck. Certificates shall be from a public weighmaster. The inspector shall not accept concrete that is not accompanied and identified by a certificate from a batch plant inspector.

3.5.4.2 Concrete shall be mixed at certified automatic concrete batch plants and shall have quality control as follows:

3.5.4.2.1 Laboratory designed mixes using adequate cement factors.

3.5.4.2.2 The testing agency shall perform continuous batch plant inspection.

3.5.4.2.3 Compliance with California Building Code (CBC) Standard 19-3.

3.5.4.2.4 Periodic inspection of quality of materials used may be made by testing laboratory, acceptable to Architect or District's Representative.

3.6 HIGH-STRENGTH GROUT

3.6.1 This Article applies to structural grout used below base plates and similar applications.

3.6.2 The placement of grout materials will be continuously inspected by the District's testing agency.

3.6.3 Grout compressive strength testing: The District will obtain a set of three samples from each batch. Samples will be tested at one (1) or three (3) days and seven (7) days following mixing. Compressive strengths shall exceed the manufacturer's published minimum strengths or eighty percent (80%) of their published typical compressive strengths.

3.7 EXPANSION ANCHOR BOLTS (TITLE 24, 1925 B.3.5)

3.7.1 Expansion type concrete anchor bolts shall be Hilti Kwik Bolt II or as indicated on the approved Construction Documents. Other brands of similar anchors will be acceptable with demonstration of equivalency. Submit manufacturer's specifications and ICBO reports. All anchors shall be installed with special inspection in accordance with the requirements of the Building Code.

3.7.2 Fifty percent of the anchors or alternate bolts in any group arrangement shall be proof tested in tension or torque, as specified on the drawings.

3.7.3 Testing Requirements:

3.7.3.1 Anchor diameter refers to the thread size.

3.7.3.2 Apply proof test loads to anchors without removing the nut, if possible. If not possible, remove nut and install a threaded coupler to the same tightness as the original nut using a torque wrench and apply load.

- 3.7.3.3 Reaction loads from test fixtures may be applied close to the anchor being tested, provided the anchor is not restrained from withdrawing by the fixture(s).
- 3.7.3.4 Test equipment is to be calibrated by an approved testing laboratory in accordance with standard recognized procedures.
- 3.7.3.5 The following criteria are applicable for the approval of installed anchors:
 - 3.7.3.5.1 Hydraulic Ram Method: The anchor should have no observable movement at the applicable test load. For wedge and sleeve type anchors, a practical way to determine observable movement is that the washer under the nut becomes loose.
 - 3.7.3.5.2 Torque Wrench Method: The applicable test torque must be reached within the following limits:
 - 3.7.3.5.2.1 One half (1/2) turn of the nut.
 - 3.7.3.5.2.2 One quarter (1/4) turn of the nut for the 3/8" sleeve anchor only.
 - 3.7.3.5.3 Testing should occur a minimum of twenty-four (24) hours after installation of the subject anchors.

3.8 ADHESIVE ANCHORS

- 3.8.1 Installation Testing: Fifty percent of the anchors shall be pull-tested.
- 3.8.2 Proof Test Load: Pull test to twice the ICBO evaluation report design tension values or as indicated on the drawings.
- 3.8.3 Inspection: Installation of adhesive anchors will be continuously inspected in accordance with the requirements of the California Building Code, Section 1701, and the appropriate ICBO evaluation report.

3.9 EPOXY AND CEMENTITIOUS GROUTED DOWELS

- 3.9.1 Initial Testing: Install three anchors for each anchor size and installation position planned in allocation acceptable to the Architect or District's Representative. These anchors shall not be incorporated into the finished construction. The testing agency will pull-test these anchors at one hundred twenty-five percent (125%) of the values specified on the drawings.
- 3.9.2 Testing: The testing agency will pull-test fifty percent (50%) of the dowels in accordance with the schedule shown on the drawings. If any failures occur, the agency will pull-test one hundred percent (100%) of dowels in the vicinity or placed with the same batch of grout until at least twenty (20) tests demonstrate compliance. The Design Builder shall bear the cost of replacing failed dowels and re-inspection.

- 3.9.3 Inspection: Installation of epoxy grouted dowels will be continuously inspected in accordance with the California Building Code, Section 1701, and the appropriate ICBO evaluation report.

3.10 REINFORCING STEEL

3.10.1 Tests

3.10.1.1 Tests shall be performed before the delivery of steel to the Site. Steel that does not meet specifications shall not be shipped to the Project.

3.10.1.2 Testing procedure shall conform to ASTM A 615.

3.10.1.3 Sample at the place of distribution, before shipment. Make one tensile strength test and one bending test from samples out of 10 tons, or fraction thereof, each size and kind of reinforcing steel, where taken from bundles as delivered from the mill and properly identified as to heat number. Mill analysis shall accompany report. Where identification number cannot be ascertained, or where random samples are taken, make one series of tests from each two and a half (2-1/2) tons, or fraction thereof, of each size and kind of reinforcing steel. Samples shall include not fewer than two pieces, each eighteen (18) inches long, of each size and kind of reinforcing steel.

3.10.1.4 Welds: Reinforcing bar welds shall be inspected. Tests of reinforcing bar welds shall be in accordance with ASTM E 709 and AWS D1.4. Chemical testing of reinforcing bars for welding shall conform to Title 24, 2603 B.5.2.

3.10.2 Inspector will inspect all reinforcement for concrete construction for size, dimensions, locations and proper placement. Special Inspector required for welding as required by Title 24, 1928 B.12. Inspector shall be present during welding of all reinforced steel.

3.10.3 Stone Veneer

3.10.3.1 All veneer shall be continuously inspected as required by the California Code or Regulations, Title 24, Part 2, Volume I, Section 1403 A.6.

3.11 STRUCTURAL STEEL INCLUDING MISCELLANEOUS STEEL

3.11.1 Mill certificates or affidavits and manufacturers' certifications shall be supplied to the inspector for verification of steel materials. Testing agency shall be notified at least three working days in advance of fabrication and supplied with the reports so that the inspector can make a shop inspection of the steel.

3.11.2 Inspection requests shall be based on Title 24, Part 2, California Building Code, Volume 2, Seismic Provisions for Structural Steel Buildings of the American Institute of Steel Construction, 2002.

3.11.3 Identify and mark steel in accordance with Section 2202B. Structural steel properly identifies need not be tested.

- 3.11.4 Tests of Steel Materials: If structural steel cannot be identified by heat or melt numbers, or if its source is questionable, not less than one tension test and one bend test will be made for each five tons or fractional part thereof. The cost of such testing will be borne by the Design Builder.
- 3.11.5 Testing and Inspection of Structural Steel:
- 3.11.5.1 Testing agency will visit the fabricator's plant to verify that materials used check with the mill tests, affidavits of test reports, and that fabrication and welding procedures meet specifications.
 - 3.11.5.2 Testing agency shall visually check fabricated steel delivered to the Project against the working and reviewed shop drawings for compliance, and make physical tests and measurements as required to meet the Specifications.
 - 3.11.5.3 Inspection of welding shall be in accordance with the requirements of section 2212 B.5.
 - 3.11.5.4 Erection Inspection: Testing agency will visually inspect bolted and field welded connections, perform such additional tests and inspections of the field work as are required by the Architect or District's Representative and prepare test reports for the approval.
- 3.11.6 Ultrasonic Testing: All complete penetration multi-pass groove welds will be ultrasonically tested:
- 3.11.6.1 The District's testing agency will perform ultrasonic testing immediately after welding is complete. A second ultrasonic testing will be performed near the end of field welding for at least twenty-five percent (25%) of the field welded groove welds.
 - 3.11.6.2 All defective welds shall be repaired and re-tested with ultrasonic equipment.
 - 3.11.6.3 When ultrasonic indications arising from the weld root can be interpreted as either a weld defect or the backing strip itself, the backing strip shall be removed at the Design Builder's expense and, if no root defect is visible, the weld shall be retested. If no defect is indicated on this re-test, and no significant amount of the base and weld metal haven been removed, no further repair or welding is necessary. If a defect is indicated, it shall be repaired at the Design Builder's expense.
 - 3.11.6.4 The ultrasonic instrumentation shall be calibrated by the technician to evaluate the quality of the welds in accordance with AWS D1.1.
 - 3.11.6.5 Should defects appear in welds tested, repairs shall be similarly inspected at the Design Builder's expense and at the direction of the Architect or District's Representative until satisfactory performance is assured.

3.11.6.6 Other methods of inspection, for example, x-ray, gamma ray, magnetic particle, or dye penetrant, may be used on welds if deemed necessary by the Architect or District's Representative.

3.11.7 The testing laboratory will review welding procedure specifications and related documentation to verify compliance with AWS and the Contract Documents.

3.12 HIGH-STRENGTH BOLTS, NUTS AND WASHERS

3.12.1 Material Tests: High-strength bolts, nuts and washers will be sampled and tested in accordance with the requirements of the specification for High-Strength Bolts for Structural Steel Joints, including Suitable Nuts and Plain Hardened Washers, ASTM A325, or for Quenched and Tempered Alloy Steel Bolts for Structural Steel Joints, ASTM 490, latest editions, details of construction, and installation procedure.

3.12.2 Inspection of High-Strength bolt Installation: Inspection of high-strength bolt installations shall be made in accordance with Title 24, Section 2213B by an inspector specially approved for that purpose by District Representative . The inspector will check the materials, equipment, details of construction, and installation procedure. The inspector shall furnish the Architect or District's Representative with a report that the Work has been completed in every respect in compliance with the approved Drawings and Specifications.

END OF SECTION

SECTION 01 52 00

CONSTRUCTION FACILITIES

PART 1 - GENERAL

1. RELATED DOCUMENTS

- 1.1. Drawings and general provisions of Section 00 50 00 (Agreement), and other Division 1 Specification Sections, apply to this Section.

2. SUMMARY

- 2.1. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.

- 2.2. Temporary utilities include, but are not limited to, the following:

- 2.2.1. Sewers and drainage.
- 2.2.2. Water service and distribution.
- 2.2.3. Sanitary facilities, including toilets, wash facilities, and drinking-water facilities.
- 2.2.4. Heating and cooling facilities.
- 2.2.5. Ventilation.
- 2.2.6. Electric power service.
- 2.2.7. Lighting.
- 2.2.8. Telephone service.
- 2.2.9. High-speed Internet service.

- 2.3. Support facilities include, but are not limited to, the following:

- 2.3.1. Temporary roads and paving.
- 2.3.2. Dewatering facilities and drains.
- 2.3.3. Project identification and temporary signs.
- 2.3.4. Waste disposal facilities.
- 2.3.5. Field offices.
- 2.3.6. District field office.
- 2.3.7. Storage and fabrication sheds.
- 2.3.8. Lifts and hoists.
- 2.3.9. Temporary elevator usage.
- 2.3.10. Temporary stairs.
- 2.3.11. Construction aids and miscellaneous services and facilities.

- 2.4. Security and protection of the Work shall comply with the requirements of Article 14 of Section 00 50 00 (Agreement) and include, but are not limited to, the following:

- 2.4.1. Environmental protection.
- 2.4.2. Stormwater control.
- 2.4.3. Tree and plant protection.
- 2.4.4. Pest control.
- 2.4.5. Site enclosure fence.
- 2.4.6. Security enclosure and lockup.

- 2.4.7. Barricades, warning signs, and lights.
- 2.4.8. Covered walkways.
- 2.4.9. Temporary enclosures.
- 2.4.10. Temporary partitions.
- 2.4.11. Fire protection.

2.5. Related Sections include the following:

- 2.5.1. Section 00 50 00 (Agreement) for progress cleaning requirements.
- 2.5.2. Section 01 77 00 (Cleaning and Closeout Procedures) for closeout, cleaning procedures.
- 2.5.3. Divisions 2 through 33 for temporary heat, ventilation, and humidity requirements for products in those Sections.

3. DEFINITIONS

- 3.1. Permanent Enclosure: As determined by District, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

4. USE CHARGES

- 4.1. General: Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
 - 4.1.1. District's construction and management forces.
 - 4.1.2. Architect and other design sub-consultants.
 - 4.1.3. Testing agencies.
 - 4.1.4. Inspection services.
 - 4.1.5. Personnel of authorities having jurisdiction.
- 4.2. Sewer Service: Use District's existing sewer service without metering and without payment of use charges.
- 4.3. Water Service: Use water from District's existing water system without metering and without payment of use charges.
- 4.4. Electric Power Service: In existing structures use electric power from District's existing system without metering and without payment of use charges unless otherwise noted. For all new structures under construction and temporary facilities (including but not limited to all field offices and temporary construction facilities) Design Builder shall engage the appropriate local utility company to install temporary service. Pay electrical service use charges for all new structures under construction and temporary facilities.
- 4.5. Telephone and High-speed Internet Service: Design Builder shall install and pay for all telephone (voice and facsimile) and High-speed Internet service use and maintenance charges and insure that such utilities are available for use by all entities engaged in construction activities at Project site.

5. QUALITY ASSURANCE

- 5.1. Standards: Comply with ANSI A10.6, NECA[§] "Temporary Electrical Facilities," and NFPA 241.
 - 5.1.1. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
 - 5.1.2. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Design Builder to obtain required certifications and permits.

6. Material Safety Data Sheets (MSDS)

- 6.1. Design Builder is required to ensure Material Safety Data Sheets are available in a readily accessible place at the Work Site for any material requiring a Material Safety Data Sheet per the Federal "Hazard Communication" standard, or employees right to know law. The Design Builder is also required to ensure proper labeling on substances brought onto the job site and that any person working with the material or within the general area of the material is informed of the hazards of the substance and follows proper handling and protection procedures. Two additional copies of the Material Safety Data Sheets shall also be submitted directly to the District.

7. PROJECT CONDITIONS

- 7.1. Temporary Utilities: At the earliest feasible time, when acceptable to District, change over from use of temporary service to use of permanent service.
 - 7.1.1. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before District[§] acceptance, regardless of previously assigned responsibilities.
- 7.2. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
 - 7.2.1. Keep temporary services and facilities clean and neat.
 - 7.2.2. Relocate temporary services and facilities as required by progress of the Work.
 - 7.2.3. If power greater than that available at nearby convenience outlets is required, make arrangements for such service and pay all costs of wiring and current. Repair existing facilities to originally found conditions.

PART 2 - PRODUCTS

1. MATERIALS

- 1.1. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by District. Provide materials suitable for use intended.

- 1.2. Pavement: Comply with Division 2 [Section "Asphaltic Concrete Paving."] [Section "Portland Cement Concrete Paving."] [Pavement Sections.]
- 1.3. Portable and Temporary Chain-Link Fencing: Minimum 2-inch (50-mm) 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch-(73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails.
 - 1.3.1. For portable chain-link fencing, provide galvanized steel support bases for supporting posts. Use bolt clamp connections. No wire ties to secure between fence panels.
 - 1.3.2. Provide gates in sizes and at locations necessary to accommodate delivery vehicles and other construction operations.
 - 1.3.3. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Provide District with three sets of keys.
 - 1.3.4. Visual Barrier: Provide and install mesh screen with District approved connections to fencing for visual barrier
- 1.4. Lumber and Plywood: Comply with requirements in Division 6 Section Rough Carpentry."
- 1.5. Paint: Comply with requirements in Division 9 Section "Painting."
- 1.6. Tarpaulins: Fire-resistive labeled with flame-spread rating of 15 or less.
- 1.7. Water: Potable.

2. EQUIPMENT

- 2.1. General: Provide equipment suitable for use intended.
- 2.2. Field Office and District Field Office: Mobile units with lockable entrances, operable windows, and serviceable finishes; heated and air conditioned; on foundations adequate for normal loading. Windows and doors are to have security bars and operable shades.
- 2.3. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures.
 - 2.3.1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- 2.4. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- 2.5. Drinking-Water Fixtures: Containerized, tap-dispenser, bottled-water drinking-water units, including paper cup supply.
- 2.6. Heating Equipment: Unless District authorizes use of permanent heating system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

- 2.6.1. Heating Units: Listed and labeled, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use for type of fuel being consumed.
- 2.7. Electrical Outlets: Properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-V plugs into higher-voltage outlets; equipped with ground-fault circuit interrupters, reset button, and pilot light.
- 2.8. Power Distribution System Circuits: Where permitted and overhead and exposed for surveillance, wiring circuits, not exceeding 125-V ac, 20-A rating, and lighting circuits may be nonmetallic sheathed cable.

PART 3 – EXECUTION

1. INSTALLATION, GENERAL

- 1.1. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by the District. See Article 3.3..1
- 1.2. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities and approved by District.

