

**PROJECT MANUAL 23007 Phase 2**

**DSA APPLICATION NO: 01-121950**

**COLEMAN ELEMENTARY SCHOOL  
KINDERGARTEN PLAY YARD AND PLAYGROUND  
MODERNIZATION  
SAN RAFAEL, CALIFORNIA**

**San Rafael City Schools**

**DSA Plan Check**

**October 01, 2024**

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**GENERAL CONSTRUCTION PROVISIONS  
FOR THE FOLLOWING PROJECT:**

**[NAME OF] PROJECT**

**BY AND BETWEEN**

**SAN RAFAEL CITY SCHOOLS**

**AND**

**[DEVELOPER]**

Dated as of \_\_\_\_\_, 20\_\_

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## 1. Contract Terms and Definitions

### 1.1 Definitions

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

**1.1.1 Adverse Weather.** Shall be only weather that satisfies all of the following conditions: (1) unusually severe precipitation, sleet, snow, hail, or extreme temperature or air conditions in excess of the norm for the location and time of year it occurred based on the closest weather station data averaged over the past five years, (2) that is unanticipated and would cause unsafe work conditions and/or is unsuitable for scheduled work that should not be performed during inclement weather (i.e., exterior finishes), and (3) at the Project.

**1.1.2 Allowance(s):** The Allowance Item(s) identified in **Exhibit C** and included in the Guaranteed Maximum Price. Any unused portion of the Allowance will revert to the District documented by a deductive Change Order. Developer hereby authorizes the District to execute a unilateral deductive Change Order at or near the end of the Project for all or any portion of the Allowance not allocated.

**1.1.3 Allowance Expenditure Directive.** Written authorization for expenditure of an Allowance, if any. Developer shall not bill for or be due any portion of an Allowance unless the District has identified specific work, Developer has submitted a price for that work or the District has proposed a price for that work, the District has accepted the cost for that work, and the District has executed an Allowance Expenditure Directive incorporating that work.

**1.1.4 Approval, Approved, and/or Accepted.** Written authorization, unless stated otherwise.

**1.1.5 Architect (or "Design Professional in General Responsible Charge").** The individual, partnership, corporation, joint venture, or any combination thereof, named as Architect, who will have the rights and authority assigned to the Architect in the Contract Documents. The term Architect means the Design Professional in General Responsible Charge as defined in DSA PR 13-02 on this Project or the Architect's authorized representative.

**1.1.6 As-Builts.** Digitally prepared and reproducible drawings using the web-based ProCore application, or comparable, to be prepared on a monthly basis pursuant to the Contract Documents, that reflect changes made during the performance of the Work, recording differences between the original design of the Work and the Work as constructed since the preceding monthly submittal. See **Record Drawings**.

**1.1.7 Burdened.** The labor rate for Developer or any Subcontractor inclusive of any and all burden costs including, but not limited to, health and welfare pay, vacation and holiday pay, pension contributions, training rates, benefits of any kind, insurance of any kind, workers' compensation, liability insurance, truck expenses, supply expenses of any kind, payroll taxes, and any other taxes of any kind.

**1.1.8 Change Order.** A written order to Developer authorizing an addition to, deletion from, or revision in the Work, and/or authorizing an adjustment in the Guaranteed Maximum Price or Contract Time.

**1.1.9 Claim.** A Dispute that remains unresolved at the conclusion of all the applicable Dispute Resolution requirements provided herein.

**1.1.10 Completion.** The earliest of the date of acceptance by the District or the cessation of labor thereon for a continuous period of sixty (60) days.

**1.1.11 Construction Change Directive.** A written order prepared and issued by the District, the Construction Manager, and/or the Architect and signed by the District and the Architect, directing a change in the Work.

**1.1.12 Construction Manager.** The individual, partnership, corporation, joint venture, or any combination thereof, or its authorized representative, named as such by the District. If no Construction Manager is used on the Project that is the subject of this Contract, then all references to Construction Manager herein shall be read to refer to District.

**1.1.13 Construction Schedule.** The progress schedule of construction of the Project as provided by Developer and approved by District.

**1.1.14 Contingency.** The GMP proposal will contain, as part of the estimated cost of the Work, Project's Contingency, a sum mutually agreed upon, controlled by District, and monitored by District and Developer to cover costs that are properly reimbursable as a cost of the Work, but are not the basis for a Change Order. Project's Contingency will not be used for changes in scope or for any item that would be the basis for an increase in the GMP. Developer will provide District with a monthly accounting of charges against Project's Contingency, if applicable, with each application for payment. Any unused Project Contingency belongs to District.

**1.1.15 Contract.** The agreement between the District and Developer contained in the Contract Documents.

**1.1.16 Contract Documents.** The Contract Documents consist exclusively of the documents evidencing the agreement of the District and Developer. The Contract Documents consist of the following documents:

**1.1.16.1** Non-Collusion Declaration

**1.1.16.2** Iran Contracting Act Certification

**1.1.16.3** Site Lease

**1.1.16.4** Facilities Lease, including Exhibits A-G

**1.1.16.4.1** Iran Contracting Act Certification (if applicable)

**1.1.16.4.2** Federal Debarment Certification (if applicable)

**1.1.16.4.3** Federal Byrd Anti-Lobbying Certification (if applicable)

**1.1.16.4.4** Performance Bond



**1.1.16.4.5** Payment Bond (Developer's Labor & Material Bond)

**1.1.16.4.6** Workers' Compensation Certification

**1.1.16.4.7** Prevailing Wage Certification

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**1.1.16.4.9** Drug-Free Workplace Certification

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**1.1.16.4.11** Disabled Veterans Business Enterprise Participation Certification (if applicable)

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**1.1.16.4.21** Guarantee Form

**1.1.16.4.22** Agreement and Release of Any and All Claims

**1.1.16.5** All Plans, Technical Specifications, and Drawings, including the Division of the State Architect approved versions of the foregoing

**1.1.16.6** Any and all addenda to any of the above documents

**1.1.16.7** Any and all change orders or written modifications to the above documents if approved in writing by the District

**1.1.17 Contract Time.** The time period stated in the Facilities Lease for the completion of the Work.

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

**1.1.19 Day(s).** Unless otherwise designated, day(s) means calendar day(s).

**1.1.20 Department of Industrial Relations (or "DIR").** DIR is responsible, among other things, for labor compliance monitoring and enforcement of California prevailing wage laws and regulations for public works contracts.

**1.1.21 Design Professional in General Responsible Charge.** See definition of Architect above.

**1.1.22 Developer.** The person or persons identified in the Facilities Lease as contracting to perform the Work to be done under this Contract, or the legal representative of such a person or persons.

**1.1.23 Dispute.** A separate demand by Developer for a time extension, or payment of money or damages arising from Work done by or on behalf of Developer pursuant to the Contract and payment of which is not otherwise expressly provided for or Developer is not otherwise entitled to; or an amount of payment disputed by the District.

**1.1.24 District.** The public agency or the school district for which the Work is performed. The governing board of the District or its designees will act for the District in all matters pertaining to the Contract. The District may, at any time:

**1.1.24.1** Direct Developer to communicate with or provide notice to the Construction Manager or the Architect on matters for which the Contract Documents indicate Developer will communicate with or provide notice to the District; and/or

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

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

**1.1.26 DSA.** Division of the State Architect.

**1.1.27 Force Account Directive.** A process that may be used when the District and Developer cannot agree on a price for a specific portion of work or before Developer prepares a price for a specific portion of work and whereby Developer performs the work as indicated herein on a time and materials basis.

**1.1.28 Guaranteed Maximum Price.** The total monies payable to Developer under the terms and conditions of the Contract Documents.

**1.1.29 Job Cost Reports.** Any and all reports or records detailing the costs associated with work performed on or related to the Project that Developer shall maintain for the Project. Specifically, Job Cost Reports shall contain, but are not limited by or to, the following information: a description of the work performed or to be performed on the Project; quantity, if applicable, of work performed (hours, square feet, cubic yards, pounds, etc.) for the Project; Project budget; costs for the Project to date; estimated costs to complete the Project; and expected costs at completion. The Job Cost Reports shall also

reflect all Contract cost codes, change orders, elements of non-conforming work, back charges, and additional services.

**1.1.30 Labor Commissioner's Office (or "Labor Commissioner").** Also known as the Division of Labor Standards Enforcement ("DLSE"): Division of the DIR responsible for adjudicating wage claims, investigating discrimination and public works complaints, and enforcing Labor Code statutes and Industrial Welfare Commission orders.

**1.1.31 Material Safety Data Sheets (or "MSDS").** A form with data regarding the properties for potentially harmful substances handled in the workplace.

**1.1.32 Municipal Separate Storm Sewer System (or "MS4").** A system of conveyances used to collect and/or convey storm water, including, without limitation, catch basins, curbs, gutters, ditches, man-made channels, and storm drains.

**1.1.33 Plans.** See "Drawings".

**1.1.34 Premises.** The real property on which the Site is located.

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

**1.1.36 Product Data.** Illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by Developer to illustrate a material, product, or system for some portion of the Work.

**1.1.37 Program Manager.** The individual, partnership, corporation, joint venture, or any combination thereof, or its authorized representative, named as such by the District. If no Program Manager is designated for the Project that is the subject of the Contract Documents, then all references to Program Manager herein shall be read to refer to District.

**1.1.38 Project.** The planned undertaking as provided for in the Contract Documents.

**1.1.39 Project Inspector (or "Inspector").** The individual(s) retained by the District in accordance with title 24 of the California Code of Regulations to monitor and inspect the Project.

**1.1.40 Project Labor Agreement (or "PLA" or Project Stabilization Agreement or "PSA").** A prehire collective bargaining agreement in accordance with Public Contract Code section 2500 *et seq.* that establishes terms and conditions of employment for a specific construction project or projects and/or is an agreement described in Section 158(f) of Title 29 of the United States Code.

**1.1.41 Proposed Change Order (or "PCO").** A written request prepared by Developer requesting that the District, the Construction Manager and the Architect issue a Change Order based upon a proposed change to the Work, to the Guaranteed Maximum Price, and/or to the Contract Time.

**1.1.42 Provide.** Shall include "provide complete in place," that is, "furnish and install," and "provide complete and functioning as intended in place" unless specifically stated otherwise.

**1.1.43 Qualified SWPPP Practitioner (or "QSP").** Certified personnel that attended a State Water Resources Control Board sponsored or approved training class and passed the qualifying exam.

**1.1.44 Record Drawings.** Unless otherwise defined in the Special Conditions, Reproducible drawings (or Plans) prepared pursuant to the requirements of the Contract Documents, that reflect all changes made during the performance of the Work, recording differences between the original design of the Work and the Work as constructed upon completion of the Project. See also "**As-Builts.**"

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

**1.1.46 Request for Substitution for Specified Item.** A request by Developer to substitute an equal or superior material, product, thing, or service for a specific material, product, thing, or service that has been designated in the Contract Documents by a specific brand or trade name.

**1.1.47 Safety Orders.** Written and/or verbal orders for construction issued by the California Division of Occupational Safety and Health ("Cal/OSHA") or by the United States Occupational Safety and Health Administration ("OSHA").

**1.1.48 Safety Plan.** Developer's safety plan specifically adapted for the Project. Developer's Safety Plan shall comply with all provisions regarding Project safety, including all applicable provisions in these Construction Provisions.

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

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

**1.1.51 Site.** The Project site as shown on the Drawings.

**1.1.52 Specifications.** That portion of the Contract Documents, Division 1 through Division 49, and all technical sections, and addenda to all of these, if any, consisting of written descriptions and requirements of a technical nature of materials, equipment, construction methods and systems, standards, and workmanship.

**1.1.53 State.** The State of California.

**1.1.54 Storm Water Pollution Prevention Plan (or "SWPPP").** A document which identifies sources and activities at a particular facility that may contribute pollutants to storm water and contains specific control measures and time frames to prevent or treat such pollutants.

**1.1.55 Subcontractor.** A contractor and/or supplier who is under contract with Developer or with any other subcontractor, regardless of tier, to perform a portion of the Work of the Project.

**1.1.56 Submittal Schedule.** The schedule of submittals as provided by Developer and approved by District.

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

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

## **1.2 Laws Concerning the Contract Documents; Venue**

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

To the fullest extent permitted by California law, the county in which the District administration office is located shall be the venue for any action or proceeding that may be brought or arise out of, in connection with or by reason of this Contract.

## **1.3 No Oral Agreements**

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

## **1.4 No Assignment**

Except as specifically permitted in the Facilities Lease, Developer shall not assign the Contract Documents or any part thereof including, without limitation, any services or money to become due hereunder without the prior written consent of the District. Assignment without District's prior written consent shall be null and void. Any assignment of money due or to become due under the Contract Documents shall be subject to a prior lien for services rendered or material supplied for performance of Work called for under the Contract Documents in favor of all persons, firms, or corporations rendering services or supplying material to the extent that claims are filed pursuant to the Civil Code, Code of Civil Procedure, Government Code, Labor Code, and/or Public Contract Code, and shall also be subject to deductions for liquidated damages or withholding of payments as determined by District in accordance with the Contract Documents. Developer shall not assign or transfer in

any manner to a Subcontractor or supplier the right to prosecute or maintain an action against the District.

## **1.5 Notice and Service Thereof**

**1.5.1** Any notice from one party to the other or otherwise under the Contract Documents shall be in writing and shall be dated and signed by the party giving notice or by a duly authorized representative of that party. Notice shall not be effective for any purpose whatsoever unless served in one of the following manners:

**1.5.1.1** If notice is given by personal delivery thereof, it shall be considered delivered on the day of delivery.

**1.5.1.2** If notice is given by overnight delivery service, it shall be considered delivered one (1) day after date deposited, as indicated by the delivery service.

**1.5.1.3** If notice is given by depositing same in United States mail, enclosed in a sealed envelope, it shall be considered delivered five (5) days after date deposited, as indicated by the postmarked date.

**1.5.1.4** If notice is given by registered or certified mail with postage prepaid, return receipt requested, it shall be considered delivered on the day the notice is signed for.

## **1.6 No Waiver**

The failure of District in any one or more instances to insist upon strict performance of any of the terms of the Contract Documents or to exercise any option herein conferred shall not be construed as a waiver or relinquishment to any extent of the right to assert or rely upon any such terms or option on any future occasion. No action or failure to act by the District, Architect, or Construction Manager shall constitute a waiver of any right or duty afforded the District under the Contract Documents, nor shall any action or failure to act constitute an approval of or acquiescence on any breach thereunder, except as may be specifically agreed in writing.