2. TEMPORARY UTILITY INSTALLATION

- 2.1. General: Engage appropriate local utility company to install temporary service or connect to existing service. Where utility company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility company recommendations.
 - 2.1.1. Arrange with utility company, District, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
 - 2.1.2. Provide adequate capacity at each stage of construction. Before temporary utility is available, provide trucked-in services.
 - 2.1.3. Obtain easements to bring temporary utilities to Project site where District easements cannot be used for that purpose.
- 2.2. Sewers and Drainage: If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully. If sewers are not available or cannot be used, provide drainage ditches, dry wells, stabilization ponds, and similar facilities. If neither sewers nor drainage facilities can be lawfully used for discharge of effluent, provide containers to remove and dispose of effluent off-site in a lawful manner.
 - 2.2.1. Filter out excessive soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.
 - 2.2.2. Connect temporary sewers to municipal system as directed by sewer department officials.

- 2.2.3. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. After heavy use, restore normal conditions promptly.
- 2.3. Water Service: Use of District's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to District.
 - 2.3.1. The Design Builder shall be responsible for undue wasting of water used on the Work.
 - 2.3.2. Design Builder to furnish hoses and temporary piping placed where water connections are available.
 - 2.3.3. Provide adequate fire protection for the duration of work in accordance with local codes, ordinances and the State Fire Marshal.
 - 2.3.3.1. The Design Builder shall take necessary precautions to guard against and eliminate possible fire hazards and to prevent damage to construction work, building materials, equipment, and public property. The Design Builder shall be responsible for providing, maintaining and enforcing fire protection methods
 - 2.3.4. here installation below an outlet might be damaged by spillage or leakage, provide a drip pan of suitable size to minimize water damage. Drain accumulated water promptly from pans.
- 2.4. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
 - 2.4.1. Disposable Supplies: Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
 - 2.4.2. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy.
 - 2.4.3. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel who handle materials that require wash up. Dispose of drainage properly. Supply cleaning compounds appropriate for each type of material handled.
 - 2.4.4. Drinking-Water Facilities: Provide bottled-water, drinking-water units and paper cup supply.
- 2.5. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment from that specified that will not have a harmful effect on completed installations or elements being installed.
- 2.6. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment from that specified that will not have a harmful effect on completed installations or elements being

installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

2.6.1. Unless the District Project Manager authorizes an alternate procedure in writing, in advance of the start of construction; continuously ventilate all construction work areas and spaces with 100% outdoor (fresh) air for at least 30 days prior to substantial completion of work. In areas, which make use of natural ventilation such as windows, install temporary fans sufficient to provide no less than three air changes per hour. In all cases make sure that air is exhausted from construction work areas directly to the outdoors; do not re-circulate air or ventilate to other enclosed areas either within the occupied school or the construction area itself. Continuously operate ventilation systems and/or temporary fans 24 hours per day, 7 days per week, providing all measures necessary to allow the operation of ventilation systems and fans while maintaining the security of the site.

2.6.1.1. When volatile organic compound, and/or odor generating activities are performed during the 30-day ventilation period provide temporary exhaust ventilation to capture emissions and exhaust them directly to the outdoors. Extend the building flush out for a minimum of four days after the completion of any such activities.

2.6.1.2. During ventilation, make necessary provisions to temper supply air or heat spaces sufficiently to prevent condensation, water damage, and/or mold growth. Do not attempt to speed the off gassing of materials and/or curing of finishes by increasing room temperatures above normal levels ("baking" the building and/or components)

2.6.1.3. Additional Conditioning at Move-In: Continue to operate ventilation systems at 100% fresh air during occupant move-in and unpacking. Do not perform final balancing of the ventilation system until two weeks after the move-in.

2.7. Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnecting means, automatic ground-fault interrupters, and main distribution switchgear.

2.7.1. Install power distribution wiring overhead and rise vertically where least exposed to damage.

2.8. Electric Power Service: Where approved by the District, use of District's existing electric power service will be permitted, as long as equipment is maintained in a condition acceptable to District.

2.9. Electric Distribution: Provide receptacle outlets adequate for connection of power tools and equipment.

2.9.1. Provide waterproof connectors to connect separate lengths of electrical power cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.

2.10. Lighting: Provide temporary lighting, as required, with local switching that provides adequate illumination for construction operations and traffic conditions.

2.11. Equipment: Provide equipment throughout construction period for common-use facilities used by all personnel engaged in construction activities.

2.11.1. Provide the following at District Field office:

2.11.1.1. CM Office

2.11.1.1.1. One fax, copy, scan machine with one dedicated phone line.

2.11.1.2. IOR Office, If Required

2.11.1.2.1. One fax copy, scan machine with one dedicated phone line.

2.11.1.3. Conference Room

2.11.1.3.1. One telephone with conference and speaker capability: Provide dedicated phone line.

2.11.1.3.2. Provide and install separate High-speed Internet service, modem, and two (2) four-port wireless router for networking hardware/software for use during construction as directed by District's representative.

2.11.1.3.3. Design Builder is responsible to maintain continuous High-speed Internet and telephone service throughout construction.

2.11.1.3.4. Provide an answering machine or voice mail service on all telephones in the District's field office.

2.11.1.3.5. Provide three (3) sets of keys for each door at the trailers.

2.11.1.3.6. District Office and Conference Rooms to have weekly (or more) Janitorial Services.

2.11.1.3.7. District Field Offices shall have one (1) Men's and one (1) Women's interior toilet facilities with hot/cold water. Bottled drinking water with cups shall be provide for the duration of the Project.

2.11.1.4. Provide the following at Design Builder Field office:

2.11.1.4.1. Provide minimum of one (1) Scan/Copy/Print machine.

2.11.1.4.2. Provide separate High-speed Internet service, modem, and four-port wireless router for networking hardware/software for use during construction.

2.11.1.4.3. Design Builder is responsible to maintain continuous High-speed Internet and telephone service throughout construction.

2.11.1.5. In the Field Office, post a list of important telephone numbers.

2.11.1.5.1. Police and fire departments.

2.11.1.5.2. Ambulance service.

2.11.1.5.3. Design Builder's home office.

2.11.1.5.4. Architect's office.

2.11.1.5.5. Engineers' offices.

2.11.1.5.6. District's office.

2.11.1.5.7. Principal sub-Design Builders' field and home offices.

2.11.1.6. Furnish superintendent with an electronic paging device or a portable two-way radio for use when away from field office.

2.11.1.7. Provide a portable cellular telephone for superintendent's use in making and receiving telephone calls when away from field office.

3. SUPPORT FACILITIES INSTALLATION

3.1. General: Comply with the following:

- 3.1.1. Locate field offices, storage sheds, sanitary facilities, and other temporary construction and support facilities in locations approved by the District.
- 3.1.2. Provide incombustible construction for offices, shops, and sheds located within construction area. Comply with NFPA 241.
- 3.1.3. Maintain support facilities until after project final completion and with approval of the District.
- 3.2. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate to support loads and to withstand exposure to traffic during construction period. Locate temporary roads and paved areas, if required, as indicated on Drawings.
 - 3.2.1. Provide a reasonably level, graded, well-drained subgrade of satisfactory soil material, compacted to not less than 95 percent of maximum dry density in the top 6 inches (150 mm).
 - 3.2.2. Provide gravel paving course of subbase material not less than 6 inches (75 mm) thick; roller compacted to a level, smooth, dense surface.
 - 3.2.3. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.
 - 3.2.4. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
 - 3.2.5. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
 - 3.2.6. Prepare subgrade and install subbase and base for temporary roads and paved areas according to Division 2 Section "Earthwork."
 - 3.2.7. Recondition base after temporary use, including removing contaminated material, regrading, proofrolling, compacting, and testing.
 - 3.2.8. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course according to Division 2 Section "Hot-Mix Asphalt Paving."
- 3.3. Traffic Controls: Provide temporary traffic controls at junction of temporary roads with public roads. Include warning signs for public traffic and "STOP" signs for entrance onto public roads. Comply with requirements of authorities having jurisdiction.
- 3.4. Dewatering Facilities and Drains: Comply with requirements in applicable Division 2 Sections for temporary drainage and dewatering facilities and operations not directly associated with construction activities included in individual Sections. Where feasible, use same facilities. Maintain Project site, excavations, and construction free of water.
 - 3.4.1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining property nor endanger permanent Work or temporary facilities.

- 3.4.2. Before connection and operation of permanent drainage piping system, provide temporary drainage where roofing or similar waterproof deck construction is completed.
- 3.5. Project Identification and Temporary Signs: Prepare a minimum of two (2) Project identification signs not less than 32 square feet in area. Install signs in locations approved by the District to inform public and persons seeking entrance to Project. Do not permit installation of unauthorized signs.
 - 3.5.1. Engage an experienced sign painter to apply graphics for Project identification signs. Comply with details indicated. District to provide project information to be included on signage.
 - 3.5.2. Prepare temporary signs to provide directional information to construction personnel and visitors.
 - 3.5.3. Construct signs of exterior-type Grade B-B high-density concrete form overlay plywood. Support on posts or framing of preservative-treated wood or steel. Do not install signage on any fencing – temporary or permanent.
 - 3.5.4. Paint sign panel and applied graphics with exterior-grade alkyd gloss enamel over exterior primer.
- 3.6. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste. Comply with Division 1 Section "Execution Requirements" for progress cleaning requirements.
 - 3.6.1. If required by authorities having jurisdiction, provide separate containers, clearly labeled, for each type of waste material to be deposited.
 - 3.6.2. Develop a waste management plan for Work performed on Project. Indicate types of waste materials Project will produce and estimate quantities of each type. Provide detailed information for on-site waste storage and separation of recyclable materials. Provide information on destination of each type of waste material and means to be used to dispose of all waste materials.
- 3.7. Professional Cleaning Services: Provide professional cleaning services on a weekly basis for temporary offices, first-aid stations, toilets, and similar areas.
- 3.8. District Field Office: Provide an insulated, weathertight, air-conditioned field office for use as by the District, District's Representative, Inspector of Record, and Architect; of sufficient size to accommodate required office personnel. District field office to contain office for IOR, office for Construction Manager (CM), Project Manager (PM), Project Engineer (PE), Project Administrator (PA) and common meeting area as detailed below. Provide and maintain all new equipment below, including all ancillary supplies required to operate equipment provided under contract. (Such as; copier toner, copy paper, drinking cups, etc).
 - 3.8.1. IOR Office Requirements as follows:
 - 3.8.1.1. Provide a minimum 140 sq. ft. (13 sq. m) office with lockable door.
 - 3.8.1.2. One desk and one ergonomic chair, two four-drawer file cabinets, a plan table, a plan rack, and one bookcase.

- 3.8.1.3. One plain paper fax, copier, scanner, copier model HP Laser Jet M1522n MFP or approved equal with capability to fax multiple pages at a time and print a confirmation page.
- 3.8.2. PE/PA Office Requirements as follows:
 - 3.8.2.1. Provide a minimum 64 sq. ft. (7.8 sq. m) workstation with overhead storage and task lighting.
 - 3.8.2.2. One desk or worksurface and one ergonomic chair, two four-drawer file cabinets and pencil drawer (lockable), a plan table or worksurface, a plan rack, and one bookcase.
- 3.8.3. Common Meeting Area:
 - 3.8.3.1. Provide a room of not less than 240 sq. ft. (22.5 sq. m) for Project meetings. Furnish room with conference table suitable for 14 people, 14 folding chairs, 4-foot-by-6-foot- tack board, and 4-foot-by-6-foot- white board.
 - 3.8.3.2. One desk and one ergonomic chair, one four-drawer file cabinet.
 - 3.8.3.3. Water cooler with hot and cold spigot.
 - 3.8.3.4. DB team shall provide a scanner/printer/copier capable of printing B/W and in Color on 8-1/2" x 11" and 11" x 17" paper.
 - 3.8.3.5.
- 3.9. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility services. Sheds may be open shelters or fully enclosed spaces within building or elsewhere on-site.

4. SECURITY AND PROTECTION FACILITIES INSTALLATION

- 4.1. General: Comply with the requirements of Article 14 of 00 50 00 (Agreement).
- 4.2. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects. Avoid using tools and equipment that produce harmful noise. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from surrounding properties. Design Builder shall perform all work in compliance with all applicable rules, regulations, laws, and local ordinances including, without limitation, all noise and light limitations.
- 4.3. Storm Water Control: Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.
- 4.4. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees (if identified for protection) to protect vegetation from construction damage. Protect tree root systems from damage, flooding, and erosion.
- 4.5. Pest Control: Before deep foundation work has been completed, retain a local exterminator or pest-control company to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests. Engage this pest-control service to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Obtain two-year extended

warranty for District. Perform control operations lawfully, using environmentally safe materials approved by the District.

- 4.6. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. The Design Builder is required to secure all areas of work and set security alarms when leaving the site.
- 4.7. Barricades, Warning Signs, and Lights: Comply as required with local authorities and State safety ordinances, standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazards. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- 4.8. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 4.8.1. Where heating or cooling is needed and permanent enclosure is not complete, provide insulated temporary enclosures. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
 - 4.8.2. Vertical Openings: Close openings of 25 sq. ft. (2.3 sq. m) or less with plywood or similar materials.
 - 4.8.3. Horizontal Openings: Close openings in floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.
 - 4.8.4. Install tarpaulins security using fire retardant treated wood framing and other materials.
- 4.9. Temporary Partitions: Erect and maintain effective dustproof partitions and temporary enclosures to prevent dust and dirt migration into areas of completed construction and to separate areas from fumes, odors and noise. Construction of temporary barriers shall take into consideration existing hazardous materials present in building finishes.
 - 4.9.1. Construct dustproof partitions of not less than nominal 4-inch (100-mm) studs, 5/8-inch (16-mm) gypsum wallboard with joints taped on occupied side, and 1/2-inch (13-mm) fire-retardant plywood on construction side.
 - 4.9.2. Insulate partitions to provide noise protection to occupied areas.
 - 4.9.3. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.
 - 4.9.4. Protect air-handling equipment.
 - 4.9.5. Weatherstrip openings.
 - 4.9.6. Where the heating, ventilating, and/or air conditioning (HVAC) system and ducting is shared between the construction and completed areas of the Project, either isolate the areas by duct capping or conduct construction operations with ventilation shut down and sealed after hours or weekends.

- 4.10. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
- 4.10.1. Store combustible materials in containers in fire-safe locations.
 - 4.10.2. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for firefighting. Prohibit smoking in hazardous fire-exposure areas.
 - 4.10.3. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
 - 4.10.4. Permanent Fire Protection: At earliest feasible date in each area of Project, complete installation of permanent fire-protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.
 - 4.10.5. Develop and supervise an overall fire-prevention and first-aid fire-protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
 - 4.10.6. Provide hoses for fire protection of sufficient length to reach construction areas. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

5. OPERATION, TERMINATION, AND REMOVAL

- 5.1. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- 5.2. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage caused by freezing temperatures and similar elements.
 - 5.2.1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
 - 5.2.2. Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- 5.3. Temporary Facility Changeover: Except for using permanent fire protection as soon as available, do not change over from using temporary security and protection facilities to permanent facilities without District approval
- 5.4. Termination and Removal: Remove each temporary facility when authorized by the District. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 5.4.1. Materials and facilities that constitute temporary facilities are the property of Design Builder. District reserves right to take possession of Project identification

signs.

- 5.4.2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
- 5.4.3. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements in Division 1 "Closeout Procedures". If LBP was disturbed during renovation the final cleaning shall meet the minimum requirements of 40 CFR Part 745 in addition to Division 1 "Closeout Procedures".

END OF SECTION

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

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

1.1.2 Related Sections include the following:

1.1.2.1 Section 01 42 00 (References) for applicable industry standards for products specified.

1.1.2.2 Section 01 77 00 (Cleaning and Closeout Procedures) for submitting warranties for Contract closeout.

1.2 DEFINITIONS

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

1.2.1.1 Refer to District Standards and Criteria Documents for Sole Source Material or Equipment.

1.2.1.2 Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.

1.2.1.1 New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.

1.2.2 Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Design Builder, as allowed in Section 00 10 00 (Request for Proposals).

1.2.2.1 The following are not considered substitutions:

1.2.2.1.1 Revisions to Contract Documents requested by the District's Representative.

1.2.2.1.2 Specified options of products and construction methods included in Contract Documents.

1.2.2.1.3 The Design Builder's determination of and compliance with governing regulations and orders issued by governing authorities.

1.2.2.2 Design Builder will be held responsible for: (a) all costs and claims arising from any cost or schedule impact resulting from the District's approval of a requested substitution and (b) all costs and claims arising from any cost or schedule impact resulting from any substitution not approved by the District.

1.3 SUBMITTALS

1.3.1 See Section 01 33 00 (Submittal Procedures).

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

1.3.2.1 Coordinate product list with Design Builder's Contract Schedule and the Submittals Schedule.

1.3.2.2 Form: Tabulate information for each product under the following column headings:

1.3.2.2.1 Specification Section number and title.

1.3.2.2.2 Generic name used in the Contract Documents.

1.3.2.2.3 Proprietary name, model number, and similar designations.

1.3.2.2.4 Manufacturer's name and address.

1.3.2.2.5 Supplier's name and address.

1.3.2.2.6 Installer's name and address.

1.3.2.2.7 Projected delivery date or time span of delivery period.

1.3.2.2.8 Identification number on Contract Schedule network.

1.3.2.2.9 Identification of items that require early submittal approval for scheduled delivery date.

1.3.2.3 Product List: Within sixty (60) Days after date of commencement of the Work, submit five (5) physical copies of product list and submit one (1) electronic copy. Include a written explanation for omissions of data and for variations from Contract requirements.