## **1.7 Substitutions For Specified Items**

Developer shall not substitute different items for any items identified in the Contract Documents without prior written approval of the District, unless otherwise provided in the Contract Documents.

## **1.8 Materials and Work**

**1.8.1** Except as otherwise specifically stated in the Contract Documents, Developer shall provide and pay for all materials, labor, tools, equipment, transportation, supervision, temporary constructions of every nature, and all other services, management, and facilities of every nature whatsoever necessary to execute and complete the Work, in a good and workmanlike manner, within the Contract Time.

**1.8.2** Unless otherwise specified, all materials shall be new and of the best quality of their respective kinds and grades as noted or specified, and workmanship shall be of high quality, and Developer shall use all diligence to

inform itself fully as to the required manufacturer's instructions and to comply therewith.

**1.8.3** Materials shall be furnished in ample quantities and at such times as to ensure uninterrupted progress of Work and shall be stored properly and protected from the elements, theft, vandalism, or other loss or damage as required.

**1.8.4** For all materials and equipment specified or indicated in the Drawings and Specifications, Developer shall provide all labor, materials, equipment, and services necessary for complete assemblies and complete working systems, functioning as intended. Incidental items not indicated on Drawings, nor mentioned in the Specifications, that can legitimately and reasonably be inferred to belong to the Work described, or be necessary in good practice to provide a complete assembly or system, shall be furnished as though itemized here in every detail. In all instances, material and equipment shall be installed in strict accordance with each manufacturer's most recent published recommendations and specifications.

**1.8.5** Developer shall, after award of the Project by District and after relevant submittals have been reviewed, place orders for materials and/or equipment as specified so that delivery of same may be made without delays to the Work. Developer shall, upon five (5) days' demand from District, present documentary evidence showing that orders have been placed.

**1.8.6** In the event of Developer's neglect in complying or failure to comply with the above instructions, District reserves the right, but has no obligation, to place orders for such materials and/or equipment as the District may deem advisable so that the Work may be completed by the date specified in the Facilities Lease, and all expenses incidental to the procuring of said materials and/or equipment shall be paid for by Developer or deducted from payment(s) to Developer.

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

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

**1.8.9** Title to new materials and/or equipment for the Work of the Contract Documents and attendant liability for its protection and safety shall remain with Developer until incorporated in the Work of the Contract Documents and accepted by District. No part of any materials and/or equipment shall be removed from its place of storage except for immediate installation in the Work of the Contract Documents. Should the District, in its discretion, allow Developer to store materials and/or equipment for the Work off-site, Developer will store said materials and/or equipment at a bonded warehouse and with appropriate insurance coverage at no cost to District. Developer shall keep an accurate inventory of all materials and/or equipment in a manner satisfactory to District or its authorized representative and shall, at the District's request, forward it to the District.

**1.8.10 [Reserved]**

**2. [Reserved]**

**3. Architect**

**3.1** The Architect shall represent the District during the Project and will observe the progress and quality of the Work on behalf of the District. Architect shall have the authority to act on behalf of District to the extent expressly provided in the Contract Documents and to the extent determined by District. Architect shall have authority to reject materials, workmanship, and/or the Work whenever rejection may be necessary, in Architect's reasonable opinion, to ensure the proper execution of the Contract Documents.

**3.2** Architect shall, with the District and on behalf of the District, determine the amount, quality, acceptability, and fitness of all parts of the Work, and interpret the Specifications, Drawings, and shall, with the District, interpret all other Contract Documents.

**3.3** Architect shall have all authority and responsibility established by law, including title 24 of the California Code of Regulations.

**3.4** Developer shall provide District and the Construction Manager with a copy of all written communication between Developer and Architect at the same time as that communication is made to Architect, including, without limitation, all RFIs, correspondence, submittals, claims, change order requests and/or proposed change orders.

**4. Construction Manager**

**4.1** If a Construction Manager is used on this Project ("Construction Manager" or "CM"), the Construction Manager will provide administration of the Contract Documents on the District's behalf. After execution of the Contract Documents, all correspondence and/or instructions from Developer and/or District shall be forwarded through the Construction Manager. The Construction Manager will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences, or procedures or for safety precautions in connection with the Work, which shall all remain Developer's responsibility.

**4.2** The Construction Manager, however, will have authority to reject materials and/or workmanship not conforming to the Contract Documents, as determined by the District, the Architect, and/or the Project Inspector. The Construction Manager shall



also have the authority to require special inspection or testing of any portion of the Work, whether it has been fabricated, installed, or fully completed. Any decision made by the Construction Manager in good faith, shall not give rise to any duty or responsibility of the Construction Manager to: Developer, any Subcontractor, or their agents, employees, or other persons performing any of the Work. The Construction Manager shall have free access to any or all parts of Work at any time.

**4.3** If the District does not use a Construction Manager on this Project, all references within the Contract Documents to Construction Manager or CM shall be read as District.

## **5. Inspector, Inspections, and Tests**

### **5.1 Project Inspector**

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

**5.1.2** No Work shall be carried on except with the knowledge and under the inspection of the Project Inspector(s). The Project Inspector(s) shall have free access to any or all parts of Work at any time. Developer shall furnish Project Inspector(s) reasonable opportunities for obtaining such information as may be necessary to keep Project Inspector(s) fully informed respecting progress and manner of work and character of materials, including, but not limited to, submission of form DSA 156 (or the most current version applicable at the time the Work is performed) to the Project Inspector at least 48 hours in advance of the commencement and completion of construction of each and every aspect of the Work. Forms are available on the DSA's website at: <http://www.dgs.ca.gov/dsa/Forms.aspx>. Inspection of Work shall not relieve Developer from an obligation to fulfill the Contract Documents. Project Inspector(s) and the DSA are authorized to suspend work whenever Developer and/or its Subcontractor(s) are not complying with the Contract Documents. Any work stoppage by the Project Inspector(s) and/or DSA shall be without liability to the District. Developer shall instruct its Subcontractors and employees accordingly.

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

### **5.2 Tests and Inspections**

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

**5.2.2** The District will select an independent testing laboratory to conduct the tests. Selection of the materials required to be tested shall be by the laboratory or the District's representative and not by Developer. Developer shall notify the

District's representative a sufficient time in advance of its readiness for required observation or inspection. This notice shall be provided, at a minimum, forty-eight (48) hours prior to the inspection of the material that needs to be tested and, at a minimum, seventy-two (72) hours prior to any special or off-site inspection.

**5.2.3** Developer shall notify the District's representative a sufficient time in advance of the manufacture of material to be supplied under the Contract Documents that must by terms of the Contract Documents be tested so that the District may arrange for the testing of same at the source of supply. This notice shall be provided, at a minimum, seventy-two (72) hours prior to the manufacture of the material that needs to be tested.

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

**5.2.5** The District will select the testing laboratory and pay for the costs for all tests and inspections, except those inspections performed at Developer's request and expense. Developer shall reimburse the District for any and all laboratory costs or other testing costs for any materials found to be not in compliance with the Contract Documents. At the District's discretion, District may elect to deduct laboratory or other testing costs for noncompliant materials from the Guaranteed Maximum Price, and such deduction shall not constitute a withholding.

### **5.3 Costs for After Hours and/or Off Site Inspections**

If Developer performs Work outside the Inspector's regular working hours, costs of any inspections required outside regular working hours shall be borne by Developer and may be invoiced to Developer by the District or the District may deduct those expenses from the next Tenant Improvement Payment.

## **6. Developer**

Developer shall construct and complete, in a good and workmanlike manner, the Work for the Guaranteed Maximum Price including any adjustment(s) to the Guaranteed Maximum Price pursuant to provisions herein regarding changes to the Guaranteed Maximum Price. Except as otherwise noted, Developer shall provide and pay for all labor, materials, equipment, permits (excluding DSA), fees, licenses, facilities, transportation, taxes, bonds and insurance, and services necessary for the proper execution and completion of the Work, except as indicated herein.

### **6.1 Status of Developer**

**6.1.1** Developer represents and warrants that Developer is an independent do or business entity that is: (i) free from the control and direction of the District in connection with the performance of the Services, (ii) performing Services that are outside the usual course of the District's business, and (iii) customarily engaged in an independently established trade, occupation, or business of the same nature as that involved in the Services performed, District being interested only in the results obtained. Developer understands and agrees that it and all of its employees and its Subcontractors shall not be considered

officers, employees, agents, partner, or joint venture of the District, and are not entitled to benefits of any kind or nature normally provided employees of the District and/or to which District's employees are normally entitled, including, but not limited to, State Unemployment Compensation or Worker's Compensation. Developer shall assume full responsibility for payment of all federal, state, and local taxes or contributions, including unemployment insurance, social security, and income taxes with respect to Consultant's employees. Developer is and shall at all times be deemed be wholly responsible for the manner in which it, its agents, and its Subcontractors perform the services required of it by the Contract Documents. Nothing herein contained shall be construed as creating the relationship of employer and employee, or principal and agent, between the District, or any of the District's employees or agents, and Developer or any of Developer's Subcontractors, agents or employees. District shall be permitted to monitor Developer's activities to determine compliance with the terms of the Contract Documents.

**6.1.2** As required by law, Developer and all Subcontractors shall be properly licensed and regulated by the Contractors State License Board, 9821 Business Park Drive, Sacramento, California 95827 (Post Office Box 26000, Sacramento, California 95826), <http://www.cslb.ca.gov>.

**6.1.3** As required by law, Developer and all Subcontractors shall be properly registered as public works contractors by the Department of Industrial Relations at <https://efiling.dir.ca.gov/PWCR/ActionServlet?action=displayPWCRegistrationForm> or current URL.

**6.1.4** Developer represents that Developer and all Subcontractors shall not be presently debarred, suspended, proposed for disbarment, declared ineligible or excluded pursuant to either Labor Code section 1777.1 or Labor Code section 1777.7.

**6.1.5 [Reserved]**

**6.1.6** Developer represents that it has no existing interest and will not acquire any interest, direct or indirect, which could conflict in any manner or degree with the performance of Work required under this Contract and that no person having any such interest shall be employed by Developer.

**6.1.7 [Reserved]**

**6.1.8** If Developer intends to make any change in the name or legal nature of the Developer's entity, Developer must first notify the District in writing prior to making any contemplated change. The District shall determine in writing if Developer's intended change is permissible while performing this Contract.

## **6.2 Project Inspection Card(s)**

Developer shall verify that forms DSA 152 (or most current version applicable at the time the Work is performed) are issued for the Project prior to the commencement of construction.

## **6.3 Developer's Supervision**

**6.3.1** During progress of the Work, Developer shall keep on the Premises, and at all other locations where any Work related to the Contract is being

performed, an experienced and competent project manager and construction superintendent who are employees of Developer, to whom the District does not object and whom shall be fluent in English, written and verbal.

**6.3.2** The project manager and construction superintendent shall both speak fluent English and the predominant language of Developer's employees.

**6.3.3** Developer acknowledges the quality and qualifications of the Key Personnel were important factors in District's selection of Developer for the Project. Developer and District agree that the personal services of the Key Personnel are a material term of the Contract Documents. Developer and District agree further that the substitution or removal or change in role or level of effort of such Key Personnel would result in damages to the District, the measure of which would be impractical or extremely difficult to fix. In lieu such damages, District and Developer have agreed to liquidated damages as described below:

**6.3.3.1** Before commencing the Work herein, Developer shall give written notice to District of Developer's Key Personnel.

**6.3.3.2** Key Personnel shall be the same as those individuals identified in Developer's response to the District's RFQ/P.

**6.3.3.3** For any substitution of any Key Personnel individual before the end of the individual's Project commitment period provided in Developer's Key Personnel staffing schedule, District may assess once, and Developer shall accept, liquidated damages in the amount of six (6) times the gross monthly salary for each substituted Key Personnel.

**6.3.4** Developer's Key Personnel shall not be changed except with prior written notice to, and approval by, District.

**6.3.5** If any of Developer's Key Personnel prove to be unsatisfactory to Developer, or to District, any of the District's employees, agents, the Construction Manager, or the Architect, the unsatisfactory Key Personnel shall be replaced. However, Developer shall immediately notify District in writing before any change occurs, but no less than two (2) business days prior. Any replacement of Key Personnel shall be made promptly and must be satisfactory to the District. Developer's Key Personnel shall each represent Developer, and all directions given to Key Personnel shall be as binding as if given to Developer.

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

**6.3.7** All contractors doing work on the Project will provide their workers with identification badges. These badges will be worn by all members of the contractor's staff who are working in a District facility.

**6.3.7.1** Badges must be filled out in full and contain the following information:

**6.3.7.1.1** Name of contractor

**6.3.7.1.2** Name of employee

**6.3.7.1.3** Contractor's address and phone number

**6.3.7.2** Badges are to be worn when Developer or his/her employees are on site and must be visible at all times. Contractors must inform their employees that they are required to allow District employees, the Architect, the Construction Manager, the Program Manager, or the Project Inspector to review the information on the badges upon request.

**6.3.7.3** Continued failure to display identification badges as required by this policy may result in the individual being removed from the Project or assessment of fines against the contractor.

#### **6.4 Duty to Provide Fit Workers**

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

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

**6.4.3** Developer shall furnish labor that can work in harmony with all other elements of labor employed or to be employed in the Work.

**6.4.4 Fingerprinting.** Developer shall comply with the provisions of Education Code section 45125.2 regarding the submission of employee fingerprints to the California Department of Justice and the completion of criminal background investigations of its employees, Subcontractor(s), and Subcontractors' employees. Developer shall not permit any employee to have any contact with District pupils until such time as Developer has verified in writing to the governing board of the District, (A) that such employee has not been convicted of a violent or serious felony, as defined in Education Code section 45122.1 and/or (B) that the prohibition does not apply to an employee as provided by Education Code section 45125.1(e)(2) or (3). Developer shall fully complete and perform all tasks required pursuant to the Criminal Background Investigation/ Fingerprinting Certification.

#### **6.5 Field Office**

**6.5.1** Developer shall provide on the Site a temporary office.

#### **6.6 Purchase of Materials and Equipment**

Developer is required to order, obtain, and store materials and equipment sufficiently in advance of its Work at no additional cost or advance payment from District to assure that there will be no delays.