1.3.2.4 District's Action: District will respond in writing to Design Builder within fifteen (15) Days of receipt of each product list. District's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. District's response, or lack of response, does not constitute a waiver of requirement to comply with the Contract Documents.

1.3.3 QUALITY ASSURANCE

1.3.4 Source Limitations: To the fullest extent possible, provide products of the same kind, from a single source.

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

1.3.6 Underwriter's Laboratories, Inc. ("UL") Label: Where laboratory standards have been established and label service is available, materials and equipment shall bear the appropriate UL, Warnock-Hersey, or Factory Mutual label.

1.3.7 Manufacturers' Trademarks and Names: District's Representative reserves the right to review and request the removal or redesign of manufacturers' trade marks and names on items of material and equipment that will be exposed to view in the completed Work. Such removal or redesign shall be completed with no adjustment to the Stipulated Sum.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

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

1.4.2 Delivery and Handling:

1.4.2.1 Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.

1.4.2.2 Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.

1.4.2.3 Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

1.4.2.4 Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

1.4.2.5 Reject delivery of damaged or defective items. Promptly remove damaged or defective products from the Project site and replace with new at no change to the Stipulated Sum.

1.4.3 Storage:

1.4.3.1 Store products to allow for inspection and measurement of quantity or counting of units.

- 1.4.3.2 Store materials in a manner that will not endanger Project structure.
- 1.4.3.3 Store products that are subject to damage by the elements under cover in a weather tight enclosure above ground, with ventilation adequate to prevent condensation.
- 1.4.3.4 Store cementitious products and materials on elevated platforms.
- 1.4.3.5 Store sand, rock, or aggregate materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- 1.4.3.6 Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
- 1.4.3.7 Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
- 1.4.3.8 Protect stored products from damage.
- 1.4.3.9 Periodically inspect stored products to assure that products are maintained under specified conditions and are free from damage and deterioration.
- 1.4.3.10 The use of mechanical or electrical rooms for storage of materials is prohibited.

1.4.4 Imported Materials and Products:

- 1.4.4.1 Imported materials and products require special handling in shipping crates. Document and examine materials at the following points:
 - 1.4.4.1.1 At the origination point prior to crating.
 - 1.4.4.1.2 At the port of embarkation (for damage to crates).
 - 1.4.4.1.3 At the port of entry (for damage to crates).
 - 1.4.4.1.4 Immediately following delivery to the Site.
- 1.4.4.2 If crates show signs of damage, open them and inspect materials and products.
- 1.4.4.3 Reject damaged or defective products or materials, and replace promptly.
- 1.4.4.4 Provide detailed Bill of Goods at each point listed above, indicating quantity and condition of each item. At port locations, Bill of Goods may be accepted unless damage is observed.

1.5 PRODUCT WARRANTIES

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

1.5.1.1 Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to District.

1.5.1.2 Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for District.

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

1.5.2.1 Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.

1.5.2.2 Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.

1.5.3 Submittal Time: Comply with requirements in Section 01 77 00 (Closeout Procedures).

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

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

2.1.1.1 Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.

2.1.1.2 Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.

2.1.1.3 District reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

2.1.1.4 Where products are accompanied by the term "as selected," District will make selection.

2.1.1.5 Where products are accompanied by the term "match sample," sample to be matched is District's.

- 2.1.1.6 Descriptive, performance, and reference standard requirements in the Specifications establish “salient characteristics” of products.
- 2.1.1.7 Or Equal: Where products are specified by manufacturer’s name and accompanied by the term “or equal,” comply with provisions in Article **Error! Reference source not found.**, Product Substitutions, to obtain approval for use of an unnamed product.

2.1.2 Product Selection Procedures:

- 2.1.2.1 Product: Where Specifications name a single product and manufacturer, and indicate “no known equal,” provide the named product that complies with requirements.
- 2.1.2.2 Manufacturer/Source: Where Specifications name a single manufacturer or source, and indicates “no known equal,” provide a product by the named manufacturer or source that complies with requirements.
- 2.1.2.3 Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
- 2.1.2.4 Manufacturers: Where Specifications include a list of manufacturers’ names, provide a product by one of the manufacturers listed that complies with requirements.
- 2.1.2.5 Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches District’s sample. District’s decision on whether a proposed product matches will be final.
 - 2.1.2.5.1 When approval of a color, pattern or texture sample match by the District is required, provide the best match that complies with the specification and also provide the two nearest in the selection range to either direction from the same manufacturer/supplier. Application examples are:
 - 2.1.2.5.1.1 *Color* – shall have two color hues or shades darker and two color hues or shades lighter. Total of five selections available.
 - 2.1.2.5.1.2 *Pattern* – shall have two patterns that are less dense (or smaller) and two patterns that are more dense (or larger). Total of five selections available.
 - 2.1.2.5.1.3 *Texture* – shall have two textures that are less rough (or smaller) and two patterns that are more rough (or larger). Total of five selections available.
 - 2.1.2.5.2 If no product available within specified category matches and complies with other specified requirements, comply

with provisions in Article **Error! Reference source not found.**
(Product Substitutions) below for proposal of product.

- 2.1.2.6 Visual Selection Specification: Where Specifications include the phrase “as selected from manufacturer’s colors, patterns, textures” or a similar phrase, select a product that complies with other specified requirements.
 - 2.1.2.6.1 Standard Range: Where Specifications include the phrase “standard range of colors, patterns, textures” or similar phrase, District will select color, pattern, density, or texture from manufacturer’s product line that does not include premium items.
 - 2.1.2.6.2 Full Range: Where Specifications include the phrase “full range of colors, patterns, textures” or similar phrase, District will select color, pattern, density, or texture from manufacturer’s product line that includes both standard and premium items.

PART 3 - EXECUTION (Not Used)

END OF SECTION

EXECUTION AND CLOSEOUT PROCEDURES

PART 1 - GENERAL

1. SUMMARY

1.1. Section Includes: Administrative and procedural requirements for contract closeout, including but not limited to, the following:

- 1.1.1. Substantial Completion requirements.
- 1.1.2. Inspection (Punch List) procedures.
- 1.1.3. Final Completion requirements
- 1.1.4. Project Record Documents.
- 1.1.5. Operations and Maintenance Manuals
- 1.1.6. Spare parts/materials.
- 1.1.7. Warranties (Minimum 2 years unless manufacturer's warranty is greater.)
- 1.1.8. Two-year maintenance and service agreements.
- 1.1.9. Demonstration and Training of District's personnel.
- 1.1.10. Final Cleaning.

1.2. Related Sections:

- 1.2.1. Section 00 50 00 (Agreement) for requirements for Project Completion and Final Payment.
- 1.2.2. The Conditions for the Contract and the other sections of Division 1 apply to this section as fully as if repeated herein.
- 1.2.3. Divisions 2 through 33 Sections for specific closeout and special cleaning requirements for products of those sections.

2. SUBSTANTIAL COMPLETION

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

- 2.1.1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list and reasons why the Work is not complete.
- 2.1.2. For the final phase of the Project, advise the District of pending insurance changeover requirements.
- 2.1.3. For the final phase of the Project, submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.

- 2.1.4. Obtain and submit releases permitting District unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
- 2.1.5. For the final phase of the Project, prepare, sign, and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs (and photographic negatives or a disk with all digital files), damage or settlement surveys, property surveys, and similar final record information. Deliver operation and maintenance manuals and Project Record Documents at least two weeks (14 days) before training and request for Substantial Completion Inspection.
- 2.1.6. For the final phase of the Project, deliver all tools, spare parts, extra materials, and similar items that are a permanent part of the installed equipment, to the District. Label with manufacturer's name and model number where applicable.
- 2.1.7. All plumbing and mechanical equipment shall operate quietly and free from vibration. Properly adjust, repair, balance, or replace equipment producing objectionable noise or vibration. Provide additional brackets, bracing, or other methods to prevent objectionable noise or vibration. All systems shall operate without humming, surging, or rapid cycling.
- 2.1.8. Complete startup testing of systems.
- 2.1.9. Complete training of the District's staff per Part 3 of this section. Submit training logs and attendance sheets.
- 2.1.10. Submit test/adjust/balance records.
- 2.1.11. Properly mount and post all operating instructions.
- 2.1.12. Make final changeover of permanent locks and deliver properly marked keys to District. Advise District's personnel of changeover in security provisions.
- 2.1.13. For the final phase of the Project and as approved by the District, terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
- 2.1.14. Advise District of changeover in heat and other utilities.
- 2.1.15. Submit changeover information related to District's occupancy, use, operation, and maintenance.
- 2.1.16. Complete final cleaning requirements per Paragraph 3.2, Final Cleaning.
- 2.1.17. Touch up and otherwise repair and restore marred and exposed finishes to eliminate visual defects.
- 2.1.18. Deliver evidence of compliance with any and all requirements of all applicable governmental regulatory agencies at all levels, including District, City, State (DSA and Emergency Planning Department) and Federal government and agencies.
- 2.1.19. Submit certificates of inspection for vertical transportation systems, and life safety systems.

2.1.20. Submit copies of the fire alarm certification.

2.1.21. Certificates: For the final phase of the Project, submit manufacturer's representative's certification that work has been installed in accordance with manufacturer's recommendations.

2.1.22. Complete all Testing requirements per Section 01 88 20 (Miscellaneous Hazardous Materials Requirements).

2.2. Inspection: After all requirements of the Substantial Completion preliminary procedures have been completed, submit a written request for inspection for Substantial Completion. Give notice at least 7 working days in advance from the time the final inspection is to be performed. District will either proceed with inspection or notify Design Builder of unfulfilled requirements. Refer to Paragraph 1.4, List of Incomplete Items (Punch List).

2.2.1. Initial Inspection (Punch List): The Design Builder or his principal superintendent, authorized to act on behalf of the Design Builder, is to assemble a list of unfinished work items and assign costs to each item.

2.2.2. Final Inspection (Punch List): The Design Builder or his principal superintendent, authorized to act on behalf of the Design Builder, shall accompany the District on the final inspection tour. Principal Subcontractors and Consultants that the District may request to be present will also attend. The District will verify the Design Builder's Initial Inspection and recommend any changes.

2.2.3. If the Work has been substantially completed in accordance with the Contract Documents, and only minor corrective measures are required, the District will conditionally accept the Work and will file for the Notice of Completion based upon the Design Builder's assurance that the corrective measures will be completed within the shortest practicable time period.

2.2.4. If the Work has not been substantially completed in accordance with the Contract Documents, and several corrective measures are still required, the District will not accept the Work or record the Notice of Completion. The Design Builder shall complete or correct the items listed on the Initial Inspection and the Final Inspection punch list and then call for a re-inspection, following the procedure outlined above.

2.2.5. Re-inspection: Request for re-inspection when the Work identified in previous inspections as incomplete is completed or corrected. More than one (1) request of the District to make a re-inspection shall be considered an additional service of District, District's Representative, and/or Inspector of Record, and all subsequent costs will be deducted from the Design Builders final payment.

3. FINAL COMPLETION

3.1. Preliminary Procedures: Before determining the date of Final Completion, complete the following:

3.1.1. Submit a final Application for Payment according to Section 00 50 00 (Agreement).

3.1.2. Submit affidavit of payment of debts and claims.

- 3.1.3. Submit affidavit of release of liens.
- 3.1.4. Submit consent of Design Builder's surety to final payment,
- 3.1.5. Submit complete payroll certifications.
- 3.1.6. Submit certified copy of District's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by the District's representative. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
- 3.1.7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- 3.1.8. Submit pest-control final inspection report and warranty.
- 3.1.9. Submit all guarantees and warranties. Refer to Paragraph 1.7, Warranties.
- 3.1.10. Submit all Material Safety Data sheets.
- 3.1.11. Submit copies of all Verified Reports.
- 3.1.12. Submit a list of all Subcontractors of every tier providing services and/or materials in connection with the Project, in a formal, adequately bound, cataloged form, which shall include the names, addresses, telephone numbers and fax numbers of such persons, and shall further include notices as to where pertinent persons can and may be reached for emergency service, inclusive of nights, weekends and holidays.

4. DESIGN BUILDER'S LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- 4.1. Preparation: Submit ten copies of each list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by the Design Builder that are outside the limits of construction.
 - 4.1.1. The list is to be in Microsoft Excel, electronic format. The format is available from the District for the Design Builder's use.
 - 4.1.2. Organize the list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor in each building in the project. Each line item is to have a unique number associated with the room number (do not re-number items once they have been assigned a number).
 - 4.1.3. Organize items by space. Each outstanding item is to be based on the room number where the problem exists and individually numbered.
 - 4.1.4. Include the following information at the top of each page:
 - 4.1.4.1.1. Project name.
 - 4.1.4.1.2. Date.
 - 4.1.4.1.3. Name of District's Representative.
 - 4.1.4.1.4. Name of Inspector or Record.

4.1.4.1.5. Name of Design Builder.

4.1.4.1.6. Page Number.

5. PROJECT RECORD DOCUMENTS

5.1. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for the District's representative and Inspector of Record's reference during normal working hours. Submit Record Documents as described in this Section 00 50 00 (Agreement) and 01 11 20 (Design Services and Deliverables).

5.2. Record Drawings: Maintain and submit one signed set of prints of Contract Drawings and Shop Drawings.

5.2.1. Mark Record drawings to show the actual installation where installation varies from that shown originally as well as construction added to the Contract that is not indicated on the Contract Drawings. Require individual or entity who obtained record data, where individual or entity is installer, Subcontractor, or similar entity, to prepare the marked-up Record Prints.

5.2.1.1. Keep Record Drawings current and legible, and available, on site, for inspection at all times by the Inspector of Record, and District's representative.

5.2.1.2. Give particular attention to information on concealed elements that cannot be readily identified and recorded later. Concealed shall mean construction installed underground or in an area which cannot be readily inspected by use of access panels, inspection plates or other removable features.

5.2.1.3. Accurately record information in an understandable drawing technique.

5.2.1.4. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.

5.2.1.5. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings.

5.2.2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.

5.2.3. Mark important additional information that was either shown schematically or omitted from original drawings.

5.2.4. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, RFI numbers, and similar identification where applicable.

5.2.5. Identify, sign and date each Record Drawing: include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into

manageable sets; bind each set with durable cover sheets. Include identification on cover sheets.

5.3. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications. Mark copy to indicate the actual product installation.

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

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

5.3.3. Note related Change orders, Record Drawings, where applicable.

5.4. Record Product Data: Submit one copy of each Product Data submittal. Mark one set to indicate the actual product installation where installation varies substantially from that indicated in Product Data.

5.4.1. Include Material Safety Data Sheets.

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

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

5.4.4. Note related Change Orders, Record Drawings, where applicable.

6. OPERATIONS AND MAINTENANCE MANUALS

6.1. Assemble 3 copies of complete sets of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Section and as follows:

6.1.1. Manufacturer's Manuals: Submit complete installation, operation, maintenance and service manuals, and printed instructions and parts lists for all materials and equipment where such printed matter is regularly available from the manufacturer. This includes, but is not limited to such service manuals as may be sold by the manufacturer covering the operation and maintenance of his items, and complete replacement parts lists sufficiently detailed for parts replacement ordering to manufacturer. Piping diagrams and wiring diagrams are to be included. Bound publications need not be assembled in binders.

6.1.1.1. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title

“OPERATION AND MAINTENANCE MANUAL,” Project name, and subject matter of contents.

- 6.1.2. Equipment Nameplate Data: Submit a typewritten list of all mechanical and electrical equipment showing exact equipment nameplate data. Identify equipment by means of names, symbols, and numbers used in the contract documents
- 6.1.3. System Operating Instructions: Submit typewritten instructions covering operation of the entire system as installed (not duplicating manufacturer’s instructions for operating individual components). Include schematic flow and control diagrams as appropriate and show or list system valves, control elements, and equipment components using identification symbols and numbers, including operating standards. List rooms, area of equipment served, and show proper settings for valves, controls, and switches. Incorporate emergency instructions and procedures, startup and shutdown procedures, seasonal procedures and weekend operations.
- 6.1.4. System Maintenance Instructions: Submit typewritten instructions covering routine maintenance of system. List each item of equipment requiring inspection, lubrication, or service and briefly describe such maintenance, including types of lubricants and frequency of service. It is not intended that these instructions duplicate manufacturer’s detailed instructions. Give name, address and phone number of nearest firm authorized or qualified to service equipment or provide parts
- 6.1.5. Wall Mounted Data: Frame one set of typewritten system instructions and diagrams as required under Paragraphs .3 and .4 above, covered with glass and mounted in locations as directed by the District. This set of instructions is in addition to the required herein.

7. WARRANTIES & GUARANTEES

- 7.1. See Section 00 45 00 for Guaranty form and for warranty form. All submitted Warranty and Guaranty forms will be on the Peralta Community College District’s Warranty and Guaranty format. Original to be provided.
- 7.2. Warranties and guarantees for fire/life safety work such as fire alarm, sprinkler, emergency and exit lighting, and exiting pathway systems such as: Elevator, wheelchair lifts, etc. shall have specific language “in the event of our failure to respond and act within 3 hours after being notified in writing by the District, we authorize the District to proceed to have the defects repaired or replaced and made whole, together with any other adjacent work which may be displaced or damaged by so doing, at our expense, and we will honor and pay the costs and charges therefore upon demand. This work shall not invalidate any and all warranties and guarantees.”
- 7.3. Submittal Time: Submit duplicate written warranties and guarantees on request of District for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- 7.4. Partial Occupancy: Submit properly executed warranties and guarantees within 15 days of completion of designated portions of the Work that are completed and occupied or used by District during construction period by separate agreement with Design Builder.

- 7.5. Organize warranty and guarantee documents into an orderly sequence based on the table of contents of the Project Manual.
 - 7.5.1. Bind warranties and guarantees in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to receive 8-1/2-by-11-inch (115-by-280-mm) paper.
 - 7.5.2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty and guarantee. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
- 7.6. Provide additional copies of each warranty and guarantee to include in operation and maintenance manuals.

PART 2 – PRODUCTS

1. MATERIALS

- 1.1. Cleaning Agents: Only use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces. All cleaners shall be specifically designed for the purpose intended, safe for use on the intended object to be cleaned, and safe to pupils, staff and the public. Refer to the District's standards for cleaning products approved by the District.
- 1.2. Commercial floor wax stripper, Easterday Ammo-Strip or approved equal, capable of removing metal interlock water emulsion floor finish.
- 1.3. Floor finish shall be minimum 20% solids content high-gloss wax. Acceptable products:
 - 1.3.1. Spartan Sunny-Side
 - 1.3.2. Spotlight (Brulin Company-800-776-7149)
 - 1.3.3. Champion Once-A-Year
- 1.4. Graffiti Remover (non-toxic): SO-SAFE BY DX, Inc., or approved equal.
- 1.5. Germicidal Cleaner must be E.P.A. registered germicidal cleaner and deodorizer appropriate for use in public school buildings. DB team should use PCCD approved COVID-19 Sanitizer.

PART 3 – EXECUTION

1. DEMONSTRATION AND TRAINING

- 1.1.1. Instruction: After Work under this contract is completed, tested, and before acceptance, and not less than 14 days after submittal of the operation and maintenance data required in Paragraph 1.6, Operations and Maintenance Manuals, operate all systems for a period of three 8-hour days during which time keep on the project competent personnel familiar with the items installed whose full-time assignment will be to instruct the District's maintenance personnel in the operation and maintenance of the equipment and systems.
- 1.1.2. Provide instructors experienced in operation and maintenance procedures.
- 1.1.3. Provide instruction at mutually agreed-upon times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.
- 1.1.4. Schedule training with District, through District's representative, with at least seven days notice.
- 1.1.5. Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.
- 1.1.6. Do not conduct this instruction period before completion of piping and equipment labeling.
- 1.2. Provide an instruction period sufficient to cover the training required. This instruction period shall be in addition and subsequent to any period of operation, test and adjustment called for elsewhere in this specification.
- 1.3. Program Structure: develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections. For each training module, develop a learning objective and teaching outline. Include instruction of the following:
 - 1.3.1. System design and operational philosophy.
 - 1.3.2. Review of documentation.
 - 1.3.3. Operations.
 - 1.3.4. Adjustments.
 - 1.3.5. Troubleshooting.
 - 1.3.6. Maintenance.
 - 1.3.7. Repair.

2. FINAL AND END-OF-PHASE CLEANING

- 2.1. General: Provide final cleaning at the completion of each phase of the work and final project completion. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal, State and local environmental and antipollution regulations. If LBP was disturbed during renovation the final cleaning shall meet the minimum requirements of 40 CFR Part 745.

2.2. Cleaning: Employ professional cleaning service for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

2.2.1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for any phase of Project:

2.2.1.1. Clean Project site, yard, and grounds in areas disturbed by construction activities including landscape development areas, of rubbish, waste material, litter, and other foreign substances.

2.2.1.2. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.

2.2.1.3. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.

2.2.1.4. Remove tools, construction equipment, machinery, and surplus material from Project site.

2.2.1.5. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

2.2.1.6. Horizontal surfaces: All horizontal surfaces must be dusted and/or washed until free of dust and grime.

2.2.1.7. Furnishings and equipment:

2.2.1.7.1. Remove all gum and sticky substances from all surfaces. Wash all furniture and equipment with a neutral cleaner. Use specialized cleaner appropriate for wood and/or excessively dirty surfaces.

2.2.1.7.2. Dust all machinery and equipment located in any shop area.

2.2.1.7.3. Clean all chalkboards and chalk rails by washing with water and/or chalkboard cleaner. Re-chalk chalkboards after completing cleaning process.

2.2.1.7.4. Clean exterior of all closed lockers and interior of open ones.

2.2.1.7.5. Graffiti must be removed from all furnishings and equipment.

2.2.1.8. Walls: Wash all wall surfaces with detergent and water. Remove all graffiti. All restroom walls should be washed with a disinfectant cleaner.

2.2.1.9. Doors: Wash all doors, frames and hardware.

2.2.1.10. Floors:

2.2.1.10.1. Resilient Floors (except linoleum flooring) – Clean and refinish flooring, using appropriate procedures and finishes/sealers. Strip

existing wax from all existing resilient flooring (using appropriate safety measures as recommended by the E.P.A. for any tile containing asbestos) and re-wax as follows:

2.2.1.10.1.1. Classrooms, offices and other rooms - three coats of wax.

2.2.1.10.1.2. Corridors - five coats of wax.

2.2.1.10.1.2.1.1. Newly installed resilient floors should have all surface mastic removed by Design Builder. New floors should be allowed to set for time recommended by manufacturer of mastic. These floors should be scrubbed with detergent -- not stripped. Seal as recommended by flooring manufacturer and re-wax as indicated above.

2.2.1.10.2. Linoleum Floors - Clean and refinish flooring, using appropriate procedures and finishes/sealers in accordance with manufacturers recommendations and finish as follows:

2.2.1.10.2.1.1.1. Newly installed linoleum floors should be allowed to set for time recommended by manufacturer of mastic. Existing and new floors should be scrubbed with a neutral pH (7-8.5) detergent/cleaner – do not strip factory finish. Apply the cleaning solution with a mop and bucket; allow the solution to remain on the floor, and then scrub with a rotary electric scrubber or automatic scrubber with a non-abrasive scrubbing pad. Do not over-saturate the floor. Rinse the entire floor surface with clean, cool water and allow the floor to dry thoroughly before allowing traffic. Apply two (2) coats of “Linobase” sealer, manufactured by Johnson Diversey or as recommended by manufacturer, followed by three (3) coats of “Carefree” finish, manufactured by Johnson Diversey or as recommended by the manufacturer, per manufacturer’s instructions.

2.2.1.10.3. Concrete Floors - Scrub using water and detergent.

2.2.1.10.4. Ceramic Floors - Scrub using water and detergent.

2.2.1.10.5. Clean, screen and apply gym seal per manufacturer’s recommendation. All gym seal to be approved by Custodial Services Department.

2.2.1.10.6. Carpeted Floors - Vacuum all carpets and clean by hot water extraction.

2.2.1.10.7. Other Floors - Marble, terrazzo and rubber floors should be cleaned and refinished using appropriate procedures and finishes/sealers.

2.2.1.11. STAIRS: All stairs to be scrubbed with detergent including walls, handrails and ledges. Finish not to be applied to stairs unless necessary and approved by the District (Custodial Services Department).

- 2.2.1.12. RESTROOMS AND LOCKER ROOMS: Thoroughly clean and disinfect all surfaces and fixtures. Remove all foreign objects from walls/ceilings and eliminate all graffiti. Specifications provided above for fixtures, walls and floors are applicable.
 - 2.2.1.13. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - 2.2.1.14. Sweep concrete floors broom clean in unoccupied spaces.
 - 2.2.1.15. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
 - 2.2.1.16. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - 2.2.1.17. Remove labels that are not permanent.
 - 2.2.1.18. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 2.2.1.18.1. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - 2.2.1.19. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - 2.2.1.20. Replace parts subject to unusual operating conditions.
 - 2.2.1.21. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - 2.2.1.22. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - 2.2.1.23. Clean ducts, blowers, and coils if units were operated without filters during construction.
 - 2.2.1.24. Clean all new and existing light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
 - 2.2.1.25. Leave Project clean and ready for occupancy.
- 2.3. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid the Project of rodents, insects, and other pests. Prepare a report.
- 2.4. Final Inspection: Any surface still exhibiting dirt, graffiti or dust shall be re-cleaned/re-stripped/refinished until free of dirt, graffiti or dust.

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

END OF SECTION

FIELD ENGINEERING

PART 1 - GENERAL

1.1 SUMMARY

1.1.1 This section describes field engineering services to be performed by Design Builder and by District, and procedures to accomplish these services.

1.1.2 Related Documents.

1.1.2.1 Document 00 33 50 Existing Site Conditions.

1.1.3 Related Sections.

1.1.3.1 Section 01 11 13 (Work Covered by Contract Documents).

1.1.3.2 Section 01 11 20 (Design Services and Deliverables).

1.1.3.3 Section 01 31 91 (Project Meetings).

1.2 RESPONSIBILITIES

1.2.1 Design Builder shall provide field engineering services; establish grades, lines, and levels for Work by use of recognized engineering survey practices.

1.2.2 Design Builder shall employ California licensed civil engineer or land surveyor for horizontal and vertical control.

1.2.3 District will provide reference points for horizontal and vertical control and shall provide starting points for the Work.

1.3 PROCEDURES

1.3.1 Design Builder shall request assistance from District two (2) Business Days prior to date assistance is required.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION (Not used)

END OF SECTION

SECTION 01 73 00

EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

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

- 1.1.1.1 Construction layout.
- 1.1.1.2 Field engineering and surveying.
- 1.1.1.3 General installation of products.
- 1.1.1.4 Coordination of District-installed products.
- 1.1.1.5 Progress cleaning.
- 1.1.1.6 Starting and adjusting.
- 1.1.1.7 Protection of installed construction.
- 1.1.1.8 Correction of the Work.

1.1.2 Related Sections include the following:

- 1.1.2.1 Section 00 33 50 (Existing Site Conditions).
- 1.1.2.2 Section 01 11 13 (Work Covered by Contract Documents).
- 1.1.2.3 Section 01 14 00 (Work Restrictions) regarding measures for noise, dust and infection control.
- 1.1.2.4 Section 01 31 00 (Project Management and Coordination) for procedures for coordinating field engineering with other construction activities.
- 1.1.2.5 Section 01 31 19 (Project Meetings).
- 1.1.2.6 Section 01 33 00 (Submittal Procedures) for submitting surveys.
- 1.1.2.7 Section 01 73 29 (Cutting and Patching) for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.
- 1.1.2.8 Section 01 77 00 (Cleaning and Closeout Procedures) for submitting final property survey with Project Record Documents, recording of District-accepted deviations from indicated lines and levels, and final cleaning.

1.2 SUBMITTALS

- 1.2.1 Qualification Data: For land surveyor or professional engineer.
- 1.2.2 Certificates: Submit certificate signed by land surveyor or professional engineer certifying that location and elevation of improvements comply with requirements.
- 1.2.3 Certified Surveys: Submit three copies signed by land surveyor or professional engineer and one AutoCad electronic file of survey complying with District CAD Standards on CD-R.
- 1.2.4 Final Property Survey: Submit three copies showing the Work performed and record survey data and one AutoCad electronic file of survey complying with District CAD Standards on CD-R.
- 1.2.5 Contingency Plan: Submit six copies within sixty (60) Days of Notice to Proceed for emergency plan(s) should an existing utility be damaged.

1.3 QUALITY ASSURANCE

- 1.3.1 Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in California and who is experienced in providing land-surveying services of the kind indicated.
- 1.3.2 Installer Qualifications.
 - 1.3.2.1 Experienced Installers: Installers shall have a minimum of five (5) years successful experience installing items similar to those required for Project, except for individuals in training under the direct supervision of an experienced installer.
- 1.3.3 If cleaning and protection is not performed to the satisfaction of the District's Representative, the District reserves the right to have cleaning performed by others at the Design Builder's expense.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- 3.1.1 Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and locations of underground utilities and other construction affecting the Work.
 - 3.1.1.1 Before construction, verify the locations and invert elevations at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 - 3.1.1.2 Furnish location data for work related to Project that must be performed by public utilities serving Project site.

- 3.1.1.3 Locate all known existing utilities and shut-off devices before proceeding with construction operations that may cause damage to such installations. Existing utilities shall be kept in service where possible and damage to them shall be repaired with no adjustment to the Stipulated Sum.
- 3.1.1.4 If any other structures or utilities are encountered, request District's Representative to provide direction on how to proceed with the Work.
- 3.1.1.5 If any structure or utility is damaged, take appropriate action to ensure the safety of persons and property.
- 3.1.1.6 Submit a contingency plan for emergency repair of all utilities to District's Representative for approval prior to commencing Work.
- 3.1.2 Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 3.1.2.1 Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - 3.1.2.1.1 Description of the Work.
 - 3.1.2.1.2 List of detrimental conditions, including substrates.
 - 3.1.2.1.3 List of unacceptable installation tolerances.
 - 3.1.2.1.4 Recommended corrections.
 - 3.1.2.2 Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3.1.2.3 Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 3.1.2.4 Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 3.1.2.5 Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 MANUFACTURERS' INSTRUCTIONS

- 3.2.1 Manufacturer's Recommendations: When work is specified to comply with manufacturers' recommendations or instructions, distribute copies to persons involved, and maintain one set in field office.

- 3.2.1.1 Conform with requirements specified in Section 01 33 00 (Submittal Procedures) for submittal of recommendations or instructions to District; submit to District only where specified or where specifically requested.
 - 3.2.2 Perform work in accordance with details of recommendations and instructions and specified requirements.
 - 3.2.2.1 Should a conflict exist between Specifications and recommendations or instructions consult with District.
 - 3.2.3 Where manufacturer's information notes special recommendations in addition to installation instructions, comply with both recommendations and instructions.
- 3.3 PREPARATION
- 3.3.1 Existing Utility Information: Furnish public utilities with information that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with District's Representative.
 - 3.3.2 Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 3.3.2.1 Where portions of Work are to fit to other construction, verify dimensions of other construction by field measurements before fabrication; allow for cutting and patching to avoid delaying Work.
 - 3.3.3 Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
 - 3.3.4 Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to District's Representative. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents. Submit requests on Form, "Request for Information."
- 3.4 CONSTRUCTION LAYOUT
- 3.4.1 Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify District's Representative promptly.
 - 3.4.2 General: Engage a land surveyor or professional engineer to lay out the Work using accepted surveying practices.
 - 3.4.2.1 Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.

- 3.4.2.2 Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 3.4.2.3 Inform installers of lines and levels to which they must comply.
 - 3.4.2.4 Check the location, level, and plumb of every major element as the Work progresses.
 - 3.4.2.5 Notify District's Representative when deviations from required lines and levels exceed allowable tolerances.
 - 3.4.2.6 Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
 - 3.4.3 Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
 - 3.4.4 Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
 - 3.4.5 Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by District's Representative.
- 3.5 FIELD ENGINEERING
- 3.5.1 Identification: District will provide reference points for horizontal and vertical control and shall provide starting points for the Work.
 - 3.5.2 Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 3.5.2.1 Do not change or relocate existing benchmarks or control points without prior written approval of District's Representative. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to District's Representative before proceeding.
 - 3.5.2.2 Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
 - 3.5.3 Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 3.5.3.1 Record benchmark locations, with horizontal and vertical data, on Project Record Documents.

- 3.5.3.2 Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
- 3.5.3.3 Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- 3.5.4 Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.
- 3.5.5 Final Property Survey: Prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by land surveyor or professional engineer, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.
 - 3.5.5.1 Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a site corner to a legal point.
 - 3.5.5.2 At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey."

3.6 INSTALLATION

- 3.6.1 Pre-Installation Meetings: Installers and suppliers are to attend pre-installation meetings scheduled by Design Builder.
- 3.6.2 General: Locate the Work and components of the Work accurately, in correct alignment and elevation.
 - 3.6.2.1 Make vertical work plumb and make horizontal work level.
 - 3.6.2.2 Install components to maximize space available for maintenance and ease of removal for replacement.
 - 3.6.2.3 Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 - 3.6.2.4 Doors and access panels shall be kept clear.
 - 3.6.2.5 Before beginning any installation, make provisions to avoid interference.
 - 3.6.2.6 Relocate installed work that does not provide adequate accessibility.
 - 3.6.2.7 Maintain minimum headroom clearance of eight (8) feet in spaces without a suspended ceiling.
 - 3.6.2.8 Do not obstruct spaces and installations that are required to be clear by California Building Code requirements.