## **6.7 Documents on Work**

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

### **6.7.2 Daily Job Reports**

**6.7.2.1** Developer shall maintain, at a minimum, at least one (1) set of Daily Job Reports on the Project. These must be prepared by Developer's employee(s) who are present on Site, and must include, at a minimum, the following information:

**6.7.2.1.1** A brief description of all Work performed on that day.

**6.7.2.1.2** A summary of all other pertinent events and/or occurrences on that day.

**6.7.2.1.3** The weather conditions on that day.

**6.7.2.1.4** A list of all Subcontractor(s) working on that day, including DIR registration numbers, Subcontractor employees working, and hours of work.

**6.7.2.1.5** A list of each Developer employee working on that day and the total hours worked for each employee.

**6.7.2.1.6** A complete list of all equipment on Site that day, whether in use or not.

**6.7.2.1.7** A complete list of all materials, supplies, and equipment delivered on that day, and verification that all materials, supplies, and equipment comply with the Contract Documents and are properly stored.

**6.7.2.1.8** A complete list of all inspections and tests performed on that day.

**6.7.2.1.9** Daily verification the Project is properly secured from the public and unauthorized entry.

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

## **6.8 Preservation of Records**

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

## **6.9 Integration of Work**

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

**6.9.2** Developer shall make its own layout of lines and elevations and shall be responsible for the accuracy of both Developer's and Subcontractors' work resulting therefrom.

**6.9.3** Developer and all Subcontractors shall take all field dimensions required in performance of the Work, and shall verify all dimensions and conditions on the Site. All dimensions affecting proper fabrication and installation of all Work must be verified prior to fabrication by taking field measurements of the true conditions. If there are any discrepancies between dimensions in drawings and existing conditions which will affect the Work, Developer shall bring such discrepancies to the attention of the District and Architect for adjustment before proceeding with the Work. In doing so, it is recognized that Developer is not acting in the capacity of a licensed design professional, and that Developer's examination is made in good faith to facilitate construction and does not create an affirmative responsibility of a design professional to detect errors, omissions or inconsistencies in the Contract Documents or to ascertain compliance with applicable laws, building codes or regulations. However, nothing in this provision shall abrogate Developer's responsibilities for discovering and reporting any error, inconsistency, or omission pursuant to the Contract within Developer's standard of care including, without limitation, any applicable laws,

ordinance, rules, or regulations. Following receipt of written notice from Developer, the District and/or Architect shall inform Developer what action, if any, Developer shall take with regard to such discrepancies.

**6.9.4** All costs caused by noncompliant, defective, or delayed Work shall be borne by Developer, inclusive of repair work. Schedule delays resulting from unauthorized work shall be Developer's responsibility.

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

## **6.10 Notifications**

**6.10.1** Developer shall notify the Architect and Project Inspector, in writing, of the commencement of construction of each and every aspect of the Work at least 48 hours in advance by submitting form DSA 156 (or the most current version applicable at the time the Work is performed) to the Project Inspector. Forms are available on the DSA's website at: <http://www.dgs.ca.gov/dsa/Forms.aspx>.

**6.10.2** Developer shall notify the Architect and Project Inspector, in writing, of the completion of construction of each and every aspect of the Work at least 48 hours in advance by submitting form DSA 156 (or the most current version applicable at the time the Work is performed) to the Project Inspector.

## **6.11 Obtaining of Permits, Licenses and Registrations**

**6.11.1** Developer shall secure and pay for any permits (except DSA), licenses, registrations, approvals, and certificates necessary for prosecution of Work, including but not limited to those listed in the Special Conditions, **Exhibit D-1**, if any, before the date of the commencement of the Work or before the permits, licenses, registrations, approvals and certificates are legally required to continue the Work without interruption. Developer shall obtain and pay, only when legally required, for all licenses, approvals, registrations, permits, inspections, and inspection certificates required to be obtained from or issued by any authority having jurisdiction over any part of the Work included in the Contract Documents. All final permits, licenses, registrations, approvals and certificates shall be delivered to District before demand is made for final payment. The costs associated with said permits, licenses, registrations, approvals and certificates shall be direct reimbursement items and are not subject to any markup.

### **6.11.2 General Permit For Storm Water Discharges Associated With Construction and Land Disturbance Activities.**

**6.11.2.1** Developer acknowledges that all California school districts are obligated to develop and implement the following requirements for the discharge of storm water to surface waters from its construction and land disturbance activities pursuant to the Clean Water Act and Porter Cologne Water Quality Act. District has determined that the construction of this Project requires enrollment in the Construction Storm Water Permit. District has filed certain submittals referred to as Permit



Registration Documents ("PRDS") with the Regional Water Control Board ("Storm Water Pollution Prevention Plan" or "SWPPP").

**6.11.2.2** Developer shall comply with any District SWPPP that is approved by the District and applicable to the Project, at no additional cost to the District. Developer shall pay any fees and any penalties that may imposed by a regulatory agency for its non-compliance with the SWPPP during the course of Work.

**6.11.2.3** Developer shall provide a Qualified Storm Water Practitioner ("QSP") at no additional cost to the District, who shall be onsite and implement and monitor any and all SWPPP requirements applicable to the Project, including but not limited to:

**6.11.2.3.1** All required visual observations, sampling, analysis, reporting and record keeping, including any Numeric Action Levels ("NALs"), if applicable;

**6.11.2.3.2** Rain Event Action Plan ("REAP") at least forty eight (48) hours prior to any forecasted rain event requiring implementation of the REAP, including any erosion and sediment control measures needed to protect all exposed portions of the site, if applicable;

**6.11.2.3.3** Active Treatment System ("ATS"), if applicable; and

**6.11.2.3.4** Best management practices ("BMPs").

## **6.12 Royalties and Patents**

**6.12.1** Developer shall obtain and pay, when legally required, all royalties and license fees necessary for prosecution of Work before the earlier of the date of the commencement of the Work or the date the license is legally required to continue the Work without interruption. Developer shall defend suits or claims of infringement of patent, copyright, or other rights and shall hold the District, Construction Manager and the Architect harmless and indemnify them from loss on account thereof except when a particular design, process, or make or model of product is required by the Contract Documents. However, if Developer has reason to believe that the required design, process, or product is an infringement of a patent or copyright, Developer shall indemnify and defend the District, Construction Manager and Architect against any loss or damage.

**6.12.2** The review by the District, Construction Manager or Architect of any method of construction, invention, appliance, process, article, device, or material of any kind shall be only as to its adequacy for the Work and shall not constitute approve use by Developer in violation of any patent or other rights of any person or entity.

## **6.13 Work to Comply With Applicable Laws and Regulations**

**6.13.1** Developer shall give all notices and comply with the following specific laws, ordinances, rules, and regulations and all other applicable laws, ordinances, rules, and regulations bearing on conduct of Work as indicated and specified, including but not limited to the appropriate statutes and administrative code sections. If Developer observes that Drawings and

Specifications are at variance with any applicable laws, ordinances, rules and regulations, or should Developer become aware of the development of conditions not covered by Contract Documents that may result in finished Work being at variance therewith, Developer shall promptly notify District in writing and any changes deemed necessary by District shall be made as provided in this **Exhibit D** for changes in Work.

**6.13.1.1** National Electrical Safety Code, U. S. Department of Commerce

**6.13.1.2** National Board of Fire Underwriters' Regulations

**6.13.1.3** International Building Code, latest addition, and the California Code of Regulations, title 24, and other amendments

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

**6.13.1.5** Industrial Accident Commission's Safety Orders, State of California

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

**6.13.1.7** Americans with Disabilities Act

**6.13.1.8** Education Code of the State of California

**6.13.1.9** Government Code of the State of California

**6.13.1.10** Labor Code of the State of California, division 2, part 7, Public Works and Public Agencies

**6.13.1.11** Public Contract Code of the State of California

**6.13.1.12** California Art Preservation Act

**6.13.1.13** U. S. Copyright Act

**6.13.1.14** U. S. Visual Artists Rights Act

**6.13.2** Developer shall comply with all applicable mitigation measures, if any, adopted by any public agency or local utility with respect to this Project pursuant to the California Environmental Quality Act (Public Resources Code section 21000 et seq.).

**6.13.3** If Developer performs any Work that it knew, or through exercise of reasonable care should have known, to be contrary to any applicable laws, ordinance, rules, or regulations, Developer shall bear all costs arising therefrom and arising from the correction of said Work.

**6.13.4** Where Specifications or Drawings state that materials, processes, or procedures must be approved by the DSA, State Fire Marshall, or other body or agency, Developer shall use its best efforts to satisfy the requirements of such bodies or agencies applicable at the time the Work is performed, and as determined by those bodies or agencies.

#### **6.13.5 [Reserved]**

### **6.14 Safety/Protection of Persons and Property**

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

**6.14.2** Developer to provide safe access for staff and students at any time, and to provide barricades, sound walls, signage, fencing, and other reasonably necessary protective measures, as necessary, to protect staff and students during construction.

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

**6.14.4** Any construction review of Developer's performance is not intended to include review of the adequacy of Developer's safety measures in, on, or near the Site.

**6.14.5** Implementation and maintenance of safety programs shall be the sole responsibility of Developer.

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

**6.14.7** Developer shall be responsible for all damages to persons or property that occur as a result of its fault or negligence in connection with the prosecution of the Contract Documents and shall take all necessary measures and be responsible for the proper care and completion and final acceptance by District. All Work shall be solely at Developer's risk.

**6.14.8** Developer shall take, and require Subcontractors to take, all necessary precautions for safety of workers on the Project and shall comply with all applicable federal, state, local, and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to premises where Work is being performed and to provide a safe and healthful place of employment. Developer shall furnish, erect, and properly maintain at all times, all necessary safety devices, safeguards, construction canopies, signs, nets, barriers, lights, and watchmen for protection of workers and the public and shall post danger signs warning against hazards created by such features in the course of construction.

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

**6.14.10** Developer shall designate a responsible member of its organization on the Project, whose duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety

requirements, and to protect the life, safety, and health of workers. Name and position of person so designated shall be reported to District by Developer.

**6.14.11** Developer shall correct any violations of safety laws, rules, orders, standards, or regulations. Upon the issuance of a citation or notice of violation by the Division of Occupational Safety and Health, Developer shall correct such violation promptly.

**6.14.12** Developer shall comply with any District storm water requirements that are approved by the District and applicable to the Project, at no additional cost to the District.

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

**6.14.14** All salvage materials will become the property of Developer and shall be removed from the Site unless otherwise called for in the Contract Documents. However, the District reserves the right to designate certain items of value that shall be turned over to the District unless otherwise directed by District.

**6.14.15** All connections to public utilities and/or existing on-site services, including, without limitation, internet, phone, and data connections, shall be made and maintained in such a manner as to not interfere with the continuing use of same by the District during the entire progress of the Work.

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

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

**6.14.18** Developer shall take adequate precautions to protect existing roads, sidewalks, curbs, pavements, utilities, adjoining property, and structures (including, without limitation, protection from settlement or loss of lateral support), and to avoid damage thereto, and repair any damage thereto caused by construction operations.

**6.14.19** Developer shall confine apparatus, the storage of materials, and the operations of workers to limits indicated by law, ordinances, permits, or directions of Architect, and shall not interfere with the Work or unreasonably encumber Premises or overload any structure with materials. Developer shall

enforce all instructions of District and Architect regarding signs, advertising, fires, and smoking, and require that all workers comply with all regulations while on Project Site.

**6.14.20** Developer, Developer's employees, Subcontractors, Subcontractors' employees, or any person associated with the Work shall conduct themselves in a manner appropriate for a school site. No verbal or physical contact with neighbors, students, and faculty, profanity, or inappropriate attire or behavior will be permitted. Developer is also responsible for ensuring workers refrain from wearing inappropriate clothing and/or logos on the Project. District may require Developer to temporarily or permanently remove non-complying persons from Project Site.

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

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

#### **6.15 General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities ("Construction Storm Water Permit")**

**6.15.1** Developer acknowledges that all California school districts are obligated to develop and implement the following requirements for the discharge of storm water to surface waters from its construction and land disturbance activities pursuant to the Clean Water Act and Porter Cologne Water Quality Act. District has determined that the construction of this Project requires enrollment in the Construction Storm Water Permit. District has filed certain submittals referred to as Permit Registration Documents (PRDS) with the Regional Water Control Board (Storm Water Pollution Prevention Plan or "SWPPP").

**6.15.2** Developer shall comply with any District SWPPP that are approved by the District and applicable to the Project at no additional cost to the District. Developer shall pay any fees and any penalties that may be imposed by a regulatory agency for its non-compliance with the SWPPP during the course of Work.

**6.15.3** Developer shall provide a Qualified SWPPP Practitioner (QSP) at no additional cost to the District, who shall be onsite and implement and monitor any and all SWPPP requirements applicable to the Project, including but not limited to:

**6.15.3.1** All required visual observations, sampling, analysis, reporting and record keeping, including any Numeric Action Levels (NALs), if applicable;

**6.15.3.2** Rain Event Action Plan (REAP) at least forty eight (48) hours prior to any forecasted rain event requiring implementation of the REAP, including any erosion and sediment control measures needed to protect all exposed portions of the site, if applicable;

**6.15.3.3** Active Treatment System (ATS), if applicable; and

**6.15.3.4** Best management practices (BMPs).

## **6.16 Working Evenings and Weekends**

Developer may be required to work increased hours, evenings, and/or weekends at no additional cost to the District. Developer shall give the District forty-eight (48) hours' notice prior to performing any evening and/or weekend work. Developer shall perform all evening and/or weekend work in compliance with all applicable rules, regulations, laws, and local ordinances including, without limitation, all noise and light limitations. Developer shall reimburse the District for any increased or additional Inspector charges as a result of Developer's increased hours, or evening and/or weekend work.

## **6.17 Cleaning Up**

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

**6.17.2** Developer at all times shall keep Premises, including property immediately adjacent thereto, free from debris such as waste, rubbish (including personal rubbish of workers, e.g., food wrappers, etc.), and excess materials and equipment caused by the Work. Developer shall not leave debris under, in, or about the Premises (or surrounding property or neighborhood), but shall promptly remove same from the Premises on a daily basis. If Developer fails to clean up, District may do so and the cost thereof shall be charged to Developer. If the Contract calls for Work on an existing facility, Developer shall also perform specific clean-up on or about the Premises upon request by the District as it deems necessary for continued operations. Developer shall comply with all related provisions of the Specifications.