- 3.6.3 Precedence of Installation Requirements:
- 3.6.3.1 Descriptive specification.
 - 3.6.3.2 Product listing, classification or certification.
 - 3.6.3.3 Manufacturer's installation instructions.
 - 3.6.3.4 Trade association or referenced standards.
 - 3.6.3.5 Most common trade practice.
- 3.6.4 Comply with manufacturer's written instructions and recommendations for installing products in applications indicated unless more explicit or stringent requirements are contained in Contract Documents.
- 3.6.5 Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- 3.6.6 Allow for building movement including thermal expansion and contraction.
- 3.6.7 Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- 3.6.8 Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- 3.6.8.1 Maximum noise level for trenchers, graders, and trucks shall not exceed ninety (90) dBA at fifty (50) feet as measured under the noisiest operating conditions. For other equipment, noise levels shall not exceed eighty-five (85) dBA at fifty (50) feet.
 - 3.6.8.2 Jackhammers shall be equipped with exhaust mufflers and steel muffing sleeves. Air compressors should be of a quiet type such as a "whisperized" compressor.
 - 3.6.8.3 Machines and equipment shall not be left idling.
 - 3.6.8.4 Where commercially feasible, electric power shall be used in lieu of internal combustion engine power wherever possible.
 - 3.6.8.5 Schedule noisy operations so as to minimize their duration at any given location
 - 3.6.8.6 Equipment shall be properly maintained to reduce noise from excessive vibration, faulty mufflers, or other sources.
 - 3.6.8.7 Provide noise barriers to comply with above criteria.
 - 3.6.8.8 Refer to Section 01 14 00 (Work Restrictions), for additional noise control requirements.

- 3.6.9 Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- 3.6.10 Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 3.6.10.1 Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application and as required by applicable Code requirements for accessibility. Refer questionable mounting height decisions to the District's Representative for final decision.
 - 3.6.10.2 Allow for building movement, including thermal expansion and contraction.
 - 3.6.10.3 Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
 - 3.6.10.4 Comply with the California Building Code requirements for earthquake Seismic Zone 4.
- 3.6.11 Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, produce sketch to arrange joints for the best visual effect and submit to the District's Representative for review. Fit exposed connections together to form hairline joints.
- 3.6.12 Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.
- 3.6.13 Isolate each part of the completed construction from incompatible material to prevent deterioration.

3.7 DISTRICT-INSTALLED PRODUCTS

- 3.7.1 Site Access: Provide access to Project Site for District's construction forces.
- 3.7.2 Coordination: Coordinate construction and operations of the Work with work performed by District's construction forces.
 - 3.7.2.1 Contract Schedule: Inform District of Design Builder's preferred contract Schedule for District's portion of the Work. Adjust Contract Schedule based on a mutually agreeable timetable. Notify District if changes to schedule are required due to differences in actual construction progress.
 - 3.7.2.2 Preinstallation Conferences: Include District's construction forces at preinstallation conferences covering portions of the Work that are to

receive District's work. Attend preinstallation conferences conducted by District's construction forces if portions of the Work depend on District's construction.

3.8 PROGRESS CLEANING

- 3.8.1 General: Clean Project site and work areas at frequent intervals, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully. Comply with the requirements of Section 01 77 00 (Cleaning and Closeout Procedures).
- 3.8.1.1 Comply with requirements in CFC Article 87 for removal of combustible waste materials and debris.
- 3.8.1.2 Do not hold materials more than seven (7) days during normal weather or three (3) Days if the temperature is expected to rise above eighty degrees Fahrenheit (80°F).
- 3.8.1.3 Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- 3.8.2 Site: Maintain Project site free of waste materials and debris.
- 3.8.3 Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
- 3.8.3.1 Remove liquid spills promptly.
- 3.8.3.2 Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate. Refer to Section 01140 (Work Restrictions) regarding dust and infection control requirements.
- 3.8.4 Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- 3.8.5 Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- 3.8.6 Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- 3.8.7 Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

- 3.8.8 During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- 3.8.9 Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- 3.8.10 Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
 - 3.8.10.1 Excessive static or dynamic loading.
 - 3.8.10.2 Excessive internal or external pressures.
 - 3.8.10.3 Excessively high or low temperatures.
 - 3.8.10.4 Thermal shock.
 - 3.8.10.5 Excessively high or low humidity.
 - 3.8.10.6 Air contamination or pollution.
 - 3.8.10.7 Water or ice.
 - 3.8.10.8 Solvents.
 - 3.8.10.9 Chemicals.
 - 3.8.10.10 Light.
 - 3.8.10.11 Puncture.
 - 3.8.10.12 Abrasion.
 - 3.8.10.13 Heavy traffic.
 - 3.8.10.14 Soiling, staining and corrosion.
 - 3.8.10.15 Bacteria.
 - 3.8.10.16 Rodent and insect infestation.
 - 3.8.10.17 Combustion.
 - 3.8.10.18 Electrical current.
 - 3.8.10.19 High speed operation.
 - 3.8.10.20 Improper lubrication.
 - 3.8.10.21 Unusual wear or other misuse.

3.8.10.22 Contact between incompatible materials.

3.8.10.23 Destructive testing.

3.8.10.24 Misalignment.

3.8.10.25 Excessive weathering.

3.8.10.26 Unprotected storage.

3.8.10.27 Improper shipping or handling.

3.8.10.28 Theft.

3.8.10.29 Vandalism.

3.9 STARTING AND ADJUSTING

3.9.1 Following are minimum starting and adjusting requirements. Design Builder is to perform starting and adjusting per manufacturer's recommendations. If more stringent requirements are described in the Contract Documents, the more stringent shall apply

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

3.9.1.2 Adjust operating components for proper operation without binding. Adjust equipment for proper operation.

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

3.9.1.4 Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Section 01 45 00 (Quality Control).

3.10 PROTECTION OF INSTALLED CONSTRUCTION

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

3.10.1.1 Cover products subject to deterioration with impervious cover; provide ventilation to avoid condensation and trapping water.

3.10.1.2 Take care to use protective covering and blocking materials that do not soil, stain, or damage materials being protected.

3.10.1.3 After installation, provide coverings to protect products from damage from traffic and construction operations, remove when no longer needed.

- 3.10.2 Comply with manufacturer's written instructions for temperature and relative humidity.
 - 3.10.3 Protect interior materials from water damage; immediately remove wet materials from site to prevent growth of mold and mildew on site.
 - 3.10.4 Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.
- 3.11 CORRECTION OF THE WORK
- 3.11.1 Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Section 01 73 29 (Cutting and Patching).
 - 3.11.1.1 Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
 - 3.11.2 Restore permanent facilities used during construction to their specified condition.
 - 3.11.3 Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
 - 3.11.4 Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
 - 3.11.5 Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION

CUTTING AND PATCHING

PART 1 - GENERAL

1. RELATED DOCUMENTS

- 1.1. The Contract Documents, including Section 00 50 00 (Agreement) and other Division 0 and 1 Specification Sections, apply to this Section.

2. SUMMARY

- 2.1. This Section includes procedural requirements for cutting and patching.
- 2.2. Related Sections include the following:
- 2.3. Divisions 2 through 33 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
- 2.4. Requirements in this Section apply to mechanical and electrical installations. Refer to Divisions 23 and 26 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

3. DEFINITIONS

- 3.1. Cutting: Removal of existing construction necessary to permit installation or performance of other Work.
- 3.2. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

4. SUBMITTALS

- 4.1. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 4.1.1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 4.1.2. Changes to Existing Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
 - 4.1.3. Products: List products to be used and firms or entities that will perform the Work.
 - 4.1.4. Dates: Indicate when cutting and patching will be performed.

- 4.1.5. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.
- 4.1.6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
- 4.1.7. District's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

5. QUALITY ASSURANCE

- 5.1. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- 5.2. Operational Elements: Do not cut and patch the following including but not limited to operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
 - 5.2.1. Primary operational systems and equipment.
 - 5.2.2. Air or smoke barriers.
 - 5.2.3. Fire-protection systems and security alarm and camera systems.
 - 5.2.4. Control systems, including electrical or pneumatic lines.
 - 5.2.5. Communication systems.
 - 5.2.6. Conveying systems.
 - 5.2.7. Electrical wiring systems. This shall also include all computer/data and fiber optic cabling.
 - 5.2.8. Building maintenance control systems/thermostats.
- 5.3. Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
 - 5.3.1. Water, moisture, or vapor barriers.
 - 5.3.2. Membranes and flashings.
 - 5.3.3. Exterior curtain-wall construction.
 - 5.3.4. Equipment supports.
 - 5.3.5. Piping, ductwork, vessels, and equipment.
 - 5.3.6. Noise- and vibration-control elements and systems.
- 5.4. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in District Representative's

opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

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

6. WARRANTY

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

PART 2 - PRODUCTS

1. MATERIALS

- 1.1. General: Comply with requirements specified in other Sections of these Specifications.
- 1.2. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 1.2.1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials.

PART 3 - EXECUTION

1. EXAMINATION

- 2.1. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1.1.1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 1.1.2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

2. PREPARATION

- 2.1. Temporary Support: Provide temporary support of Work to be cut.
- 2.2. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- 2.3. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

- 2.4. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to avoid interruption of services to occupied areas.

3. PERFORMANCE

- 3.1. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 3.1.1. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- 3.2. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 3.2.1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 3.2.2. Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3.2.3. Concrete and/or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 3.2.4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
 - 3.2.5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 3.2.6. Proceed with patching after construction operations requiring cutting are complete.
- 3.3. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
 - 3.3.1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 - 3.3.2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - 3.3.3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance.

Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

3.3.3.1. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface, from corner to corner and floor to ceiling, containing the patch. Provide additional coats until patch blends with adjacent surfaces.

3.3.4. Ceilings: Patch, repair, or re-hang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.3.5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight condition.

4. PAYMENT FOR COSTS:

4.1. Cost caused by ill-timed or defective Work or Work not conforming to Contract documents, including costs for additional services of the District, its consultants, including but not limited to the Construction Manager, the Architect, the Project Inspector (s), Engineers and Agents, will be paid by Design Builder and/or deducted from the Design Builder's contract by the District.

4.2. District shall only pay for cost of Work if it is part of the original Contract Price or if a change has been made to the contract in compliance with the provisions of the General Conditions. Cost of Work performed upon instructions from the District, other than defective or nonconforming Work, will be paid by District on approval of written Change Order. Design Builder shall provide written cost proposals prior to proceeding with cutting and patching.

END OF SECTION

CLEANING AND CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Administrative and procedural requirements for contract closeout, including but not limited to, the following:
 - 1. Substantial Completion requirements.
 - 2. Inspection (Punch List) procedures.
 - 3. Final Completion requirements
 - 4. Project Record Documents.
 - 5. Operations and Maintenance Manuals
 - 6. Spare parts/materials.
 - 7. Warranties (Minimum 2 years unless manufacturer's warranty is greater.)
 - 8. Two-year maintenance and service agreements.
 - 9. Demonstration and Training of District's personnel.
 - 10. Final Cleaning.
- B. Related Sections:
 - 1. Section 00 50 00 (Agreement) for requirements for Project Completion and Final Payment.
 - 2. The Conditions for the Contract and the other sections of Division 1 apply to this section as fully as if repeated herein.
 - 3. Divisions 2 through 33 Sections for specific closeout and special cleaning requirements for products of those sections.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion by phase, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list and reasons why the Work is not complete.
 - 2. For the final phase of the Project, advise the District of pending insurance changeover requirements.

3. For the final phase of the Project, submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Obtain and submit releases permitting District unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. For the final phase of the Project, prepare, sign, and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs (and photographic negatives or a disk with all digital files), damage or settlement surveys, property surveys, and similar final record information. Deliver operation and maintenance manuals and Project Record Documents at least two weeks (14 days) before training and request for Substantial Completion Inspection.
6. For the final phase of the Project, deliver all tools, spare parts, extra materials, and similar items that are a permanent part of the installed equipment, to the District. Label with manufacturer's name and model number where applicable.
7. All plumbing and mechanical equipment shall operate quietly and free from vibration. Properly adjust, repair, balance, or replace equipment producing objectionable noise or vibration. Provide additional brackets, bracing, or other methods to prevent objectionable noise or vibration. All systems shall operate without humming, surging, or rapid cycling.
8. Complete startup testing of systems.
9. Complete training of the District's staff per Part 3 of this section. Submit training logs and attendance sheets.
10. Submit test/adjust/balance records.
11. Properly mount and post all operating instructions.
12. Make final changeover of permanent locks and deliver properly marked keys to District. Advise District 's personnel of changeover in security provisions.
13. For the final phase of the Project and as approved by the District, terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
14. Advise District of changeover in heat and other utilities.
15. Submit changeover information related to District's occupancy, use, operation, and maintenance.
16. Complete final cleaning requirements per Paragraph 3.2, Final Cleaning.
17. Touch up and otherwise repair and restore marred and exposed finishes to eliminate visual defects.

18. Deliver evidence of compliance with any and all requirements of all applicable governmental regulatory agencies at all levels, including District, City, State (DSA and Emergency Planning Department) and Federal government and agencies.
 19. Submit certificates of inspection for vertical transportation systems, and life safety systems.
 20. Submit copies of the fire alarm certification.
 21. Certificates: For the final phase of the Project, submit manufacturer's representative's certification that work has been installed in accordance with manufacturer's recommendations.
 22. Complete all Testing requirements per Section 01 88 20 (Miscellaneous Hazardous Materials Requirements).
- B. Inspection: After all requirements of the Substantial Completion preliminary procedures have been completed, submit a written request for inspection for Substantial Completion. Give notice at least 7 working days in advance from the time the final inspection is to be performed. District will either proceed with inspection or notify Design Builder of unfulfilled requirements. Refer to Paragraph 1.4, List of Incomplete Items (Punch List).
1. Initial Inspection (Punch List): The Design Builder or his principal superintendent, authorized to act on behalf of the Design Builder, is to assemble a list of unfinished work items and assign costs to each item.
 2. Final Inspection (Punch List): The Design Builder or his principal superintendent, authorized to act on behalf of the Design Builder, shall accompany the District on the final inspection tour. Principal Subcontractors and Consultants that the District may request to be present will also attend. The District will verify the Design Builder's Initial Inspection and recommend any changes.
 3. If the Work has been substantially completed in accordance with the Contract Documents, and only minor corrective measures are required, the District will conditionally accept the Work and will file for the Notice of Completion based upon the Design Builder's assurance that the corrective measures will be completed within the shortest practicable time period.
 4. If the Work has not been substantially completed in accordance with the Contract Documents, and several corrective measures are still required, the District will not accept the Work or record the Notice of Completion. The Design Builder shall complete or correct the items listed on the Initial Inspection and the Final Inspection punch list and then call for a re-inspection, following the procedure outlined above.
 5. Re-inspection: Request for re-inspection when the Work identified in previous inspections as incomplete is completed or corrected. More than one (1) request of the District to make a re-inspection shall be considered an additional service of District, District's Representative, and/or Inspector of Record, and all subsequent costs will be deducted from the Design Builders final payment.

1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before determining the date of Final Completion, complete the following:
1. Submit a final Application for Payment according to Section 00 50 00 (Agreement).
 2. Submit affidavit of payment of debts and claims.
 3. Submit affidavit of release of liens.
 4. Submit consent of Design Builder's surety to final payment,
 5. Submit complete payroll certifications.
 6. Submit certified copy of District's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by the District's representative. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 8. Submit pest-control final inspection report and warranty.
 9. Submit all guarantees and warranties. Refer to Paragraph 1.7, Warranties.
 10. Submit all Material Safety Data sheets.
 11. Submit copies of all Verified Reports.
 12. Submit a list of all Subcontractors of every tier providing services and/or materials in connection with the Project, in a formal, adequately bound, cataloged form, which shall include the names, addresses, telephone numbers and fax numbers of such persons, and shall further include notices as to where pertinent persons can and may be reached for emergency service, inclusive of nights, weekends and holidays.

1.4 DESIGN BUILDER'S LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit ten copies of each list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by the Design Builder that are outside the limits of construction.
1. The list is to be in Microsoft Excel, electronic format. The format is available from the District for the Design Builder's use.
 2. Organize the list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor in each building in the project. Each line item is to have a unique number associated with the room number (do not re-number items once they have been assigned a number).
 3. Organize items by space. Each outstanding item is to be based on the room number where the problem exists and individually numbered.

4. Include the flowing information at the top of each page:

- 1) Project name.
- 2) Date.
- 3) Name of District's Representative.
- 4) Name of Inspector or Record.
- 5) Name of Design Builder.
- 6) Page Number.

1.5 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for the District's representative and Inspector of Record's reference during normal working hours. Submit Record Documents as described in this Section 00 50 00 (Agreement) and 01 11 20 (Design Services and Deliverables).
- B. Record Drawings: Maintain and submit one signed set of prints of Contract Drawings and Shop Drawings.
1. Mark Record drawings to show the actual installation where installation varies from that shown originally as well as construction added to the Contract that is not indicated on the Contract Drawings. Require individual or entity who obtained record data, where individual or entity is installer, Subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Keep Record Drawings current and legible, and available, on site, for inspection at all times by the Inspector of Record, and District's representative.
 - b. Give particular attention to information on concealed elements that cannot be readily identified and recorded later. Concealed shall mean construction installed underground or in an area which cannot be readily inspected by use of access panels, inspection plates or other removable features.
 - c. Accurately record information in an understandable drawing technique.
 - d. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - e. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings.
 2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
 3. Mark important additional information that was either shown schematically or omitted from original drawings.

4. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, RFI numbers, and similar identification where applicable.
 5. Identify, sign and date each Record Drawing: include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable cover sheets. Include identification on cover sheets.
- C. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications. Mark copy to indicate the actual product installation.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Note related Change orders, Record Drawings, where applicable.
- D. Record Product Data: Submit one copy of each Product Data submittal. Mark one set to indicate the actual product installation where installation varies substantially from that indicated in Product Data.
1. Include Material Safety Data Sheets.
 2. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 3. Include significant changes in the product delivered to Project site and changes in manufacturer's written instruction for installation.
 4. Note related Change Orders, Record Drawings, where applicable.

1.6 OPERATIONS AND MAINTENANCE MANUALS

- A. Assemble 3 copies of complete sets of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Section and as follows:
1. Manufacturer's Manuals: Submit complete installation, operation, maintenance and service manuals, and printed instructions and parts lists for all materials and equipment where such printed matter is regularly available from the manufacturer. This includes, but is not limited to such service manuals as may be sold by the manufacturer covering the operation and maintenance of his items, and complete replacement parts lists sufficiently detailed for parts replacement ordering to manufacturer. Piping diagrams and wiring diagrams are to be included. Bound publications need not be assembled in binders.
 - a. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each

binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

2. Equipment Nameplate Data: Submit a typewritten list of all mechanical and electrical equipment showing exact equipment nameplate data. Identify equipment by means of names, symbols, and numbers used in the contract documents
3. System Operating Instructions: Submit typewritten instructions covering operation of the entire system as installed (not duplicating manufacturer's instructions for operating individual components). Include schematic flow and control diagrams as appropriate and show or list system valves, control elements, and equipment components using identification symbols and numbers, including operating standards. List rooms, area of equipment served, and show proper settings for valves, controls, and switches. Incorporate emergency instructions and procedures, startup and shutdown procedures, seasonal procedures and weekend operations.
4. System Maintenance Instructions: Submit typewritten instructions covering routine maintenance of system. List each item of equipment requiring inspection, lubrication, or service and briefly describe such maintenance, including types of lubricants and frequency of service. It is not intended that these instructions duplicate manufacturer's detailed instructions. Give name, address and phone number of nearest firm authorized or qualified to service equipment or provide parts
5. Wall Mounted Data: Frame one set of typewritten system instructions and diagrams as required under Paragraphs .3 and .4 above, covered with glass and mounted in locations as directed by the District. This set of instructions is in addition to the required herein.

1.7 WARRANTIES & GUARANTEES

- A. See Section 00 62 00 (Guaranty) form and 00 62 50 (Certificate of Warranty) for warranty form. All submitted Warranty and Guaranty forms will be on the Peralta Community College District's Warranty and Guaranty format. Originals to be provided.
- B. Warranties and guarantees for fire/life safety work such as fire alarm, sprinkler, emergency and exit lighting, and exiting pathway systems such as: Elevator, wheelchair lifts, etc. shall have specific language "in the event of our failure to respond and act within 3 hours after being notified in writing by the District, we authorize the District to proceed to have the defects repaired or replaced and made whole, together with any other adjacent work which may be displaced or damaged by so doing, at our expense, and we will honor and pay the costs and charges therefore upon demand. This work shall not invalidate any and all warranties and guarantees."
- C. Submittal Time: Submit duplicate written warranties and guarantees on request of District for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- D. Partial Occupancy: Submit properly executed warranties and guarantees within 15 days of completion of designated portions of the Work that are completed and

occupied or used by District during construction period by separate agreement with Design Builder.

- E. Organize warranty and guarantee documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and guarantees in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to receive 8-1/2-by-11-inch (115-by-280-mm) paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty and guarantee. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
- F. Provide additional copies of each warranty and guarantee to include in operation and maintenance manuals.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Only use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces. All cleaners shall be specifically designed for the purpose intended, safe for use on the intended object to be cleaned, and safe to pupils, staff and the public. Refer to the District's standards for cleaning products approved by the District.
- B. Commercial floor wax stripper, Easterday Ammo-Strip or approved equal, capable of removing metal interlock water emulsion floor finish.
- C. Floor finish shall be minimum 20% solids content high-gloss wax. Acceptable products:
 - 1. Spartan Sunny-Side
 - 2. Spotlight (Brulin Company-800-776-7149)
 - 3. Champion Once-A-YearGraffiti Remover (non-toxic): SO-SAFE BY DX, Inc., or approved equal.
- D. Germicidal Cleaner must be E.P.A. registered germicidal cleaner and deodorizer appropriate for use in public school buildings.

PART 3 – EXECUTION

DEMONSTRATION AND TRAINING

- A. Instruction: After Work under this contract is completed, tested, and before acceptance, and not less than 14 days after submittal of the operation and maintenance data required in Paragraph 1.6, Operations and Maintenance Manuals, operate all systems for a period of three 8-hour days during which time keep on the project competent personnel familiar with the items installed whose full-time assignment will be to instruct the District's maintenance personnel in the operation and maintenance of the equipment and systems.
 - 1. Provide instructors experienced in operation and maintenance procedures.
 - 2. Provide instruction at mutually agreed-upon times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.
 - 3. Schedule training with District, through District's representative, with at least seven days notice.
 - 4. Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.
 - 5. Do not conduct this instruction period before completion of piping and equipment labeling.

- B. Provide an instruction period sufficient to cover the training required. This instruction period shall be in addition and subsequent to any period of operation, test and adjustment called for elsewhere in this specification.

- C. Program Structure: develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections. For each training module, develop a learning objective and teaching outline. Include instruction of the following:
 - 1. System design and operational philosophy.
 - 2. Review of documentation.
 - 3. Operations.
 - 4. Adjustments.
 - 5. Troubleshooting.
 - 6. Maintenance.
 - 7. Repair.

3.2 FINAL AND END-OF-PHASE CLEANING

- A. General: Provide final cleaning at the completion of each phase of the work and final project completion. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal, State and local environmental and antipollution regulations. If LBP was disturbed during renovation the final cleaning shall meet the minimum requirements of 40 CFR Part 745.

- B. Cleaning: Employ professional cleaning service for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for any phase of Project:
 - a. Clean Project site, yard, and grounds in areas disturbed by construction activities including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Horizontal surfaces: All horizontal surfaces must be dusted and/or washed until free of dust and grime.
 - g. Furnishings and equipment:
 - 1) Remove all gum and sticky substances from all surfaces. Wash all furniture and equipment with a neutral cleaner. Use specialized cleaner appropriate for wood and/or excessively dirty surfaces.
 - 2) Dust all machinery and equipment located in any shop area.
 - 3) Clean all dry-erase boards and marker rails by washing with water and/or dry-erase board cleaner.
 - 4) Clean exterior of all closed lockers and interior of open ones.
 - 5) Graffiti must be removed from all furnishings and equipment.
 - h. Walls: Wash all wall surfaces with detergent and water. Remove all graffiti. All restroom walls should be washed with a disinfectant cleaner.
 - i. Doors: Wash all doors, frames and hardware.
 - j. Floors:
 - 1) Resilient Floors (except linoleum flooring) – Clean and refinish flooring, using appropriate procedures and finishes/sealers. Strip existing wax from all existing resilient flooring (using appropriate safety measures as recommended by the E.P.A. for any tile containing asbestos) and re-wax as follows:

- Classrooms, offices and other rooms - three coats of wax.
- Corridors - five coats of wax.

Newly installed resilient floors should have all surface mastic removed by Design Builder. New floors should be allowed to set for time recommended by manufacturer of mastic. These floors should be scrubbed with detergent -- not stripped. Seal as recommended by flooring manufacturer and re-wax as indicated above.

- 2) Linoleum Floors - Clean and refinish flooring, using appropriate procedures and finishes/sealers in accordance with manufacturers recommendations and finish as follows:

Newly installed linoleum floors should be allowed to set for time recommended by manufacturer of mastic. Existing and new floors should be scrubbed with a neutral pH (7-8.5) detergent/cleaner – do not strip factory finish. Apply the cleaning solution with a mop and bucket; allow the solution to remain on the floor, and then scrub with a rotary electric scrubber or automatic scrubber with a non-abrasive scrubbing pad. Do not over-saturate the floor. Rinse the entire floor surface with clean, cool water and allow the floor to dry thoroughly before allowing traffic. Apply two (2) coats of “Linobase” sealer, manufactured by Johnson Diversey or as recommended by manufacturer, followed by three (3) coats of “Carefree” finish, manufactured by Johnson Diversey or as recommended by the manufacturer, per manufacturer’s instructions.

- 3) Concrete Floors - Scrub using water and detergent.
- 4) Ceramic Floors - Scrub using water and detergent.
- 5) Carpeted Floors - Vacuum all carpets and clean by hot water extraction.
- 6) Other Floors - Marble, terrazzo and rubber floors should be cleaned and refinished using appropriate procedures and finishes/sealers.

- k. STAIRS: All stairs to be scrubbed with detergent including walls, handrails and ledges. Finish not to be applied to stairs unless necessary and approved by the District (Custodial Services Department).
- l. RESTROOMS AND LOCKER ROOMS: Thoroughly clean and disinfect all surfaces and fixtures. Remove all foreign objects from walls/ceilings and eliminate all graffiti. Specifications provided above for fixtures, walls and floors are applicable.
- m. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- n. Sweep concrete floors broom clean in unoccupied spaces.
- o. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
- p. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-

obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.

- q. Remove labels that are not permanent.
 - r. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - s. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - t. Replace parts subject to unusual operating conditions.
 - u. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - v. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - w. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - x. Clean ducts, blowers, and coils if units were operated without filters during construction.
 - y. Clean all new and existing light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
 - z. Leave Project clean and ready for occupancy.
- C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid the Project of rodents, insects, and other pests. Prepare a report.
- D. Final Inspection: Any surface still exhibiting dirt, graffiti or dust shall be re-cleaned/re-stripped/refinished until free of dirt, graffiti or dust.
- E. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on District's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove materials from Project site and dispose of lawfully.

END OF SECTION

BUILDING INFORMATION MODELING (BIM) PERFORMANCE REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

1.1.1 The Design Builder shall utilize a Building Information Modeling (BIM) system to submit Design Development and Construction Documents in the form of a BIM Model of the Project buildings and Site in a parametric 3D format in order to maximize design and construction coordination of the facility through interference checking (clash detection) and code compliance studies within that electronic format. As is technically feasible, the Design Builder shall also test and modify the proposed construction schedule and the project cost model to optimize the project delivery options for the best overall value and performance by coordinating the BIM Model with the schedule (4D) and using the BIM Model to support cost (5D).

1.1.1.1 The BIM Model and individual system models are the property of the District. The Design Builder shall provide the District with access to the models at any time throughout the project. Submittals are outlined in Section 01 11 20 Design Services and Deliverables.

1.1.1.2 Design Builder shall:

1.1.1.2.1 Use the BIM Model and associated model aggregation platform to facilitate the construction methods and means.

1.1.1.2.2 Update the BIM Model and associated model aggregation platform progressively throughout the design and construction period to incorporate all Subcontractor information and approved changes.

1.1.1.2.3 Provide a final "as-built" BIM Model to the District for the District's unrestricted use in operating and managing the facility.

1.1.1.2.4 Engage in regular BIM management meetings with the District and Design Build team participants to discuss and evolve the scope of work described through this section. Discussion topics will include element modeling responsibilities, software interoperability, 2.5d modeling scope, best practices and technical feasibility in the context of rapidly evolving BIM technology.

1.2 USE OF THE BIM/VIRTUAL CONSTRUCTION MODEL

1.2.1 Intent of the BIM Model and Aggregate Platform: The BIM Model and aggregate platform shall be developed for coordination, communication and collaboration purposes during design and construction. At the completion of the Work, the BIM Model shall be turned over to the District. The District shall have exclusive rights to the model for its use in operating and managing the facility.

- 1.2.2 Basis of Information for Modeling: The Contract Documents and Reference Documents shall be the basis of information for the BIM Model described herein. The Criteria Architect's Architectural Drawings are available in AutoCAD 2019 and Revit Version 2019 format for use by the Design Builder in developing the BIM Model; however, such usage shall be for convenience only and shall not carry contractual implication.
- 1.2.3 Relation of BIM to other Contract Documents: The BIM may be used by the Design Builder as a tool to plan the Work and produce Construction Documents. Hardcopy documentation shall be used as the basis of construction. Not all building components required by the contract documents will be included in the BIM.

1.3 DEFINITIONS

- 1.3.1 BIM: Building Information Modeling, a process of constructing electronic models of facility's buildings and site.
- 1.3.2 BIM or Virtual Construction (VC) Model: A Virtual Construction Model using 3-D Building Information Modeling (BIM) technologies to convey the design and construction elements of the Work. The Virtual Model will consist of a minimum of seven system models: Civil, Architectural, Structural, Mechanical, Electrical, Fire Protection and Equipment.

1.4 MINIMUM REQUIREMENTS

- 1.4.1 General: The BIM Model shall be developed to include parametric components of major building and site elements as defined by Part 2 of this section.
- 1.4.2 Accuracy of the Models: The BIM Model and each of its system models shall be developed to within a tolerance of 1/4" plus or minus.
- 1.4.3 Parametric Data: The BIM Model may vary in level of detail for individual elements, but at a minimum shall include sufficient parametric data to support use and analysis of:
- 1.4.3.1 Functional and visual representation of all spaces.
 - 1.4.3.2 Review of Design Builder's Construction Documents at all times during the Design and Construction phases.
 - 1.4.3.3 Clash detection and correction of all major systems.
 - 1.4.3.4 Construction methods and means.
 - 1.4.3.5 Construction scheduling.
 - 1.4.3.6 Cost estimating.
 - 1.4.3.7 As-built documentation and modeling.

- 1.4.4 File Format: Revit or any file format (BIM application(s) or software(s)) approved by the District's Project Manager may be used for development of the BIM Model providing that it is a true parametric, data-based application. The District will give

preference to a file format that allows direct linking and interoperability. The Design Builder shall maintain a matrix that summarizes BIM software tools used on the project by all participants.

1.4.5 Level of Detail: The BIM Model shall be developed and detailed sufficiently to meet the requirements of the Request for Proposal and the Contract Documents. The two levels of detail are Generic-model(ed) and Project-model(ed), as defined below. All elements listed under Part 2 Products shall be Project-model(ed). All other elements may be Generic-model(ed). The level of detail described by Part 2: Products shall be subject to further discussion, clarification, and evolution through BIM management meetings. The Design Builder will maintain a building component matrix that documents the BIM scope and clarifies responsibilities and level of detail. This matrix shall be subject to District approval.

1.4.5.1 “Generic-model(ed)”: the model and its elements may be based upon the standard objects available from the modeling software without project-specific customization. In addition, generic components may be used early in the BIM development process as “placeholders” for “project modeled” components.

1.4.5.2 “Project-model(ed)”: the model and/or a specific element must be customized to reflect project-specific configuration.

1.4.5.3 “2.5D Elements”: Model management may require use of 2.5D components. This type of component includes parametric, plan and elevation information but does not include 3D data. The scope of use for 2.5D elements shall be determined through discussions held at BIM management meetings.

1.4.6 OmniClass: The OmniClass Construction Classification System (known as OmniClass or OCCS) is a new classification system for the construction industry developed by the Construction Specification Institute (CSI). It builds upon MasterFormat for work results, UniFormat for elements and EPCI (Electronic Product Information Cooperation) for structuring products. OmniClass is a reference library that will serve as the foundation upon which information is transferred between the construction and operations phases via the BIM Model. The Design Builder shall include the appropriate OmniClass classification in the list of attributes that is assigned to the building elements that will be Project-model(ed).

PART 2 - PRODUCTS

2.1 SYSTEM MODELS

2.1.1 Architectural Systems: The Architectural Systems Model shall be the primary model to which others are linked. Except as noted, provide project-model(ed) elements of:

2.1.1.1 Spaces: 1) net square footage of all occupied spaces, 2) gross constructed floor area, 3) room names and numbers, and 4) floor, base, wall, and ceiling finishes.