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

**6.17.4** Should Developer fail to perform the required clean-up, or should the clean-up be deemed unsatisfactory by the District, the District may, at its sole discretion, then perform the clean-up. All cost associated with the clean-up work (including all travel, payroll burden, and costs for supervision) will be deducted from the Guaranteed Maximum Price.

#### **6.18 No Relief from Obligations Based on Review by Other Persons**

**6.18.1** Developer shall not be relieved of obligations to perform the Work in accordance with the Contract Documents by act or omission of the District, Architect, Construction Manager, Project Inspector, or DSA or other entities having jurisdiction including, but not limited to, administration of the Contract, review of submittals, or by tests, observation, inspection, or permit /interconnection approvals.

### **7. Subcontractors**

**7.1** Developer shall provide the District with information for all of Developer's Subcontracts and Subcontractors as indicated in Developer's Submittals and Schedules Section herein.

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

**7.3** Developer agrees to bind every Subcontractor by terms of the Contract Documents as far as those terms that are applicable to Subcontractor's work including, without limitation, all labor, wage & hour, apprentice and related provisions and requirements. If Developer subcontracts any part of the Work called for by the Contract Documents, Developer shall be as fully responsible to District for acts and omissions of any Subcontractor and of persons either directly or indirectly employed by any Subcontractor, including Subcontractor caused Project delays, as it is for acts and omissions of persons directly employed by Developer. The divisions or sections of the Specifications and/or the arrangements of the drawings are not intended to control Developer in dividing the Work among Subcontractors or limit the work performed by any trade.

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

**7.5** Developer is directed to familiarize itself with sections 1720 through 1861 of the Labor Code of the State of California, as regards the payment of prevailing wages and related issues, and to comply with all applicable requirements therein including, without limitation, section 1775 and Developer's and Subcontractors' obligations and liability for violations of prevailing wage law and other applicable laws.

**7.6** Developer shall be responsible for the coordination of the trades, Subcontractors, sub-subcontractors, and material or equipment suppliers working on the Project.

**7.6.1** Developer is responsible for ensuring that first-tier Subcontractors holding C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, and/or C-46 licenses, are prequalified by the District to work on the Project pursuant to Public Contract Code section 20111.6.

**7.6.2** Developer is responsible for ensuring that all Subcontractors are properly registered as public works contractors by the Department of Industrial Relations.

**7.7** Developer is solely responsible for settling any differences between Developer and its Subcontractor(s) or between Subcontractors.

**7.8** Developer must include in all of its subcontracts the assignment provisions indicated in the Termination section of these Construction Provisions.

## **8. Other Contracts/Contractors**

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

**8.2** Developer shall protect the work of any other contractor that Developer encounters while working on the Project.

**8.3** If any part of Developer's Work depends for proper execution or results upon work of District or any other contractor, Developer shall visually inspect, and with reasonable effort, physically inspect all accessible portions of District's or any other contractor's work and, before proceeding with its Work, promptly report to the District in writing any defects in District's or any other contractor's work that render Developer's Work unsuitable for proper execution and results. Developer shall be held accountable for damages to District for District's or any other contractor's work that Developer failed to inspect or should have inspected. Developer's failure to inspect and report shall constitute Developer's acceptance of all District's or any other contractor's work as fit and proper for reception of Developer's Work, except as to defects that may develop in District's or any other contractor's work after execution of Developer's Work and not caused by execution of Developer's Work.

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

**8.5** Developer shall ascertain to its own satisfaction the scope of the Project and nature of District's or any other contracts that have been or may be awarded by District in prosecution of the Project to the end that Developer may perform under the Contract in light of the other contracts, if any.

**8.6** Nothing herein contained shall be interpreted as granting to Developer exclusive occupancy of the Site, the Premises, or of the Project. Developer shall not cause any unnecessary hindrance or delay to the use and/or operation(s) of the Premises and/or to District or any other contractor working on the Project. If simultaneous execution of any contract or Premises operation is likely to cause interference with performance of Developer's obligations under the Contract Documents, Developer shall coordinate with those contractor(s), person(s), and/or entity(s) and shall notify the District of the resolution.



## **9. Drawings and Specifications**

**9.1** A complete list of all Drawings that form a part of the Contract Documents are to be found as an index on the Drawings themselves, and/or may be provided to Developer and/or in the Table of Contents.

**9.2** Materials or Work described in words that so applied have a well-known technical or trade meaning shall be deemed to refer to recognized standards, unless noted otherwise.

**9.3** Trade Name or Trade Term

It is not the intention of the Contract Documents to go into detailed descriptions of any materials and/or methods commonly known to the trade under "trade name" or "trade term." The mere mention or notation of "trade name" or "trade term" shall be considered a sufficient notice to Developer that it will be required to complete the work so named, complete, finished, and operable, with all its appurtenances, according to the best practices of the trade.

**9.4** The naming of any material and/or equipment shall mean furnishing and installing of same, including all incidental and accessory items thereto and/or labor therefor, as per best practices of the trade(s) involved, unless specifically noted otherwise.

**9.5** Contract Documents are complementary, and what is called for by one shall be binding as if called for by all. As such, Drawings and Specifications are intended to be fully cooperative and to agree. However, if Developer observes that Drawings and Specifications are in conflict with the Contract Documents, Developer shall promptly notify District and Architect in writing, and any necessary changes shall be made as provided in the Contract Documents.

**9.6** Figured dimensions shall be followed in preference to scaled dimensions, and Developer shall make all additional measurements necessary for the work and shall be responsible for their accuracy. Before ordering any material or doing any work, each Developer shall verify all measurements at the building and shall be responsible for the correctness of same.

**9.7** Should any question arise concerning the intent or meaning of the Contract Documents, including the Plans and Specifications, the question shall be submitted to the District for interpretation. If a conflict exists in the Contract Documents, these Construction Provisions shall control over the Facilities Lease, which shall control over the Site Lease, which shall control over Division 1 Documents, which shall control over Division 2 through Division 49 documents, which shall control over figured dimensions, which shall control over large-scale drawings, which shall control over small-scale drawings. In no case shall a document calling for lower quality and/or quantity of material or workmanship control. However, in the case of discrepancy or ambiguity solely between and among the Drawings and Specifications, the discrepancy or ambiguity shall be resolved in favor of the interpretation that will provide District with the functionally complete and operable Project described in the Drawings and Specifications.

**9.8** Drawings and Specifications are intended to comply with all laws, ordinances, rules, and regulations of constituted authorities having jurisdiction, and where referred

to in the Contract Documents, the laws, ordinances, rules, and regulations shall be considered as a part of the Contract Documents within the limits specified.

**9.9** As required by Section 4-317(c), Part 1, Title 24, CCR: "Should any existing conditions such as deterioration or non-complying construction be discovered which is not covered by the DSA-approved documents wherein the finished work will not comply with Title 24, California Code of Regulations, a construction change document, or a separate set of plans and specifications, detailing and specifying the required repair work shall be submitted to and approved by DSA before proceeding with the repair work."

#### **9.10 Ownership of Drawings**

All copies of Plans, Drawings, Designs, Specifications, and copies of other incidental architectural and engineering work, or copies of other Contract Documents furnished by District, are the property of District. They are not to be used by Developer in other work and, with the exception of signed sets of Contract Documents, are to be returned to District on request at completion of Work, or may be used by District as it may require without any additional costs to District. Neither Developer nor any Subcontractor, or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications, and other documents prepared by the Architect. District hereby grants Developer, Subcontractors, sub-subcontractors, and material or equipment suppliers a limited license to use applicable portions of the Drawings prepared for the Project in the execution of their Work under the Contract Documents.

### **10. Developer's Submittals and Schedules**

Developer's submittals shall comply with the provisions and requirements of the Specifications including, without limitation Submittals.

#### **10.1 Schedule of Work, Schedule of Submittals, and Schedule of Values.**

**10.1.1** Developer shall comply with the construction schedule attached to the Facilities Lease as **Exhibit F** ("Construction Schedule"). [To be attached when available.]

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

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

**10.1.4** The District shall have the right at any time to discuss with Developer revisions to the schedule of values if, in the District's sole opinion, the schedule of values does not accurately reflect the value of the Work performed.

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

**10.1.6** Within TEN (10) calendar days after the date of the Notice to Proceed with Construction (unless otherwise specified in the Specifications), Developer shall prepare and submit to the District for review, in a form supported by sufficient data to substantiate its accuracy as the District may require:

#### **10.1.6.1 Preliminary Schedule**

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

**10.1.6.1.1** The District is not required to approve a preliminary schedule of construction with early completion, i.e., one that shows early completion dates for the Work and/or milestones. Developer shall not be entitled to extra compensation if the District approves a Construction Schedule with an early completion date and Developer completes the Project beyond the date shown in the schedule but within the Contract Time. A Construction Schedule showing the Work completed in less than the Contract Time, the time between the early completion date and the end of the Contract Time shall be Float.

#### **10.1.6.2 Preliminary Schedule of Values**

A preliminary schedule of values for all of the Work, which must include quantities and prices of items aggregating the Guaranteed Maximum Price and must subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Unless the Special Conditions contain different limits, this preliminary schedule of values shall include, at a minimum, the following information and the following structure:

**10.1.6.2.1** Divided into at least the following categories:

**10.1.6.2.1.1** Overhead and profit

**10.1.6.2.1.2** Supervision

**10.1.6.2.1.3** General conditions

**10.1.6.2.1.4** Layout

**10.1.6.2.1.5** Mobilization

**10.1.6.2.1.6** Submittals

**10.1.6.2.1.7** Bonds and insurance

**10.1.6.2.1.8** Close-out/Certification documentation

**10.1.6.2.1.9** Demolition

**10.1.6.2.1.10** Installation

**10.1.6.2.1.11** Rough-in

**10.1.6.2.1.12** Finishes

**10.1.6.2.1.13** Testing

**10.1.6.2.1.14** Punch list and District acceptance

**10.1.6.2.2** And also divided by each of the following areas:

**10.1.6.2.2.1** Site work

**10.1.6.2.2.2** By each phase and/or building, as applicable

**10.1.6.2.2.3** By each floor

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

**10.1.6.2.3.1** Mobilization and layout combined to equal not more than 1%.

**10.1.6.2.3.2** Submittals, samples and shop drawings combined to equal not more than 3%.

**10.1.6.2.3.3** Bonds and insurance combined to equal not more than 2%.

**10.1.6.2.3.4** Closeout documentation shall have a value in the preliminary schedule of not less than 3%.

**10.1.6.2.4** Notwithstanding any provision of the Contract Documents to the contrary, payment of Developer's overhead, supervision, general conditions costs, and profit, as reflected in the Cost Breakdown, shall be paid based on percentage complete, with the disbursement of Progress Payments and the Final Payment.

**10.1.6.2.5** Developer shall certify that the preliminary schedule of values as submitted to the District is accurate and reflects the costs as developed in preparing Developer's bid. For example, without limiting the foregoing, Developer shall not "front-load" the preliminary schedule of values with dollar amounts greater than the value of activities performed early in the Project.

**10.1.6.2.6** The preliminary schedule of values shall be subject to the District's review and approval of the form and content thereof. In the event that the District objects to any portion of the preliminary schedule of values, the District shall notify Developer, in writing, of the District's objection(s) to the preliminary schedule of values. Within five (5) calendar days of the date of the District's written objection(s), Developer shall submit a revised preliminary schedule of values to the District for

review and approval. The foregoing procedure for the preparation, review and approval of the preliminary schedule of values shall continue until the District has approved the entirety of the preliminary schedule of values.

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

#### **10.1.6.3 Schedule of Values**

The Developer shall provide for District review and approval prior to commencement of the Work a schedule of values for all of the Work, which includes quantities and prices of items aggregating the Guaranteed Maximum Price and subdivided into component parts as per specifications. The Schedule of Values shall not be modified or amended by the Developer without the prior consent and approval of the District, which may be granted or withheld in the sole discretion of the District. The District shall have the right at any time to revise the schedule of values if, in the District's sole opinion, the schedule of values does not accurately reflect the value of the Work performed.

#### **10.1.6.4 Preliminary Schedule of Submittals**

A preliminary schedule of submittals, including Shop Drawings, Product Data, and Samples submittals. Once approved by District, this shall become the Submittal Schedule. All submittals may be reviewed by District in ProCore and shall be forwarded to the Architect by the date indicated on the approved Submittal Schedule, unless an earlier date is necessary to maintain the Construction Schedule, in which case those submittals shall be forwarded to the District so as not to delay the Construction Schedule. Upon request by the District, Developer shall provide an electronic copy of all submittals to the District. All submittals shall be submitted no later than ninety (90) days after the Notice to Proceed with Construction.

#### **10.1.6.5 Safety Plan**

Developer's Safety Plan specifically adapted for the Project shall comply with the following requirements:

**10.1.6.5.1** All applicable requirements of California Division of Occupational Safety and Health ("Cal/OSHA") and/or of the United States Occupational Safety and Health Administration ("OSHA").

**10.1.6.5.2** All provisions regarding Project safety, including all applicable provisions in these Construction Provisions.

**10.1.6.5.3** Developer's Safety Plan shall be in English and in the language(s) of Developer's and its Subcontractors' employees.

#### **10.1.6.6 Complete Registered Subcontractor List**

The name, address, telephone number, facsimile number, California State Contractors License number, classification, DIR registration number, and monetary value of all Subcontracts of any tier for parties furnishing labor, material, or equipment for completion of the Project.

### **10.2 Monthly Progress Schedule(s)**

**10.2.1** Developer shall provide Monthly Progress Schedule(s) to the District. A Monthly Progress Schedule shall update the approved Construction Schedule or the last Monthly Progress Schedule, showing all work completed and to be completed as well as updating the Registered Subcontractors List. The monthly Progress Schedule shall be sent as noted below and, if also requested by District, within the timeframe requested by the District and shall be in a format acceptable to the District and contain a written narrative of the progress of work that month and any changes, delays, or events that may affect the work. The process for District approval of the Monthly Progress Schedule shall be the same as the process for approval of the Construction Schedule.

**10.2.2** Developer shall submit Monthly Progress Schedule(s) with all payment applications.

**10.2.3** Developer must provide all schedules both in hard copy and electronically in a native format (e.g., Microsoft Project or Primavera), approved in advance by District.

**10.2.4** District will review the schedules submitted and Developer shall make changes and corrections in the schedules as requested by the District and resubmit the schedules until approved by the District.

**10.2.5** District shall have the right at any time to discuss with Developer revisions to the schedule of values if, in the District's sole opinion, the schedule of values does not accurately reflect the value of the Work performed.

**10.2.6** All schedules must be approved by the District before Developer can rely on them as a basis for payment. District shall use best efforts to approve all submittals and schedules on or before fourteen (14) days after presentation of the same from Developer, providing there are no extenuating circumstances, and no such approval shall be unreasonably withheld by District.

### **10.3 Material Safety Data Sheets (MSDS)**

Developer is required to ensure Material Safety Data Sheets are available in a readily accessible place at the Site for any material requiring a Material Safety Data Sheet per the federal "Hazard Communication" standard, or employees' "right to know" law. Developer 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.

## **10.4 Submittals**

**10.4.1** Architect's favorable review shall neither be construed as a complete check nor relieve Developer, Subcontractor, manufacturer, fabricator, or supplier from responsibility for any deficiency that may exist or from any departures or deviations from the requirements of the Contract Documents unless Developer has, in writing, called Architect's attention to the deviations at the time of submission and the Architect has given specific written response. "Favorable review" shall mean merely that Architect has no objection to Developer using, upon Developer's own full responsibility, plan or method of Work proposed, or furnishing materials or equipment proposed.

## **11. Site Access, Conditions, And Requirements**

### **11.1 Site Investigation**

Developer has made a careful investigation of the Site and is familiar with the requirements of the Contract Documents and has accepted the readily observable, existing conditions of the Site.

### **11.2 Soils Investigation Report**

When a soils investigation report obtained from test holes at Site or for the Project is available, that report may be made available to Developer but shall not be a part of this Contract but shall not alleviate or excuse Developer's obligation to perform its own investigation. Any information obtained from that report or any information given on Drawings as to subsurface soil condition or to elevations of existing grades or elevations of underlying rock is approximate only, is not guaranteed, does not form a part of this Contract, and Developer may not rely thereon. Developer acknowledges that it has made a visual examination of the Site and has made whatever tests Developer deems appropriate to determine underground condition of soil. Although any such report is not a part of this Contract, recommendations from the report may be included in the Drawings, Specifications, or other Contract Documents. It is Developer's sole responsibility to thoroughly review all Contract Documents, Drawings, and Specifications.

### **11.3 Access to Work**

District and its representatives shall at all times have access to Work wherever it is in preparation or progress, including storage and fabrication. Developer shall provide safe and proper facilities for such access so that District's representatives may perform their functions. District shall provide Developer adequate advance notice for access to active construction zones such that Developer may provide for safety measures to District and representatives.

### **11.4 Layout and Field Engineering**

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

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

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

## **11.5 Utilities**

Utilities shall be provided as indicated in the Specifications.

## **11.6 Sanitary Facilities**

Sanitary facilities shall be provided as indicated in the Specifications.

## **11.7 Surveys**

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

## **11.8 Regional Notification Center**

Developer, except in an emergency, shall contact the appropriate regional notification center at least two (2) days prior to commencing any excavation if the excavation will be conducted in an area or in a private easement that is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the District, and obtain an inquiry identification number from that notification center. No excavation shall be commenced and/or carried out by Developer unless an inquiry identification number has been assigned to Developer or any Subcontractor and Developer has given the District the identification number. Any damages arising from Developer's failure to make appropriate notification shall be at the sole risk and expense of Developer. Any delays caused by failure to make appropriate notification shall be at the sole risk of Developer and shall not be considered for an extension of the Contract Time.

## **11.9 Existing Utility Lines**

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

**11.9.2** Locations of existing utilities provided by District shall not be considered exact, but approximate within a reasonable margin and shall not



relieve Developer of its responsibilities to exercise reasonable care and to pay all costs of repair due to Developer's failure to do so. District shall compensate Developer for the costs of locating, repairing damage not due to the failure of Developer to exercise reasonable care, and removing or relocating such utility facilities not indicated in the Plans and Specifications with reasonable accuracy, and for equipment necessarily idle during such work.

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

**11.9.4** If Developer, while performing Work under this Contract, discovers utility facilities not identified by District in Contract Plans and Specifications, Developer shall immediately notify the District and the utility in writing. In the event Developer fails to immediately provide notice and subsequently causes damage to the utility facilities, the cost of repair for damage to above-mentioned visible facilities shall be borne by Developer.

#### **11.10 Notification**

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

#### **11.11 Hazardous Materials**

Developer shall comply with all provisions and requirements of the Contract Documents related to hazardous materials including, without limitation, Hazardous Materials Procedures and Requirements.

#### **11.12 No Signs**

Neither Developer nor any other person or entity shall display any signs not required by law or the Contract Documents at the Site, fences, trailers, offices, or elsewhere on the Site without specific prior written approval of the District.

### **12. Trenches**

#### **12.1 Trenches Greater Than Five Feet**

Pursuant to Labor Code section 6705, if the Guaranteed Maximum Price exceeds \$25,000 and involves the excavation of any trench or trenches five (5) feet or more in depth, Developer shall, in advance of excavation, promptly submit to the District and/or a registered civil or structural engineer employed by the District or Architect, a detailed plan showing the design of shoring for protection from the hazard of caving ground during the excavation of such trench or trenches.

## **12.2 Excavation Safety**

If such plan varies from the Shoring System Standards established by the Safety Orders, the plan shall be prepared by a registered civil or structural engineer, but in no case shall such plan be less effective than that required by the Safety Orders. No excavation of such trench or trenches shall be commenced until said plan has been accepted by the District or by the person to whom authority to accept has been delegated by the District.

## **12.3 No Tort Liability of District**

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

## **12.4 No Excavation without Permits**

Developer shall not commence any excavation Work until it has secured all necessary permits including the required CalOSHA excavation/shoring permit. Any permits shall be prominently displayed on the Site prior to the commencement of any excavation.

## **12.5 Discovery of Hazardous Waste and/or Unusual Conditions**

**12.5.1** Pursuant to Public Contract Code section 7104, if the Work involves digging trenches or other excavations that extend deeper than four feet below the Surface, Developer shall promptly, and before the following conditions are disturbed, notify the District, in writing, of any:

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

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

**12.5.1.3** Unknown physical conditions at the Project Site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents.

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

**12.5.3** In the event that a dispute arises between District and Developer whether the conditions materially differ or cause a decrease or increase in Developer's cost of, or time required for, performance of any part of the Work, Developer shall not be excused from any scheduled completion date provided for by the Contract Documents but shall proceed with all work to be performed under the Contract Documents. Developer shall retain any and all rights provided either by the Contract Documents or by law that pertain to the resolution of disputes and protests.

### **13. Insurance and Bonds**

#### **13.1 Developer's Insurance**

Developer shall comply with the insurance requirements as indicated in the Facilities Lease.

#### **13.2 Contract Security – Bonds**

**13.2.1** Developer shall furnish two surety bonds issued by a California admitted surety insurer as follows:

##### **13.2.1.1 Performance Bond**

A bond in an amount at least equal to one hundred percent (100%) of Guaranteed Maximum Price as security for faithful performance of the Contract Documents.

##### **13.2.1.2 Payment Bond**

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

**13.2.2** Cost of bonds shall be included in the Guaranteed Maximum Price.

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

### **14. Warranty/Guarantee/Indemnity**

#### **14.1 Warranty/Guarantee**

**14.1.1** Developer shall obtain and preserve for the benefit of the District, manufacturer's warranties on materials, fixtures, and equipment incorporated into the Work.

**14.1.2** In addition to guarantees and warranties required elsewhere, Developer shall, and hereby does guarantee and warrant all Work furnished on the job against all defects for a period of ONE (1) year after the later of the following dates, unless a longer period is provided for in the Contract Documents:

**14.1.2.1** The acceptance by the District's governing board of the Work, subject to these General Conditions, or

**14.1.2.2** The date that commissioning for the Project, if any, was completed.

**14.1.3** If any work is not in compliance with the Drawings and Specifications, Developer shall repair or replace any and all of that Work, together with any other Work that may be displaced in so doing, that may prove defective in workmanship and/or materials within a ONE (1) year period from date of

completion as defined above, unless a longer period is provided for in the Contract Documents, without expense whatsoever to District.

**14.1.4** In the event of failure of Developer and/or Surety to commence and pursue with diligence said replacements or repairs within ten (10) days after being notified in writing, Developer and Surety hereby acknowledge and agree that District is authorized to proceed to have defects repaired and made good at expense of Developer and/or Surety who hereby agree to pay costs and charges therefore immediately on demand.

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

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

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

## **14.2 Indemnity**

Developer shall indemnify the District as indicated in the Facilities Lease.

## **15. Time**

### **15.1 Notice to Proceed with Construction**

**15.1.1** District may issue a Notice to Proceed with Construction ("NTP 2") within ninety (90) days from the date of the Notice of Award after Guaranteed Maximum Price. Once Developer has received the Notice to Proceed with Construction, Developer shall complete the Work within the period of time indicated in the Contract Documents.

**15.1.2** In the event that the District desires to postpone issuing the Notice to Proceed with Construction beyond ninety (90) days from the date of the Notice of Award after Guaranteed Maximum Price, it is expressly understood that with reasonable notice to Developer, the District may postpone issuing the Notice to Proceed with Construction. It is further expressly understood by Developer that Developer shall not be entitled to any claim of additional compensation as a result of the postponement of the issuance of the Notice to Proceed with Construction.

**15.1.3** If Developer believes that a postponement of issuance of the Notice to Proceed with Construction will cause a hardship to Developer, Developer may terminate the Contract. Developer's termination due to a postponement shall be by written notice to District within ten (10) days after receipt by Developer of District's notice of postponement. It is further understood by Developer that in the event that Developer terminates the Contract as a result of postponement by the District, the District shall only be obligated to pay Developer for the Work that Developer had performed at the time of notification of postponement.

## **15.2 Computation of Time / Adverse Weather**

**15.2.1** Developer will only be allowed a time extension for Adverse Weather conditions if requested by Developer in compliance with the time extension request procedures herein and only if all of the following conditions are met:

**15.2.1.1** The weather conditions constitute Adverse Weather, as defined herein;

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

**15.2.1.3** Developer's crew is dismissed as a result of the Adverse Weather;

**15.2.1.4** Said delay adversely affect the critical path in the Construction Schedule; and

**15.2.1.5** Exceeds twelve (12) days of delay per year.

**15.2.2** If the aforementioned conditions are met, a non-compensable day-for-day extension will only be allowed for those days in excess of those indicated herein.

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

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

## **15.3 Hours of Work**

### **15.3.1 Sufficient Forces**

Developer and Subcontractors shall continuously furnish sufficient and competent work forces with the required levels of familiarity with the Project and skill, training and experience to ensure the prosecution of the Work in accordance with the Construction Schedule.

### **15.3.2 Performance During Working Hours**

Work shall be performed during regular working hours as permitted by the appropriate governmental agency except that in the event of an emergency, or when required to complete the Work in accordance with job progress, Work may be performed outside of regular working hours with the advance written consent of the District and approval of any required governmental agencies.

### **15.3.3 No Work during State Testing**

Developer shall, at no additional cost to the District and at the District's request, coordinate its Work to not disturb District students including, without limitation, not performing any Work when students at the Site are taking State or Federally-required tests. The District or District's Representative will provide Developer with a schedule of test dates concurrent with the District's issuance of the Notice to Proceed with Construction, or as soon as test dates are made available to the District.

## **15.4 Progress and Completion**

### **15.4.1 Time of the Essence**

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

### **15.4.2 No Commencement Without Insurance or Bonds**

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

## **15.5 Schedule**

Developer shall provide to District, Construction Manager, and Architect a schedule in conformance with the Contract Documents and as required in these Construction Provisions.

## **15.6 Expeditious Completion**

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

## **16. Extensions of Time – Liquidated Damages, Excusable Delays**

### **16.1 Liquidated Damages**

Developer and District hereby agree that the exact amount of damages for failure to complete the Work within the time specified is extremely difficult or impossible to determine. If the Work is not completed within the time specified in the Contract Documents, it is understood that the District will suffer damage. It being impractical

and unfeasible to determine the amount of actual damage, it is agreed Developer shall pay to District as fixed and liquidated damages, and not as a penalty, the amount set forth in the Facilities Lease for each calendar day of delay in Completion. Developer and its Surety shall be liable for the amount thereof pursuant to Government Code section 53069.85.

## **16.2 Excusable Delay**

**16.2.1** Developer shall not be charged for liquidated damages because of any delays in completion of the Work which are not the fault of Developer or its Subcontractors, including without limitation acts of God as defined in Public Contract Code section 7105, acts of enemy, epidemics, and quarantine restrictions. Developer shall, within five (5) calendar days of beginning of any delay, including a Force Majeure event, notify District in writing of causes of delay including documentation and facts explaining the delay and the direct correlation between the cause and effect ("Notice of Delay"). If Developer fails to provide its written Notice of Delay within this timeframe, Developer waives, releases, and discharges any right to assert or claim any entitlement to an adjustment to the Guaranteed Maximum Price and/or the Contract Time based on circumstances giving rise to the asserted delay. District shall review the facts and extent of any delay and shall grant extension(s) of time for completing Work when, in its judgment, the findings of fact justify an extension. Extension(s) of time shall apply only to that portion of Work affected by delay and shall not apply to other portions of Work not so affected. An extension of time may only be granted if Developer has timely submitted the Construction Schedule as required herein.

**16.2.2** Developer's Notice of Delay and request for a time extension pursuant to subparagraph 16.2 is a condition precedent to Developer's submittal of and/or entitlement to a claim pursuant to Article 25 of these Construction Provisions. Developer shall notify the District pursuant to the claims provisions in these Construction Provisions of any anticipated delay and its cause. Following submission of a claim, the District may determine whether the delay is to be considered avoidable or unavoidable, how long it continues, and to what extent the prosecution and completion of the Work might be delayed thereby.

**16.2.3** In the event Developer requests an extension of Contract Time for unavoidable delay as set forth in subparagraph 16.2.1, such request shall be submitted in accordance with the provisions in the Contract Documents governing changes in Work, including without limitation, the time requirements set forth in subsection 17.5, below. When requesting time, requests must be submitted with full justification and documentation. If Developer fails to submit justification, it waives its right to a time extension at a later date. Such justification must be based on the official Construction Schedule as updated at the time of occurrence of the delay or execution of Work related to any changes to the Scope of Work. Any request for a time extension must include the following information as support, without limitation:

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

**16.2.3.2** Specific logical ties to the Contract Schedule for the proposed changes and/or delay showing the activity/activities in the Construction Schedule that are affected by the change and/or delay. In particular, Developer must show an actual impact to the schedule, after making a good faith effort to mitigate the delay by rescheduling the work, by providing an analysis of the schedule ("Time Impact Analysis"). Such Time Impact Analysis shall describe in detail the cause and effect of the delay and the impact on the critical dates in the Project schedule. (This information must be provided for any portion of any delay of seven (7) days or more.)