- 2.1.1.2 Exterior Walls and Curtain Walls: 1) type and composition, 2) height, length, and width, and 3) thermal, acoustic, fire, and security ratings.
- 2.1.1.3 Partitions: 1) type and composition, 2) height, length, and width, and 3) thermal, acoustic, fire, and security ratings.
- 2.1.1.4 Floors: 1) type and material, 2) thickness, and 3) finishes with manufacturer's name and product numbers. Link floor structure to the Structural Systems Model.
- 2.1.1.5 Ceilings: 1) type and composition, 2) height, length, and width, and 3) thermal, acoustic, fire, and security ratings.
- 2.1.1.6 Exterior Doors, Windows, and Louvers: 1) type and material, 2) height, width, and thickness, 3) thermal, acoustic, fire, and security rating, 4) location, and 5) hardware elements or group.
- 2.1.1.7 Interior Doors, Windows, and Louvers: 1) type and material, 2) height, width, and thickness, 3) thermal, acoustic, fire, and security rating, 4) location, and 5) hardware elements or group.
- 2.1.1.8 Stairs and Ramps: 1) stairs and railings, 2) ramps and railings, and 3) handrails and guardrails.
- 2.1.1.9 Casework and Counters: 1) type and material, 2) height, width, and depth, 3) location, and 4) hardware.
- 2.1.1.10 Plumbing Fixtures: 1) type and material, 2) location, 3) trim, and 4) finishes. Link fixtures and trim to the Mechanical Systems Model.
- 2.1.1.11 HVAC Grills and Registers: 1) type and material, 2) location, 3) trim, and 4) finishes. Link fixtures and trim to the Mechanical Systems Model.
- 2.1.1.12 Electrical Fixtures: 1) type and material, 2) bulb type and wattage, 3) location, 4) trim, and 5) finishes. Link fixtures and trim to the Electrical Systems Model.
- 2.1.1.13 Miscellaneous Fittings: 1) toilet partitions, 2) toilet room accessories, 3) grab bars, 4) personal storage lockers, 5) display cases, and 6) other surface applied quasi-permanent items such as mirrors etc.
- 2.1.1.14 Other requirements:
 - 2.1.1.14.1 Quantities: data to reflect accurate quantities of the above elements.
 - 2.1.1.14.2 Schedules: data for installation of the above elements.

2.1.2 Structural Systems: The Structural Systems Model shall be a sub-system model linked to the architectural system model. Except as noted provide project-model(ed) elements of:

- 2.1.2.1 Foundations and footings: 1) type and configuration, and 2) depth, length, and width.

- 2.1.2.2 Slab(s) on-grade: 1) type and configuration, 2) under-slab base and waterproofing, 3) recesses, curbs, pads, closure pours, and 4) major penetrations.
- 2.1.2.3 Basement Walls: 1) type and composition, 2) height, length, and width, and 3) thermal, acoustic, fire, and security ratings.
- 2.1.2.4 Elevated Floors: 1) columns and beams, 2) primary and secondary framing members, 3) bracing, 4) connections, and 5) framed, composite, and/or slab decks.
- 2.1.2.5 Joints: 1) expansion and/or contraction, and 2) seismic.
- 2.1.2.6 Stairs and Ramps: 1) openings and framing, and 2) railing supports.
- 2.1.2.7 Shafts and Pits: 1) openings and framing, and 2) railing supports.
- 2.1.2.8 Other requirements:
 - 2.1.2.8.1 Quantities: include data to reflect accurate quantities of the above elements.
 - 2.1.2.8.2 Schedules: data for installation of the above elements.
 - 2.1.2.8.3 Fireproofing: Fireproofing is not to be included in the BIM but clash detection studies shall include definition of tolerances for conflict detection.
 - 2.1.2.8.4 Color Code: color code structural steel from other elements.
- 2.1.3 Mechanical: The Mechanical Systems Model shall be a sub-system model linked to the architectural system model. Except as noted provide project-model(ed) elements of:
 - 2.1.3.1 Heating, Ventilating, and Air Conditioning: 1) all heating, ventilating, air-conditioning, exhaust fans, and specialty equipment, 2) air supply, return, ventilation and exhaust ducts, including space-consuming elbows and transitions, 3) fire dampers with ratings, 4) mechanical piping, and 5) registers, diffusers, grills and hydronic baseboards. Coordinate and link fixtures and trim to the Architectural Systems Model.
 - 2.1.3.2 Plumbing: 1) all domestic plumbing piping and fixtures, 2) floor and area drains, and 3) related equipment.
 - 2.1.3.2.1 Piping larger than 1 .5" diameter shall be modeled.
 - 2.1.3.3 Roof Drainage: 1) all piping and fixtures, and 2) related equipment.
 - 2.1.3.3.1 Piping larger than 1 .5" diameter shall be modeled.
 - 2.1.3.4 Other requirements:

- 2.1.3.4.1 Quantities: data to reflect accurate quantities of the above elements.
 - 2.1.3.4.2 Schedules: schedule data for installation of the above elements.
 - 2.1.3.4.3 Equipment Clearances: Clearances for major equipment and all M/E/P Equipment and Architecturally Significant Equipment, as model objects for conflict detection and maintenance access requirements.
 - 2.1.3.4.4 Color Code: separate color code for each type element.
- 2.1.4 **Electrical:** The Electrical Systems Model shall be a sub-system model linked to the architectural system model. Except as noted provide project-model(ed) elements of:
- 2.1.4.1 Interior Electrical Power and Lighting: 1) all interior electrical components, 2) lighting, receptacles, special and general purpose power receptacles, 3) lighting fixtures, 4) panel-boards and control systems, and 5) conduit and cable trays.
 - 2.1.4.1.1 Individual conduit larger than 1 .5" diameter shall be modeled.
 - 2.1.4.1.2 Groups or clusters runs of conduit of all sizes shall be modeled.
 - 2.1.4.2 Exterior Building Lighting: 1) all exterior electrical components, 2) lighting, receptacles, special and general purpose power receptacles, 3) lighting fixtures, 4) panel-boards and control systems, and transformers, and 5) utility connection and equipment.
 - 2.1.4.2.1 Individual conduit larger than 1 .5" diameter shall be modeled.
 - 2.1.4.2.2 Grouped or clustered runs of conduit of all sizes shall be modeled.
 - 2.1.4.3 Telephone, Data, Television, and Other Low Voltage: 1) all interior low voltage components, 2) outlets, receptacles, special and controls, 3) fixtures, 4) panel-boards, equipment racks, and control systems, and 5) conduit and cable trays.
 - 2.1.4.3.1 Individual conduit larger than 1 .5" diameter shall be modeled.
 - 2.1.4.3.2 Groups or clusters runs of conduit of all sizes shall be modeled.
 - 2.1.4.4 Other requirements:
 - 2.1.4.4.1 Quantities: data to reflect accurate quantities of the above elements.

- 2.1.4.4.2 Schedules: schedule data for installation of the above elements.
 - 2.1.4.4.3 Equipment Clearances: Clearances for major as model objects for conflict detection and maintenance access requirements.
 - 2.1.4.4.4 Color Code: separate color code for each type element.
- 2.1.5 Fire Suppression: The Fire Suppression Systems Model shall be a sub-system model linked to the architectural system model. Except as noted provide Project-model(ed) elements of:
- 2.1.5.1 Fire Suppression System: 1) valves and risers, 2) all main, branch, and drains lines, 3) sprinkler heads, and fittings, 4) pumps.
 - 2.1.5.2 Fire Alarms: 1) alarm and notification devices, and 2) detection systems.
 - 2.1.5.3 Other requirements:
 - 2.1.5.3.1 Quantities: data to reflect accurate quantities of the above elements.
 - 2.1.5.3.2 Schedules: schedule data for installation of the above elements.
 - 2.1.5.3.3 Equipment Clearances: Clearances for major equipment as model objects for conflict detection and maintenance access requirements.
 - 2.1.5.3.4 Color Code: separate color code for each type element.
- 2.1.6 Equipment: The Equipment Model shall be a sub-system model linked to the architectural model. Except as noted provide Project-model(ed) elements of:
- 2.1.6.1 Equipment: related security, mechanical, plumbing, and electrical requirements.
 - 2.1.6.1.1 Quantities: data to reflect accurate quantities of the above elements.
 - 2.1.6.1.2 Schedules: schedule data for installation of the above elements.
 - 2.1.6.1.3 Equipment Clearances: equipment clearances as model objects for conflict detection and maintenance access requirements.

2.2 COST AND SCHEDULE INFORMATION

2.2.1 Schedule Data (4D):

- 2.2.1.1 Use 4D where practically possible to optimize the construction schedule and validate sequencing.
- 2.2.1.2 Provide construction activity sequences, including rough-in, finish, and phasing schedules for major elements of all models.
- 2.2.1.3 Breakdown the schedule of elements by individual sub-contractors.

2.2.2 Cost Data (5D):

- 2.2.2.1 Provide quantity-based, installed cost breakdown of labor and material for major elements of all models.
- 2.2.2.2 Leverage the model where practically possible to assure that the budget is being met.

2.3 MODEL SOFTWARE REQUIREMENTS

2.3.1 The Design Builder's selected BIM application(s) and software(s) for the BIM Model shall:

- 2.3.1.1 Have maximum interoperability between systems models, and shall be fully compatible with Autodesk® Navisworks 2019 software or later.
- 2.3.1.2 Be provided in a format that is compatible with a free software download for viewing the Design Builder's models with the ability to save and track user annotations and notes.
- 2.3.1.3 Contain reports/logs of:
 - 2.3.1.3.1 Discrepancies and/or clarifications in the Contract Documents or Construction Documents identified during the modeling process.
 - 2.3.1.3.2 Conflicts between location and alignment of model elements with resolutions developed by the Design Builder.
 - 2.3.1.3.3 Quantities of modeled building element.
 - 2.3.1.3.4 Schedule for each building element.
- 2.3.1.4 For any additional electronic model information that is not supported by the Revit or the primary software solution approved by Program Manager, and for constructing 4D models, the Design Builder shall utilize AutoDesk® Navisworks software (Manage, Review, Simulate and Freedom) to create and utilize .nwd files.
- 2.3.1.5 Be provided in a format that links with cost and scheduling software utilities.

PART 3 - EXECUTION

3.1 DEVELOPMENT AND SUBMITTAL OF THE MODELS

- 3.1.1 The Design Builder shall develop the BIM Model and its systems models in compliance with the Contract Documents and the following:
 - 3.1.1.1 Develop and submit all of the systems models concurrently. Note: if any of the systems models qualify as deferred approvals, they may be submitted separately.
 - 3.1.1.2 Submit models with generic-model(ed) information as required to satisfy the requirements of the submittals are outlined in Section 01 11 20 Design Services and Deliverables.
 - 3.1.1.3 Submit partially completed models during the Design Development and Construction Documents Phase submittals outlined in Section 01 11 20 (Design Services and Submittals), for review and coordination.
 - 3.1.1.4 Submit partially complete models at any time when the District requests changes and/or clarifications or Design Builder proposes changes.
 - 3.1.1.5 Submit fully completed BIM Model and its systems models, prior to construction.
 - 3.1.1.6 Submit updated systems models complying with final approved shop drawing submittals.
 - 3.1.1.7 Submit the “as-built” BIM Model and its systems models as part of the close-out process.

3.2 UPDATING THE MODELS DURING CONSTRUCTION

- 3.2.1 The BIM Model shall be updated/revise to keep it current with construction activity as follows:
 - 3.2.1.1 Updating: issue the BIM Model and its systems models one week before each regularly scheduled Construction Phase Coordination meeting as defined in Section 01 31 19 (Project Meetings).
 - 3.2.1.2 Revising: issue the revised BIM Model and/or its systems models immediately after each meeting or other activity where revisions have been made. Include a report that indicates every change.

3.2.2 Submit the updates and revisions to the District.

3.3 DELIVERY OF FINAL AS-BUILT MODELS

- 3.3.1 The final updated and revised BIM Model and all its systems models shall be submitted to the District as part of the close-out submittals.
- 3.3.2 The BIM Model and all its systems models will be:
 - 3.3.2.1 Editable for future expansion or remodel projects.

3.3.2.2 Functioning for use with 3-D Facilities Management Software.

END OF SECTION

MISCELLANEOUS HAZARDOUS MATERIALS PERFORMANCE REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- 1.1.1 Scope of Work: The Design Builder shall hire a competent Hazardous Materials Consultant to investigate, survey and report on Hazardous Materials discovered at the site. Except as otherwise expressly specified herein, the Design Builder's Hazardous Substances Removal Contractor ("Contractor") will supply all labor, supervision, materials, equipment, tools, services, insurance and each and every item of expense necessary for the removal, handling, management, packaging, transportation and disposal of miscellaneous hazardous materials, herein called the "Work."
- 1.1.2 Applicability: Except as otherwise may be provided for, the requirements of the Contractor will apply to the Design Builder and, by extension, to all subcontractors engaged in the removal or handling of the miscellaneous hazardous materials designated herein. To the extent allowable by law, the District will be the sole and final arbiter of which contractor(s) or subcontractor(s) qualify to remove Hazardous Materials at the Project Site.
- 1.1.3 Miscellaneous Hazardous Materials: The Contractor shall notify the District of the presence of any items identified in specification 4.11 of Section 00 50 00 (Agreement) within 24 hours of its discovery at the Project site.
- 1.1.4 Limitation of Responsibility: The role of the Design Builder's Industrial Hygiene Consultant (hereinafter referred to as the "Project IH Consultant") in this project is to provide independent, third-party industrial hygiene/hazardous materials consulting services on behalf of the District. Such services may or may not include conducting on-site work observations, materials or environmental testing, and/or consulting with the District. It is not the responsibility of the Project IH Consultant to supervise the Contractor; nor to direct the Contractor's work effort; nor to assume the management of, or responsibility for, the Contractor's health and/or safety practices, nor its waste management, nor its regulatory compliance. At all times, the Contractor is solely responsible for the quality and execution of all phases and aspects of the Work.

1.2 SUBMITTALS

1.2.1 General:

- 1.2.1.1 In addition to any other contractual submittals required of the Contractor, the Contractor will provide the submittals described in this Section. Submittals will be reviewed by both the District and the Project IH Consultant for acceptability. The Project IH Consultant will either recommend submittals to the District for acceptance, or will return them as deficient, with notations for correction and re-submission. The Project IH Consultant does not have authority to "approve" submittals.

1.2.2 Schedule And Format:

- 1.2.2.1 Delivery: Submittals listed in this section must be delivered to the District for conveyance to the Project IH Consultant.
- 1.2.2.2 Quantity: Five (5) identical, legible copies and one complete pdf of each submittal listed in this section shall be delivered in an organized fashion suitable to the District for review. One (1) copy will be conveyed by the District to the Project IH Consultant for review.
- 1.2.2.3 Work Commencement: No portion of the Work that is dependent upon submittal acceptance shall be commenced by the Contractor until the submittals are reviewed and accepted by the District or its designated representative.
- 1.2.2.4 Delays: Delays to the Work resulting from the submittal of deficient or illegible documentation, or from the untimely submittal of potentially acceptable documentation, shall be the sole responsibility of the Design-Builder. Except as otherwise granted by the District, no extensions will be made to the awarded contract schedule or budget to accommodate such delays.
- 1.2.2.5 Format: Submittals will be provided in 8-1/2" x 11" format, organized in a standard 3-ring binder, with sections separated by numbered tabs indexed to a printed Table of Contents. Illegible submittals will be considered deficient and returned to the Design/Builder for correction.
- 1.2.2.6 Pre-work Submittals: Pre-work submittals shall be delivered to the District not less than ten (10) Business Days prior to the Contractor's mobilization onto the work site. Deficient submittals must be resubmitted by the Design-Builder within five (5) Business Days after return of review copy. Once accepted, the reviewed copy will be returned to the Design-Builder, who must maintain a copy of the reviewed submittal at the job site. The following is to be submitted:
 - 1.2.2.6.1 Worker Qualifications: Name and qualifications of each employee to be engaged in handling or removal of materials specified in this Section.
 - 1.2.2.6.2 Technician Certification: The U.S. EPA requires that individuals who perform maintenance, service, repair, or disposal of ODCs be certified in accordance with Section 608 of the Clean Air Act, as amended (Section 608). The Contractor will submit documentation of certification for any technician or subcontractor to be engaged in work covered by Section 608.
 - 1.2.2.6.3 Worker Training: The Contractor shall provide current (within previous 12 months) valid documentation of worker training in accordance with Cal/OSHA Hazardous Waste Operations and Emergency Response (8 CCR §5192, "HAZWOPER") for any workers or subcontractors engaged in work specified in this Section. An exception to this

training requirement will be made for workers or subcontractors engaged solely in work involving handling or disposal of ODCs.