**16.2.3.3** A recovery schedule must be submitted within twenty (20) calendar days of written notification to the District of causes of delay.

**16.2.4** Developer must comply with requirements in subsection 16.2 for a Notice of Delay and supporting justification notwithstanding Developer contends the specific delay period is unknown and continuing. When submitting a Notice of Delay and supporting justification, Developer must provide an estimated delay duration to critical path activities at the time the Notice of Delay and supporting justification is required to be submitted. If Developer contends the delaying event(s) are continuing, Developer must update monthly the estimated delay period with supporting justification.

**16.2.5** Developer's failure to timely submit a written Notice of Delay and/or provide the justification required in subparagraph 16.2 shall constitute Developer's waiver of any right to later submit a Proposed Change Order or pursue a Claim on the circumstances giving rise to the request, or to later pursue any additional money or time extensions in any manner related to that issue, regardless of the merits. Developer will not have satisfied a condition precedent or exhausted administrative remedies required to show entitlement to a Contract Time adjustment. Developer acknowledges that these written notices and justification requirements are critically important to District's Work, Project management, and evaluating potential options and alternatives to implement mitigation efforts to reduce or eliminate additional Project costs and delays.

### **16.3 No Additional Compensation for Delays within Developer's Control**

**16.3.1** Developer is aware that governmental agencies and utilities, including, without limitation, the Division of the State Architect, the Department of General Services, gas companies, electrical utility companies, water districts, and other agencies may have to approve Developer-prepared drawings or approve a proposed installation. Accordingly, Developer has included in the Guaranteed Maximum Price, time for possible review of its drawings and for reasonable delays and damages that may be caused by such agencies, including without limitation delays due to California Environmental Quality Act ("CEQA") compliance. Thus, Developer is not entitled to make a claim for damages for delays arising from the review of Developer's drawings.

**16.3.2** Developer shall only be entitled to compensation for delay when all of the following conditions are met:

**16.3.2.1** The District is responsible for the delay;



**16.3.2.2** The delay is unreasonable under the circumstances involved;

**16.3.2.3** The delay was not within the contemplation of the District and Developer;

**16.3.2.4** The delay could not have been avoided or mitigated by reasonable diligence; and

**16.3.2.5** Developer timely complies with the claims procedure of the Contract Documents.

**16.3.3** Where a change in the Work extends the Contract Time, Developer may request and recover additional, actual direct costs, provided that Developer can demonstrate such additional costs are:

**16.3.3.1** Actually incurred performing the Work;

**16.3.3.2** Not compensated by the Markup allowed; and

**16.3.3.3** Directly result from the extended Contract Time.

**16.3.4** Developer shall comply with all required procedures, documentation and time requirements in the Contract Documents. Developer may not seek or recover such costs using formulas (e.g. Eichleay, labor factors).

## **16.4 Force Majeure**

"Force Majeure" means any event or circumstance unknown at the time of contracting that is beyond the parties' control and makes performance of the contract impractical or impossible. The Party seeking to have its performance obligation(s) excused must demonstrate that there was such an insuperable interference occurring without the party's intervention as could not have been prevented by the exercise of prudence, diligence, and care, by providing prompt notice to the other Party, including full particulars of such event, of its inability to perform its obligations due to such event, following commencement of the claiming Party's inability to so perform its obligations. To the extent satisfying these conditions, Force Majeure events include the following: acts of God, war, civil unrest, epidemic, fire, smoke, volcanic eruption, earthquake, strike, unusually severe weather, flood, or shortage of transportation facilities, lock out, or commandeering of materials, product, plant, or facilities by the government. Force Majeure shall not be based on a Party's financial inability to perform under this Agreement unless there exists extreme and unreasonable difficulty, expense, injury, or loss involved. A Force Majeure event does not include an act of negligence or intentional wrongdoing by a Party. Any Party claiming a Force Majeure event shall use reasonable diligence to remove the condition that prevents performance and shall not be entitled to suspend performance of its obligations in any greater scope or for any longer duration than is required by the Force Majeure event. Each Party shall use its best efforts to mitigate the effects of such Force Majeure event, remedy its inability to perform, and resume full performance of its obligations hereunder. No obligation that arose before the Force Majeure event that could and should have been fully performed before such Force Majeure event is excused as a result of such Force Majeure event.

## **16.5 Float or Slack in the Schedule**

Float or slack is the amount of time between the early start date and the late start date, or the early finish date and the late finish date, of any of the activities in the

schedule. Float or slack is not for the exclusive use of or benefit of either the District or Developer, but its use shall be determined solely by the District.

**17. Changes in the Work**

**17.1 No Changes without Prior Authorization**

**17.1.1** There shall be no change whatsoever in the Drawings, Specifications, or in the Work without an executed Change Order or a written Construction Change Directive authorized by the District as herein provided. District shall not be liable for the cost of any extra work or any substitutions, changes, additions, omissions, or deviations from the Drawings and Specifications unless the District's governing board has authorized the same and the cost thereof has been approved in writing by Change Order or Construction Change Directive in advance of the changed Work being performed. No extension of time for performance of the Work shall be allowed hereunder unless a request for such extension is made at the time changes in the Work are ordered, and such time duly adjusted and approved in writing in the Change Order or Construction Change Directive. The provisions of the Contract Documents shall apply to all such changes, additions, and omissions with the same effect as if originally embodied in the Drawings and Specifications.

**17.1.2** Developer shall perform immediately all work that has been authorized by a fully executed Change Order or Construction Change Directive. Developer shall be fully responsible for any and all delays and/or expenses caused by Developer's failure to expeditiously perform this Work.

**17.1.3** Should any Change Order result in an increase in the Guaranteed Maximum Price or extend the Contract Time, the cost of or length of extension in that Change Order shall be agreed to, in writing, by the District in advance of the work by Developer. In the event that Developer proceeds with any change in Work without a Change Order executed by the District or Construction Change Directive, Developer waives any claim of additional compensation or time for that additional work. Under no circumstances shall Developer be entitled to any claim of additional compensation or time not expressly requested by Developer in a Proposed Change Order or approved by District in an executed Change Order.

**17.1.4** A Change Order or Construction Change Directive will become effective when approved by the Board, notwithstanding that Developer has not signed it. A Change Order or Construction Change Directive will become effective without Developer's signature provided District indicates it as a "Unilateral Change Order". Any dispute as to the adjustment in the Guaranteed Maximum Price or Contract Time, if any, of the Unilateral Change Order shall be resolved pursuant to the Payment and Claims and Disputes provisions herein.

**17.1.5** Developer understands, acknowledges, and agrees that the reason for District authorization is so that District may have an opportunity to analyze the Work and decide whether the District shall proceed with the Change Order or alter the Project so that a change in Work becomes unnecessary.

## **17.2 Architect Authority**

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

## **17.3 Change Orders**

**17.3.1** A Change Order is a written instrument prepared and issued by the District and/or the Architect and signed by the District (as authorized by the District's Board of Education), Developer, the Architect, and approved by the Project Inspector (if necessary) and DSA (if necessary), stating their agreement regarding all of the following:

**17.3.1.1** A description of a change in the Work.

**17.3.1.2** The amount of the adjustment in the Guaranteed Maximum Price, if any; and

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

## **17.4 Proposed Change Order**

### **17.4.1** Definition of Proposed Change Order

A Proposed Change Order ("PCO") is a written request prepared by the Developer requesting that the District and the Architect issue a Change Order based upon a proposed change to the Work, to the Guaranteed Maximum Price, and/or to the Contract Time.

### **17.4.2** Changes in Guaranteed Maximum Price

A PCO shall include breakdowns and backup documentation pursuant to the provisions herein and sufficient, in the District's judgment, to validate any change in Guaranteed Maximum Price. In no case shall Developer or any of its Subcontractors be permitted to reserve rights for additional compensation for Change Order Work.

### **17.4.3** Changes in Time

A PCO shall also include any changes in time required to complete the Project. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the critical path in the Construction Schedule as defined in the Contract Documents. Developer shall justify the proposed change in time by submittal of a schedule analysis that accurately shows the actual impact, if known, or the estimated impact if unknown, of the change on the critical path of the Construction Schedule ("Time Impact Analysis"). If Developer fails to request a time extension in a PCO, including the Time Impact Analysis, and/or fails to comply with these Construction Provisions including, without limitation, Articles 15, 16, or 17, then Developer is thereafter precluded from requesting, and waives any right to request, an adjustment to the Contract Time or Guaranteed Maximum Price.

relating to the subject matter of the PCO. In no case shall Developer or any of its Subcontractors be permitted to reserve rights for additional time for Change Order Work. A PCO that leaves the amount of time requested blank, or states that such time requested is "to be determined," or otherwise not specifically identified, is not permitted and shall also constitute a waiver of any right to request additional time and/or claim a delay.

#### **17.4.4 Allowances**

If there is an Allowance, then Developer shall not bill for or be due any portion of an Allowance unless the District has identified specific work, Developer has submitted a price for that work or the District has proposed a price for that work, the District has accepted the cost for that work, and the District has executed an Allowance Expenditure Directive incorporating that work. Allowance Expenditure Directives shall be based on Developer's costs, without overhead and profit, for products, delivery, installation, labor, insurance, payroll, taxes, bonding and equipment rental will be included in Allowance Expenditure Directive authorizing expenditure of funds from the Allowance. No overhead and profit shall be added to the Allowance Expenditure Directive.

Any unused portion of the Allowance will revert to the District documented by a deductive Change Order. Developer authorizes the District to execute a unilateral deductive Change Order at or near the end of the Project for all or any portion of the Allowance not allocated.

#### **17.4.5 Unknown and / or Unforeseen Conditions**

Separate from what is provided in the Allowance, if requests an increase in Guaranteed Maximum Price and/or Contract Time that is based at least partially on Developer's assertion that Developer has encountered unknown and/or unforeseen condition(s) on the Project, then Developer shall base the PCO on provable information that, beyond a reasonable doubt and to the District's satisfaction, demonstrates that the unknown and/or unforeseen condition(s) were actually unknown and/or unforeseen and that the condition(s) were reasonably unknown and/or unforeseen. If not, the District shall deny the PCO as unsubstantiated, and the Developer shall complete the Project without any increase in Guaranteed Maximum Price and/or Contract Time based on that PCO.

#### **17.4.6 Time to Submit Proposed Change Order**

Developer shall submit its PCO, using the Proposed Change Order Form, within five (5) working days of the date Developer discovers, or reasonably should have discovered, the circumstances giving rise to the PCO, unless additional time to submit a PCO is granted in writing by the District. Time is of the essence in Developer's submission of PCOs so that the District can promptly investigate the basis for the PCO. Accordingly, if Developer fails to submit its PCO within this timeframe, Developer waives, releases, and discharges any right to assert or claim any entitlement to an adjustment of the Guaranteed Maximum Price and/or Contract Time based on circumstances giving rise to the PCO.

#### **17.4.7 Proposed Change Order Certification**

In submitting a PCO, Developer certifies and affirms that the cost and/or time request is submitted in good faith, that the cost and/or time request is accurate

and in accordance with the provisions of the Contract Documents, and Developer submits the cost and/or request for extension of time recognizing the significant civil penalties and treble damages which follow from making a false claim or presenting a false claim under Government Code section 12650 et seq.

It is expressly understood that the value of the extra Work or changes expressly includes any and all of Developer's costs and expenses, direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project including, without limitation, cumulative impacts. Developer is not entitled to separately recover amounts for overhead or other indirect costs. Any costs, expenses, damages, or time extensions not included are deemed waived.

## 17.5 Format for Proposed Change Order

**17.5.1** The following format shall be used as applicable by the District and Developer (e.g. Change Orders, PCOs) to communicate proposed additions and/or deductions to the Contract, supported by attached documentation. Any spaces left blank will be deemed no change to cost or time.

	<b>WORK PERFORMED OTHER THAN BY DEVELOPER</b>	<b>ADD</b>	<b>DEDUCT</b>
(a)	<b><u>Material</u></b> (attach suppliers' invoice or itemized quantity and unit cost plus sales tax)		
(b)	<b><u>Add Labor</u></b> (attach itemized hours and rates, fully Burdened, and specify the hourly rate for each additional labor burden, for example, payroll taxes, fringe benefits, etc.)		
(c)	<b><u>Add Equipment</u></b> (attach suppliers' invoice)		
(d)	<b><u>Subtotal</u></b>		
(e)	<b><u>Add Overhead and Profit for any and all tiers of Subcontractors</u></b> , the total not to exceed ten percent (10%) of Item (d)		
(f)	<b><u>Subtotal</u></b>		
(g)	<b><u>Add General Conditions Cost</u></b> (if Time is Compensable) (attach supporting documentation)		
(h)	<b><u>Subtotal</u></b>		
(i)	<b><u>Add Overhead and Profit for Developer</u></b> , not to exceed _____ percent (____%) of Item (h)		
(j)	<b><u>Subtotal</u></b>		
(k)	<b><u>Add Bond and Insurance</u></b> , not to exceed _____ percent (____%) of Item (j)		
(l)	<b><u>TOTAL</u></b>		
(m)	<b><u>Time</u></b> (zero unless indicated; "TBD" not permitted)	<b>_____ Calendar Days</b>	

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	<b>WORK PERFORMED BY DEVELOPER</b>	<b>ADD</b>	<b>DEDUCT</b>
(a)	<b>Material</b> (attach itemized quantity and unit cost plus sales tax)		
(b)	<b>Add Labor</b> (attach itemized hours and rates, fully Burdened, and specify the hourly rate for each additional labor burden, for example, payroll taxes, fringe benefits, etc.)		
(c)	<b>Add Equipment</b> (attach suppliers' invoice)		
(d)	<b>Add General Conditions Cost</b> (if Time is Compensable) (attach supporting documentation)		
(e)	<b>Subtotal</b>		
(f)	<b>Add Overhead and Profit for Developer</b> , not to exceed _____ percent (____%) of Item (e)		
(g)	<b>Subtotal</b>		
(h)	<b>Add Bond and Insurance</b> , not to exceed _____ percent (____%) of Item (g)		
(i)	<b>TOTAL</b>		
(j)	<b>Time</b> (zero unless indicated; "TBD" not permitted)		<b>_____ Calendar Days</b>

### 17.5.2 Mandatory Use of Forms

Developer shall only submit PCOs by completing the Proposed Change Order Form. Developer acknowledges and agrees that use of this specific and consistent format is essential to District's evaluation of PCOs. Accordingly, Developer waives, releases, and discharges any right to assert or claim any entitlement to an adjustment of the Guaranteed Maximum Price and/or Time for any purported PCO that does not comply with the Proposed Change Order Form.