- 1.2.2.6.4 Permits/Licenses: The Design-Builder is responsible for obtaining any permits or licenses and for making any regulatory notifications required to perform the work of this Section. The Design-Builder will deliver one (1) copy of all permits, approvals and notifications to the District at least five (5) Business Days before beginning the Work of this Section.
 - 1.2.2.6.5 Subcontractors: Submit qualifications and twenty-four (24) hour contact information for each subcontractor to be used. This shall include two (2) legible copies of federal, state, and/or local business or operating permits, as well as State and/or EPA identification numbers for the waste transporters and disposal facilities to be used.
 - 1.2.2.6.6 Waste Hauling Qualifications: Submit proof of hazardous waste transporter's registration and the vehicle operator training. Submittals shall include, but not necessarily be limited to: business name, address (mailing address and physical location), and business telephone number of the company; primary contact name and emergency contact (24-hour) telephone number; documentation of current State and/or EPA authorization to operate; and insurance coverage.
 - 1.2.2.6.7 Waste Disposal Facility Qualifications: Submit documentation of the California State and/or EPA-approved waste recycling, disposal, and/or treatment facilities designated to receive shipments of hazardous and universal wastes generated during this project. Such information will include, but not necessarily be limited to: business name, address (mailing address and physical location), and business telephone number of the facility; primary contact name and emergency contact (24-hour) telephone number; documentation of current State and/or EPA authorization to operate; operator's facility I. D. number; classification and/or types of waste(s) accepted; name, business address and telephone number of insurance provider; documentation of insurance type(s), coverage amounts, and any limitations on liability; and any regulatory agency information pertaining to known citations issued, notices of violations issued, corrective actions ordered, Records of Decisions rendered, or on-going environmental investigations or known liabilities.
- 1.2.2.7 Post-work Submittals: The Design-Builder will, within twenty (20) Business Days of Contractor's demobilization from the Project Site, submit two (2) copies of all waste disposal documentation (waste manifests, recycler's or reclaimer's receipts, or other applicable

documentation) to demonstrate appropriate material management and disposal. If the Project IH Consultant or District determines that the Post-work Submittals are inadequate and/or require additional unanticipated review time, the Contractor will be required to correct the deficiencies and re-submit them for additional review. Any additional cost for the Project IH Consultant's time to perform a subsequent review(s) of Post-work Submittals will be borne by the Design-Builder.

1.3 QUALITY REQUIREMENTS

1.3.1 Reference Standards:

- 1.3.1.1 Regulations: Applicable regulations pertaining to this work include, but are not limited to, the following:
 - 1.3.1.1.1 California Department of Occupational Safety and Health (Cal-OSHA) – General Industry Safety Orders Hazardous Waste Operations and Emergency Response (8 CCR §5192 et seq.).
 - 1.3.1.1.2 California Health & Safety Code Section 25163(c).
 - 1.3.1.1.3 Title 22, California Code of Regulations, Section 66261.24 et seq.
 - 1.3.1.1.4 Title 22, California Code of Regulations, Section 66268.7(a)(4) et seq.
 - 1.3.1.1.5 Title 22, California Code of Regulations, Section 66268.114 et seq.
 - 1.3.1.1.6 California Safe Drinking Water and Toxic Enforcement Act of 1986 (Prop. 65).
 - 1.3.1.1.7 Title 22, California Code of Regulations, Division 4.5, Chapter 23 – Universal Waste Rule - California Department of Toxic Substances Control (DTSC).
 - 1.3.1.1.8 Title 40, Code of Federal Regulations, Part 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP) (U.S. EPA).
 - 1.3.1.1.9 Title 40, Code of Federal Regulations, Part 82 et seq., Protection of Stratospheric Ozone. U.S. Environmental Protection Agency (U.S. EPA).
 - 1.3.1.1.10 Title 40, Code of Federal Regulations, Part 761, et seq., Polychlorinated Biphenyl (PCBs) Manufacturing, Processing, Distribution in Commerce and Use Prohibitions. U.S. Environmental Protection Agency (U.S. EPA).

1.3.1.1.11 Title 49, Code of Federal Regulations, Part 172, U.S. Department of Transportation.

1.3.1.1.12 All other applicable Federal, State, and/or Local regulations, codes, and ordinances.

1.3.1.2 **Applicability.** The most current version of each document shall apply. Where conflicts among these specifications exist, the more strict or stringent requirement or interpretation shall apply.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

3.1.1 **Examination of Conditions:** The Design/Builder must carefully examine the work site before beginning work and report any previously undisclosed or special conditions to the District. Except as may be otherwise stipulated elsewhere in the Contract Documents, starting the Work shall be interpreted as implied acceptance of conditions as they exist.

3.1.2 **Responsibility for Work:** By commencing the Work, Design/Builder acknowledges and agrees that it has sole and primary responsibility and obligation to the District to make inspections of its own work at all stages of the Work. This includes acknowledging and agreeing that it has sole responsibility to supervise or superintend the performance of the Work, and that said work will be in strict adherence to, and in compliance with, all applicable methods, materials, regulations, and required standards whether or not specified herein. Where conflicts arise between standards or regulations, the more stringent will apply.

3.1.3 **Coordination of Work:** The Design-Builder is responsible to coordinate all scheduling, phasing, and completion of the Work with the District and all other employers working on the job site.

3.1.4 **Measurements and Quantities:** The Design-Builder is responsible to field verify all measurements, dimensions and quantities before starting the Work. Discrepancies between plan and field dimensions or quantities must be reported to the District as soon as discovered.

3.2 WASTE MANAGEMENT AND DISPOSAL

3.2.1 **General:** The Design-Builder is responsible for the safe handling, storage and transportation of all hazardous waste generated by the Work. By commencing this work, the Design-Builder implicitly agrees to bear all costs arising from any claims, damages, losses, and/or clean-up expenses incurred which, as a result of the Design-Builder's negligence, result from a hazardous waste spill(s) or release(s) on the Project site and/or while hazardous waste is in transport to a waste disposal facility. The Design-Builder or its designated subcontractor waste hauler will deliver all waste materials to an appropriately designated waste disposal facility that is acceptable to the District and which is permitted in accordance with applicable regulations.

- 3.2.2 Storage Facilities: The Design-Builder will assure that all waste (hazardous and non-hazardous) generated by the Work is stored in a secured manner until received at the waste disposal facility. Debris bins, storage enclosures, etc. will be locked overnight and whenever the Design-Builder is off-site or unable to directly monitor the contents. The Design-Builder will ensure that the appropriate and required warning signs are posted on waste storage locations. The Design-Builder will be responsible to maintain the waste storage facilities in an orderly and well-kept condition at all times. The Design-Builder will conduct routine waste storage area inspections to assure that appropriate storage conditions are maintained. Waste is not to be co-mingled with stored non-waste material or equipment.
- 3.2.3 Off-site Shipment of Wastes: The Design-Builder shall notify the District or its Representative in advance, whenever hazardous waste must be removed from the site. A copy of the Uniform Hazardous Waste Manifest or any other documents required by Federal, State, or Local agencies shall be completed by the Design-Builder and submitted to the District or its Representative for review and signature prior to transporting hazardous waste materials to a disposal facility. The Design-Builder shall provide the District or its Representative with sufficient advance notice of the need to obtain manifest signatures, so as to not delay waste shipment or otherwise impede the Project Schedule. Only the District or its Representative has authority to sign or approve waste shipping documents. It is the Design-Builder's responsibility to obtain the necessary authorized signatures to ship wastes off-site. Delays or expenses resulting from the untimely waste document coordination shall be borne by the Design-Builder.
- 3.2.4 Waste Shipment Documentation: EPA Uniform Hazardous Waste Manifest form or such other form or forms required by law or regulation shall be used for all waste transported off-site for hazardous waste disposal. A non-hazardous waste Bill of Lading will be used for all waste transported off-site for disposal or recycling as non-hazardous waste. All waste loads removed from the Project Site will be weighed by a Certified Weighmaster prior to delivery to the disposal facility. Certified weight tickets shall be submitted by the Design-Builder as a part of the Post-job Submittals. At the conclusion of the Work, the Design-Builder will provide documentation that the hazardous waste was disposed of at an appropriate EPA-approved waste disposal facility. The documentation will be submitted as part of the Post-Job Submittals.
- 3.2.5 Shipment Containers: All waste shipping containers must be individually labeled with appropriate signage and warnings, as required by applicable regulations, codes and ordinances.

END OF SECTION

SITE CONSTRUCTION PERFORMANCE REQUIREMENTS

PART 1 - GENERAL**1.1 GENERAL REQUIREMENTS**

- 1.1.1 The Criteria Documents indicate site development design intent for the Title IX Locker Room Facility of Laney College, consistent with applicable building codes and standards. The intent includes general site development including some vehicular and pedestrian circulation and hardscape to comply with ADA and CBC Title 24 accessible path of travel and parking serving the Title IX Locker Room Project.
- 1.1.2 The Criteria Documents show conceptual layout and design, with approximate quantities only. The specifications identify minimum levels of quality, materials and workmanship. If there are differences between this Section and the Criteria Documents submit RFI prior to submittal of Proposal for clarification.

1.2 SITE UTILITIES

- 1.2.1 General: The Design Builder shall prepare final plans and documents to the applicable codes and standards, obtain the necessary permits and local jurisdiction approvals, and coordinate all systems with final Construction Documents and the District.
- 1.2.2 Temporary Connections: Various utilities identified on the Criteria Documents requiring relocation may interrupt service to neighboring buildings that are intended to remain in operation. Sequence of construction operations shall be scheduled to minimize time of interrupted service. In some cases, temporary services to these buildings shall be required and shall be provided. Refer to the Criteria Documents for details.
- 1.2.3 Water: The distribution network around the Locker Room Facility of Laney College is a combined system for domestic and fire water. Complete existing and proposed water and fire water system descriptions and design criteria are provided in the Criteria Documents.
- 1.2.4 Sanitary Sewer: Criteria to be followed when designing the on-site and off-site sanitary sewer systems and descriptions of the existing and proposed sanitary sewer systems are provided in the Criteria Documents.
- 1.2.5 Electrical: Criteria Documents indicate routing of new overhead electrical lines and relocation of existing electrical lines throughout the site. Criteria for equipment, pipe materials, and other requirements can be found in the Criteria Documents. The Design Builder shall prepare final plans and coordinate final design and equipment selection with the electrical vendors, PG&E and the District Representative.

- 1.2.6 Telecommunications, Fire Alarm, etc. Systems: Criteria Documents indicate routing of new overhead communications utilities and relocation of existing communications utilities throughout the site. Criteria for equipment, pipe materials, and other requirements can be found in the District Standards.

1.3 GRADING AND EROSION CONTROL

- 1.3.1 Earthwork for hardscape excavation, over-excavation and recompaction of the pedestrian and vehicular paving areas for the ADA accessible path of travel shall occur after existing surface improvements have been removed.
- 1.3.2 The Design Builder shall produce and obtain approval of the site Storm Water Pollution Prevention Plan (SWPPP). Design Builder is responsible for obtaining the NPDES Notice of Intent and Notice of Termination from the State Water Resources Control Board and the District. Design Builder is responsible for implementing all Best Management Practices (BMPs) for preconstruction, construction and post-construction as recommended by the SWPPP document, which is an integral part of the final construction documents. Provide a copy of all such documents to the District Representative for approval.
- 1.3.3 Erosion control materials shall be stored onsite by the Design Builder and made available for immediate use. BMPs, including the placement of erosion control materials on or near the limits of work, shall be implemented as shown on the final approved SWPPP. Prevention and control measures shall be adjusted as the site conditions change with the phasing of the various areas of construction. All prevention and control measures required by the District, and the State Water Quality Act and incorporated into the SWPPP and BMPs shall be in place at the end of every workday.
- 1.3.4 Dirt and debris on the Project site and impacts to the neighboring communities is a major concern. Water shall be provided on-site to control dust during construction operations.
- 1.3.5 Permanent erosion control measures shall be provided as required by the Criteria Documents.

1.4 SITE DEVELOPMENT

1.4.1 Hardscape

1.4.1.1 Paving:

- 1.4.1.1.1 Primary pedestrian sidewalks are poured-in-place and colored and textured to match the design documents.
- 1.4.1.1.2 Vehicular traffic and traffic parking areas are generally asphaltic concrete with concrete curbs or curbs and gutters.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 95 06
RECYCLED CONTENT CERTIFICATION FORM

See Recycled Content Certification Form (next two (2) pages)

CIWMB #74 (rev. 9/01)

Document # _____

Recycled-Content Certification

This form must be completed by contractor. The contractor must return the certification to the Owner’s Representative, with a row completed for each product supplied to the State. Attach additional sheets if necessary. Information must be included, even if the product does not contain recycled-content material.

Contractor’s Name _____ Date _____
 Address _____ Phone _____
 Fax _____ E-mail _____ Website _____

Item/Row Number	Quantity	Unit of Measure	Dollars	Product Description	Product Category 1	Virgin Content (Percent) ²	Post-Consumer Material (Percent) ³	Secondary Material (Percent) ⁴	Total Percents
									100%
									100%
									100%
									100%
									100%
									100%
			Total \$						

Public Contract Code sections 10233, 1030.5, and 10354 require all vendors and contractors to certify in writing, under penalty of perjury, to the State agency awarding a contract, the minimum, if not the exact, percentage of post-consumer and secondary material in the products, materials, goods, or supplies offered or sold.

Public Contract Code section 12205 (a) requires all State agencies to require all contractors to certify in writing, under penalty of perjury, the minimum, if not the exact percentage, of post-consumer and secondary material in the products, materials, goods or supplies offered or sold.

Printed name of person completing form
 (See footnotes on the back of this page.) Footnotes

Title

Signature of person completing form

CIWMB #74 (rev. 9/01)

Document # _____

You must submit copies of this form and/or other documentation for each product that contains any amount of recycled material for inclusion in the annual SABRC procurement report to the Board each year with the report form (CIWMB #71)

Please do not send recycled-content certification forms or other documentation for products that do not contain any recycled-content material.

1. Product category refers to one of the product categories into which the reportable recycled-content product (RCP) purchase falls. For products made from multiple materials, choose the category that comprises most of the product, either by a weight or volume criteria. If the product does not fit into any of the product categories, put "NA." The product categories and corresponding content requirements are defined as follows:

Recycled-content printing and writing papers (PWB) include copy paper and xerographic papers of all colors, and higher-grade papers such as watermarked and cotton fiber papers. High-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, ruled tablets, calendars, posters, manila file folders, index cards, white wove envelopes, and other uncoated printing and writing paper such as writing and office paper, book paper, cotton-fiber paper (containing 25-75 percent cotton fiber), and cover stock are all included in the PWP category.

Recycled steel product means flat rolled products with at least 25 percent of the total weight consisting of secondary and post-consumer material, with not less than 10 percent post-consumer material. Products made with flat rolled steel meeting these content percentages may include automobiles, cans, appliances, and office furniture and supplies.

Recycled-content product (RCP) for paper products, plastic products, glass products, tires, tire-derived products, compost and co-compost, lubricating oil, paints, solvents, is identified in PCC section 12200 (SB 1915, 1994) as containing at least 50 percent of the total weight of which consists of secondary and post-consumer material with not less than 10 percent of its total weight consisting of post-consumer material. This definition applies to all product categories that do not have specific statutory definitions.

2. Virgin material content is that portion of the product made from non-recycled material, that is, the material is neither secondary nor post-consumer material.
3. Post-consumer material is defined as "a finished material which would have been disposed of as a solid waste, having completed its life cycle as a

Consumer item, and does not include manufacturing wastes." This is material such as newspaper that you read and was recycled and then made into recycled-content newsprint or some other recycled product. Post-consumer material is generally any product that was bought by the consumer, used, and then recycled into another product.

4. Secondary material is defined as "fragments of finished products or finished products of a manufacturing process, which has converted a resource into a commodity of real economic value, but does not include excess virgin resources of the manufacturing process." This is material such as newsprint that is trimmed from a roll in the paper plant that is returned to the beginning of the process to make recycled-content newsprint. The material (product) did not get to the consumer before being recycled.

Secondary material **does not** include post-consumer material. **For example,** if a printing and writing paper contained 20 percent post-consumer material, you would indicate 20 percent in the post-consumer column and 80 percent in the virgin column. If the product had 40 percent secondary material and 20 percent post-consumer material, you would indicate 40 percent in the secondary column. To meet the 50/10 content requirement of another product category, the product would contain 50 percent recycled-content (40 percent secondary and 10 percent post-consumer material) and 50 percent virgin material.

5. The sum of the virgin column, the post-consumer column, and the secondary column must equal 100 percent.

Note: Products that are made from multiple material types should be reported in the product category of the material type representing most of the product. The amount of material used in the product can be measured by weight or volume. If, for instance, a chair is made from steel, aluminum, and plastic and most of the material, either by weight or volume, is plastic, report it as a plastic product. If, however, most of the product, either by weight or volume, is steel, report the purchase as a steel product.