### 17.5.3 Labor

Developer shall be compensated for the costs of labor actually and directly utilized in the performance of the Work. Such labor costs shall be the actual cost, use of any formulas (e.g. labor factors) is not allowed, not to exceed prevailing wage rates in the locality of the Site and shall be in the labor classification(s) necessary for the performance of the Work, fully Burdened. Labor costs shall exclude costs incurred by the Developer in preparing estimate(s) of the costs of the change in the Work, in the maintenance of records relating to the costs of the change in the Work, coordination and assembly of materials and information relating to the change in the Work or performance thereof, or the supervision and other overhead and general conditions costs associated with the change in the Work or performance thereof, including but not limited to the cost for the job superintendent. If applicable, District will pay Developer the reasonable costs for room and board, supported with appropriate backup documentation, without markup for profit or overhead as provided by U.S. General Services Administration per diem rates for California lodging, meals and incidentals, <https://www.gsa.gov/travel/plan-book/per-diem-rates/per-diem-rates-lookup>.

#### **17.5.4 Materials**

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

#### **17.5.5 Equipment**

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

insurance, labor (exclusive of labor costs of the Equipment operator), and any and all other costs incurred by Developer incidental to the use of the Equipment.

**17.5.6 General Conditions Cost.**

The phrase "General Conditions Cost" shall mean, other than expressly limited or excluded herein, the costs of Developer during the construction phase, including but not limited to: payroll costs for project manager for Work conducted at the Site, payroll costs for the superintendent and full-time general foremen, workers not included as direct labor costs engaged in support functions (e.g., loading/unloading, clean-up), costs of offices and temporary facilities including office materials, office supplies, office equipment, minor expenses, utilities, fuel, sanitary facilities and telephone services at the Site, costs of consultants not in the direct employ of Developer or Subcontractors, and fees for permits and licenses.

**17.5.7 Overhead and Profit.**

The phrase "Overhead and Profit" shall include field and office supervisors and assistants, watchperson, use of small tools, consumable, insurance other than construction bonds and insurance required herein, and general conditions, field and home office expenses.

**17.6 Change Order Certification**

**17.6.1** All Change Orders and PCOs must include the following certification by Developer, either in the form specifically or incorporated by this reference:

The undersigned Developer approves the foregoing as to the changes, if any, and to the Guaranteed Maximum Price specified for each item and as to the extension of time allowed, if any, for completion of the entire Work as stated herein, and agrees to furnish all labor, materials, and service, and perform all work necessary to complete any additional work specified for the consideration stated herein. Submission of sums which have no basis in fact or which Developer knows are false are at the sole risk of Developer and may be a violation of the False Claims Act set forth under Government Code section 12650 et seq. and U.S. Criminal Code, 18 U.S.C. § 1001. It is understood that the changes herein to the Contract Documents shall only be effective when approved by the governing board of the District.

It is expressly understood that the value of the extra Work or changes expressly includes any and all of Developer's costs and expenses, both direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project, including, without limitation, cumulative impacts. Developer is not entitled to separately recover amounts for overhead or other indirect costs. Any costs, expenses, damages, or time extensions not included are deemed waived.

**17.6.2** Accord and Satisfaction: Developer's execution of any Change Order shall constitute a full accord and satisfaction, and release, of all Developer (and if applicable, Subcontractor) claims for additional time, money or other relief arising from or relating to the subject matter of the change including, without



limitation, impacts of all types, cumulative impacts, inefficiency, overtime, delay and any other type of claim.

**17.6.3 Mandatory Use of Forms:** Developer shall only submit Change Orders by completing the Change Order Form. Developer acknowledges and agrees that use of this specific and consistent format is essential to District's processing of Change Orders. Accordingly, Developer waives, releases, and discharges any right to assert or claim any entitlement to an adjustment of the Guaranteed Maximum Price and/or Time for any change that does not comply with the Change Order Form.

## **17.7 Determination of Change Order Cost**

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

**17.7.1.1** District acceptance of a COR or PCO.

**17.7.1.2** By amounts contained in Developer's schedule of values, if applicable.

**17.7.1.3** By agreement between District and Developer.

## **17.8 Deductive Change Orders**

All deductive Change Order(s) must be prepared pursuant to the provisions herein. Where a portion of the Work is deleted from the Contract, the reasonable value of the deleted work less the value of any new work performed shall be considered the appropriate deduction. The value submitted on the Schedule of Values shall be used to calculate the credit amount unless the bid documentation is being held in escrow as part of the Contract Documents. Unit Prices, if any, may be used in District's discretion in calculating reasonable value. If Developer offers a proposed amount for a deductive Change Order(s) for work performed, Developer shall include a credit for total profit and overhead less proof of expended costs related to the deleted work with the Change Order(s). If Subcontractor work is involved, Subcontractors shall also include a credit for total profit and overhead less proof of expended costs related to the deleted work with the Change Order(s). Any deviation from this provision shall not be allowed.

## **17.9 Addition or Deletion of Alternate Bid Item(s)**

If Developer's Proposal includes proposal(s) for Alternate Bid Item(s), during Developer's performance of the Work, the District may elect to add or delete any such Alternate Bid Item(s) if not included in the Contract at the time the Guaranteed Maximum Price is agreed upon. If the District elects to add or delete Alternate Bid Item(s) after Contract award, the cost or credit for such Alternate Bid Item(s) shall be as set forth in the Proposal unless the parties agree to a different price and the Contract Time shall be adjusted by the number of days allocated in the Contract Documents. If days are not allocated in the Contract Documents, the Contract Time shall be equitably adjusted.

### **17.10 Discounts, Rebates, and Refunds**

For purposes of determining the cost, if any, of any change, addition, or omission to the Work hereunder, all trade discounts, rebates, refunds, and all returns from the sale of surplus materials and equipment shall accrue and be credited to Developer, Developer shall make provisions so that such discounts, rebates, refunds, and returns may be secured, and the amount thereof shall be allowed as a reduction of Developer's cost in determining the actual cost of construction for purposes of any change, addition, or omission in the Work as provided herein.

### **17.11 Construction Change Directives**

**17.11.1** A Construction Change Directive is a written order prepared and issued by the District, the Construction Manager, and/or the Architect and signed by the District and the Architect, directing a change in the Work. The District may, as provided by law, by Construction Change Directive and without invalidating the Contract, order changes in the Work consisting of additions, deletions, or other revisions. The adjustment to the Guaranteed Maximum Price or Contract Time, if any, is subject to the provision of this section regarding Changes in the Work. If all or a portion of the Project is being funded by funds requiring approval by the State Allocation Board ("SAB"), these revisions may be subject to compensation once approval of same is received and funded by the SAB, and funds are released by the Office of Public School Construction ("OPSC"). Any dispute as to the adjustment of the Guaranteed Maximum Price, if any, of the Construction Change Directive or timing of payment shall be resolved pursuant to the Payment and Claims and Disputes provisions herein.

**17.11.2** The District may issue a Construction Change Directive in the absence of agreement on the terms of a Change Order.

### **17.12 Force Account Directives**

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

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

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

**17.12.4** Developer shall be responsible for all costs related to the administration of Force Account Directives. The markup for overhead and profit for Developer modifications shall be full compensation to Developer to administer Force Account Directives, and Developer shall not be entitled to separately recover additional amounts for overhead and/or profit.

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

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

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

### **17.13 Price Request**

#### **17.13.1 Definition of Price Request**

A Price Request is a written request prepared by the Architect or Construction Manager requesting Developer submit to the District, the Construction Manager and the Architect an estimate of the effect of a proposed change in the Work on the Guaranteed Maximum Price and the Contract Time.

#### **17.13.2 Scope of Price Request**

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

### **17.14 Accounting Records**

With respect to portions of the Work performed by Change Orders and Construction Change Directives, Developer shall keep and maintain cost-accounting records satisfactory to the District, including, without limitation, Job Cost Reports as provided in these General Conditions, which shall be available to the District on the same terms as any other books and records Developer is required to maintain under the Contract Documents. Such records shall include without limitation hourly records for Labor and

Equipment and itemized records of materials and Equipment used that day in connection with the performance of any Work. All records maintained hereunder shall be subject to inspection, review and/or reproduction by the District, the Construction Manager and the Architect or the Project Inspector upon request. In the event that Developer fails or refuses, for any reason, to maintain or make available for inspection, review and/or reproduction such records, the District's determination of the extent of adjustment to the Guaranteed Maximum Price shall be final, conclusive, dispositive and binding upon Developer.

#### **17.15 Notice Required**

If Developer desires to make a claim for an increase in the Guaranteed Maximum Price, or any extension in the Contract Time for completion, it shall notify the District pursuant to the provisions herein, including the Article on Claims and Disputes. No claim shall be considered unless made in accordance with this subparagraph. Developer shall proceed to execute the Work even though the adjustment may not have been agreed upon. Any change in the Guaranteed Maximum Price or extension of the Contract Time resulting from such claim shall be authorized by a Change Order.

#### **17.16 Applicability to Subcontractors**

Any requirements under this Article shall be equally applicable to Change Orders or Construction Change Directives issued to Subcontractors by Developer to the extent required by the Contract Documents.

#### **17.17 Alteration to Change Order Language**

Developer shall not alter Change Orders or reserve time in Change Orders. Change Orders altered in violation of this provision, if in conflict with the terms set forth herein, shall be construed in accordance with the terms set forth herein. Developer shall execute finalized Change Orders and proceed under the provisions herein with proper notice.

#### **17.18 Failure of Developer to Execute Change Order**

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

### **18. Requests For Information**

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

**18.2** Developer may be responsible for any costs incurred for professional services that District may deduct from any amounts owing to Developer, if a Request for Information requests an interpretation or decision of a matter where the information sought is equally available to the party making the request. District may deduct from and/or invoice Developer for professional services arising therefrom.

## **19. Payments**

### **19.1 Guaranteed Maximum Price**

As compensation for Developer's construction of the Project, the District shall pay Developer pursuant to the terms of **Exhibit C** to the Facilities Lease. This is the total amount payable by the District to Developer for performance of the Work under the Contract.

### **19.2 Applications for Tenant Improvement Payments**

#### **19.2.1 Procedure for Applications for Tenant Improvement Payments**

**19.2.1.1** Not before the fifth (5th) day of each calendar month during the progress of the Work, Developer shall submit to the District and the Architect an itemized Application for Payment for operations completed in accordance with the Schedule of Values. Such application shall be on a form approved by the District and shall be notarized, if required, and supported by the following or each portion thereof unless waived by the District in writing:

**19.2.1.1.1** The amount paid to the date of the Application for Payment to Developer, to all its Subcontractors, and all others furnishing labor, material, or equipment under the Contract Documents.

**19.2.1.1.2** The amount being requested under the Application for Payment by Developer on its own behalf and separately stating the amount requested on behalf of each of the Subcontractors and all others furnishing labor, material, and equipment under the Contract Documents.

**19.2.1.1.3** The balance that will be due to each of such entities after said payment is made.

**19.2.1.1.4** A certification that the As-Built Drawings and annotated Specifications are current.

**19.2.1.1.5** Itemized breakdown of work done for the purpose of requesting partial payment.

**19.2.1.1.6** An updated and acceptable construction schedule in conformance with the provisions herein.

**19.2.1.1.7** The additions to and subtractions from the Guaranteed Maximum Price and Contract Time.

**19.2.1.1.8** A total of the retentions held.

**19.2.1.1.9** Material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the District may require from time to time.

**19.2.1.1.10** The percentage of completion of Developer's Work by line item.

**19.2.1.1.11** Schedule of Values updated from the preceding Application for Payment.

**19.2.1.1.12** A duly completed and executed conditional waiver and release upon Tenant Improvement Payment compliant with Civil Code section 8132 from Developer and each subcontractor of any tier and supplier to be paid from the current Tenant Improvement Payment.

**19.2.1.1.13** A duly completed and executed unconditional waiver and release upon Tenant Improvement Payment compliant with Civil Code section 8134 from Developer and each subcontractor of any tier and supplier that was paid from the previous Tenant Improvement Payment submitted 60 days prior; and

**19.2.1.1.14** A certification by Developer of the following:

Developer warrants title to all Work performed as of the date of this payment application and that all such Work has been completed in accordance with the Contract Documents for the Project. Developer further warrants that all Work performed as of the date of this payment application is free and clear of liens, claims, security interests, or encumbrances in favor of Developer, Subcontractors, material and equipment suppliers, workers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work, except those of which the District has been informed. Submission of sums which have no basis in fact or which Developer knows are false are at the sole risk of Developer and may be a violation of the False Claims Act set forth under Government Code section 12650 et seq.

**19.2.1.1.15** Developer shall be subject to the False Claims Act set forth in Government Code section 12650 et seq. for information provided with any Application for Tenant Improvement Payments.

**19.2.1.1.16** All remaining certified payroll records ("CPR(s)") for each journeyman, apprentice, worker, or other employee employed by Developer and/or each Subcontractor in connection with the Work for the period of the Application for Payment. As indicated herein, the District shall not make any payment to Developer until:

**19.2.1.1.16.1** Developer and/or its Subcontractor(s) provide electronic CPRs directly to the DIR on no less than every 30 days while Work is being performed and within 30 days after the final day of Work performed on the Project for any journeyman, apprentice, worker or other employee was employed in connection with the Work, or within ten (10) days of any request by the District or the DIR to the requesting entity; and

**19.2.1.1.16.2** Any delay in Developer and/or its Subcontractor(s) providing CPRs in a timely manner may directly delay Developer's payment.

**19.2.1.1.17** Applications received after June 20th will not be paid until the second week of July and applications received after December 12th will not be paid until the first week of January.

## **19.2.2 Prerequisites for Tenant Improvement Payments**

### **19.2.2.1 First Payment Request**

The following items, if applicable, must be completed before the District will accept and/or process Developer's first payment request:

**19.2.2.1.1** Installation of the Project sign.

**19.2.2.1.2** Installation of field office.

**19.2.2.1.3** Installation of temporary facilities and fencing.

**19.2.2.1.4** Schedule of Values.

**19.2.2.1.5** Developer's Preliminary Construction Schedule for the first ninety (90) days.

**19.2.2.1.6** Schedule of unit prices, if applicable.

**19.2.2.1.7** Submittal Schedule.

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

**19.2.2.1.9** List of Subcontractors, with names, license numbers, telephone numbers, and Scope of Work.

**19.2.2.1.10** All bonds and insurance endorsements; and

**19.2.2.1.11** Resumes of Developer's project manager, and if applicable, job site secretary, record documents recorder, and job site superintendent.

## **19.2.3 Subsequent Payment Requests**

The District will not process subsequent payment requests until and unless submittals and Shop Drawings necessary to maintain the Project schedule have been submitted to the Architect.

## **19.2.4 No Waiver of Criteria**

Any payments made to Developer where criteria set forth herein have not been met shall not constitute a waiver of said criteria by District. Instead, such payment shall be construed as a good faith effort by District to resolve differences so Developer may pay its Subcontractors and suppliers. Developer agrees that failure to submit such items may constitute a breach of contract by Developer and may subject Developer to termination.

### **19.3 District's Approval of Application for Payment**

**19.3.1** Upon receipt of an Application for Payment, The District shall act in accordance with both of the following:

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

**19.3.1.2** Any Application for Payment determined not to be a proper Application for Payment suitable for payment shall be returned to Developer as soon as practicable, but not later than seven (7) days, after receipt. An Application for Payment returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the Application for Payment is not proper. The number of days available to the District to make a payment without incurring interest pursuant to this section shall be reduced by the number of days by which the District exceeds this seven-day return requirement.

**19.3.2** An Application for Payment shall be considered properly executed if funds are available for payment of the Application for Payment, and payment is not delayed due to an audit inquiry by the financial officer of the District.

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

**19.3.3.1** Observation of the Work for general conformance with the Contract Documents.

**19.3.3.2** Results of subsequent tests and inspections.

**19.3.3.3** Minor deviations from the Contract Documents correctable prior to completion; and

**19.3.3.4** Specific qualifications expressed by the Architect.

**19.3.4** District's approval of the certified Application for Payment shall be based on Developer complying with all requirements for a fully complete and valid certified Application for Payment.

**19.3.5** Payments to Developer

**19.3.5.1** Within thirty (30) days after approval of the Application for Payment, Developer shall be paid a sum equal to ninety-five percent (95%), of the value of the Tenant Improvement Payment (as verified by Architect and Inspector and certified by Developer) up to the last day of the previous month, less the aggregate of previous payments and amount to be withheld. The value of the Work completed shall be Developer's best estimate. No inaccuracy or error in said estimate shall operate to release Developer, or any Surety upon any bond, from damages arising from such Work, or from the District's right to enforce



each and every provision of the Contract Documents, and the District shall have the right subsequently to correct any error made in any estimate for payment.

**19.3.5.2** Developer may not be entitled to have payment requests processed, or may be entitled to have only partial payment made for Work performed, so long as any direction given by the District concerning the Work, or any portion thereof, remains incomplete.

#### **19.3.6 No Waiver**

No payment by District hereunder shall be interpreted so as to imply that District has inspected, approved, or accepted any part of the Work. Notwithstanding any payment, the District may enforce each and every provision of this Contract. The District may correct or require correction of any error subsequent to any payment

#### **19.3.7 Warranty of Title**

**19.3.7.1** If a lien or a claim based on a stop payment notice of any nature should at any time be filed against the Work or any District property, by any entity that has supplied material or services at the request of Developer, Developer and Developer's Surety shall promptly, on demand by District and at Developer's and Surety's own expense, take any and all action necessary to cause any such lien or a claim based on a stop payment notice to be released or discharged immediately therefrom.

**19.3.7.2** If Developer fails to furnish to the District within ten (10) calendar days after demand by the District satisfactory evidence that a lien or a claim based on a stop payment notice has been released, discharged, or secured, the District may discharge such indebtedness and deduct the amount required therefor, together with any and all losses, costs, damages, and attorney's fees and expenses incurred or suffered by District from any sum payable to Developer under the Contract.

### **19.4 Decisions to Withhold Payment**

#### **19.4.1 Reasons to Withhold Payment**

The District shall withhold payment in whole, or in part, as required by statute. In addition, the District may withhold payment in whole, or in part, to the extent reasonably necessary to protect the District if, in the District's opinion, the representations to the District required herein cannot be made. Payment, in whole, or in part, will be withheld based on the need to protect the District from loss because of, but not limited to, any of the following:

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

**19.4.1.2** Stop Payment Notices or other liens served upon the District as a result of the Contract.

**19.4.1.3** Failure to comply with the requirements of Public Contract Code section 2600 et seq. ("Skilled and Trained Workforce Requirements").

**19.4.1.4** Liquidated damages assessed against Developer.

**19.4.1.5** Reasonable doubt that the Work can be completed for the unpaid balance of the Guaranteed Maximum Price or by the Contract Time.

**19.4.1.6** Damage to the District or other contractor(s).

**19.4.1.7** Unsatisfactory prosecution of the Work by Developer.

**19.4.1.8** Failure to store and properly secure materials.

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

**19.4.1.10** Failure of Developer to maintain As-Built Drawings.

**19.4.1.11** Erroneous estimates by Developer of the value of the Work performed, or other false statements in an Application for Payment.

**19.4.1.12** Unauthorized deviations from the Contract Documents.

**19.4.1.13** Failure of Developer to prosecute the Work in a timely manner in compliance with the Construction Schedule, established progress schedules, and/or completion dates.

**19.4.1.14** Failure to provide acceptable electronic certified payroll records, as required by the Labor Code, by these Contract Documents or by written request for each journeyman, apprentice, worker, or other employee employed by Developer and/or by each Subcontractor in connection with the Work for the period of the Application for Payment or if payroll records are delinquent or inadequate.

**19.4.1.15** Failure to properly pay prevailing wages as required in Labor Code section 1720 et seq., failure to comply with any other Labor Code requirements, and/or failure to comply with labor compliance monitoring and enforcement by the DIR.

**19.4.1.16** Allowing an unregistered subcontractor, as described in Labor Code section 1725.5, to engage in the performance of any work under this Contract.

**19.4.1.17** Failure to comply with any, if applicable federal requirements regarding minimum wages, withholding, payrolls and basic records, apprentice and trainee employment requirements, equal employment opportunity requirements, Copeland Act requirements,

Davis-Bacon Act and related requirements, Contract Work Hours and Safety Standards Act requirements.

**19.4.1.18** Failure to properly maintain or clean up the Site.

**19.4.1.19** Failure to timely indemnify, defend, or hold harmless the District.

**19.4.1.20** Failure to perform any implementation and/or monitoring required by the General Permit, including without limitation any SWPPP for the Project and/or the imposition of any penalties or fines therefore whether imposed on the District or Developer.

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

**19.4.1.22** Failure to pay any royalty, license or similar fees.

**19.4.1.23** Failure to pay Subcontractor(s) or supplier(s) as required by law and Developer's subcontract agreement and by the Contract Documents; and

**19.4.1.24** Developer is otherwise in breach, default, or in substantial violation of any provision of the Contract Documents.

**19.4.2** Reallocation of Withheld Amounts

**19.4.2.1** After prior written notice to Developer with details regarding the District's proposed application of withheld amounts, District may, in its discretion, apply any withheld amount to pay outstanding claims or obligations as defined herein. In so doing, District shall make such payments on behalf of Developer. If any payment is so made by District, then that amount shall be considered a payment made under the Contract Documents by District to Developer and District shall not be liable to Developer for any payment made in good faith. These payments may be made without prior judicial determination of claim or obligation. District will render Developer an accounting of funds disbursed on behalf of Developer.

**19.4.2.2** If Developer defaults or neglects to carry out the Work in accordance with the Contract Documents or fails to perform any provision thereof, District may, after FORTY-EIGHT (48) hours' written notice to Developer and opportunity to commence and pursue cure of default, and, without prejudice to any other remedy, make good such deficiencies. The District shall adjust the total Guaranteed Maximum Price by reducing the amount thereof by the cost of making good such deficiencies. If District deems it inexpedient to correct Work that is damaged, defective, or not done in accordance with the provisions of the Contract Documents, an equitable reduction in the Guaranteed Maximum Price (up to one hundred fifty percent (150%) of the estimated reasonable value of the nonconforming Work) shall be made therefor.

#### **19.4.3 Payment After Cure**

When Developer removes the grounds for declining approval, payment shall be made for amounts withheld because of them. No interest shall be paid on any retainage or amounts withheld due to the failure of Developer to perform in accordance with the terms and conditions of the Contract Documents.

### **19.5 Subcontractor Payments**

#### **19.5.1 Payments to Subcontractors**

No later than seven (7) days after receipt of any Tenant Improvement Payment, or pursuant to Business and Professions Code section 7108.5 and Public Contract Code section 7107, Developer shall pay to each Subcontractor, out of the amount paid to Developer on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled. Developer shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to its Sub-subcontractors in a similar manner.

#### **19.5.2 No Obligation of District for Subcontractor Payment**

The District shall have no obligation to pay, or to see to the payment of, money to a Subcontractor except as may otherwise be required by law.

#### **19.5.3 Joint Checks**

District shall have the right in its sole discretion, if necessary for the protection of the District, to issue joint checks made payable to Developer and Subcontractors and/or material or equipment suppliers. The joint check payees shall be responsible for the allocation and disbursement of funds included as part of any such joint payment. In no event shall any joint check payment be construed to create any contract between the District and a Subcontractor of any tier, or a material or equipment supplier, or any obligation from the District to such Subcontractor or a material or equipment supplier or rights in such Subcontractor against the District.

## **20. Completion of the Work**

### **20.1 Completion**

**20.1.1** District will accept completion of Project and have the Notice of Completion recorded when the entire Work shall have been completed to the satisfaction of District.

**20.1.2** The Work may only be accepted as complete by action of the governing board of the District.

**20.1.3** District, at its sole option, may accept completion of Project and have the Notice of Completion recorded when the entire Work shall have been completed to the satisfaction of District, except for minor corrective items, as distinguished from incomplete items. If Developer fails to complete all minor corrective items within fifteen (15) days after the date of the District's acceptance of completion, District shall withhold from the final payment one hundred fifty percent (150%) of an estimate of the amount sufficient to

complete the corrective items, as reasonably determined by District, until the item(s) are completed.

**20.1.4** At the end of the fifteen (15) day period, if there are any items remaining to be corrected, District may elect to proceed as provided herein related to adjustments to Guaranteed Maximum Price, and/or District's right to perform the Work of Developer.

## **20.2 Close-Out/Certification Procedures**

### **20.2.1 Punch List**

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

### **20.2.2 Close-Out/Certification Requirements**

#### **20.2.2.1 Utility Connections**

Buildings shall be connected to water, gas, sewer, electric, phone, and internet services, complete and ready for use. Service connections shall be made and existing services reconnected.

#### **20.2.2.2 As-Built/Record Drawings and Record Specifications**

**20.2.2.2.1** Developer shall provide exact "as-built" drawings of the Work upon completion of the Project as indicated in the Contract Documents, including but not limited to the Specifications ("As-Built Drawings") as a condition precedent to approval of final payment.

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

**20.2.2.2.3** Upon completion of the Work and as a condition precedent to approval of final payment, Developer shall obtain the Inspector's approval of the corrected prints and deliver the same to Architect in a form acceptable to the Architect as part of closeout.

#### **20.2.2.3 Construction Storm Water Permit, if applicable**

Developer shall submit to District all electric and hard copy records required by the Construction Storm Water Permit, if applicable, within seven (7) days of Completion of the Project.

### **20.2.3 Maintenance Manuals**

Developer shall prepare all operation and maintenance manuals and date as indicated in the Specifications.

#### **20.2.4 Source Programming**

Developer shall provide all source programming for all items in the Project.

#### **20.2.5 Verified Reports**

Developer shall completely and accurately fill out and file forms DSA 6-C or DSA 152 (or most current version applicable at the time the Work is performed), as appropriate. Refer to section 4-336 and section 4-343 of Part 1, Title 24 of the California Code of Regulations.

### **20.3 Final Inspection**

**20.3.1** Developer shall comply with Punch List procedures as provided herein and maintain the presence of its District-approved project superintendent and project manager until the Punch List is complete to ensure proper and timely completion of the Punch List. Under no circumstances shall Developer demobilize its forces prior to completion of the Punch List without District's prior written approval. Upon receipt of Developer's written notice that all of the Punch List items have been fully completed and the Work is ready for final inspection and District acceptance, Architect and Project Inspector will inspect the Work and shall submit to Developer and District a final inspection report noting the Work, if any, required in order to complete in accordance with the Contract Documents. Absent unusual circumstances, this report shall consist of the Punch List items not yet satisfactorily completed.

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

#### **20.3.3 Final Inspection Requirements**

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

**20.3.3.1.1** The Work has been completed.

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

**20.3.3.1.3** Mechanical and electrical Work, including, without limitation, security system, data, fire alarm, are complete and tested, fixtures are in place, connected, and ready for tryout.

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

**20.3.3.1.5** Painting and special finishes complete.

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

**20.3.3.1.7** Tops and bottoms of doors sealed.

**20.3.3.1.8** Floors waxed and polished as specified.

**20.3.3.1.9** Broken glass replaced and glass cleaned.

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

**20.3.3.1.11** Work cleaned, free of stains, scratches, and other foreign matter, damaged and broken material replaced.

**20.3.3.1.12** Finished and decorative work shall have marks, dirt, and superfluous labels removed.

**20.3.3.1.13** Final cleanup, as provided herein.

## **20.4 Costs of Multiple Inspections**

More than two (2) requests of the District to make a final inspection shall be considered an additional service of District, Architect, Construction Manager, and/or Project Inspector, and all subsequent costs will be invoiced to Developer and if funds are available, withheld from remaining payments.

## **20.5 Partial Occupancy or Use Prior to Completion**

### **20.5.1 District's Rights to Occupancy**

The District may occupy or use any completed or partially completed portion of the Work at any stage, and such occupancy shall not constitute the District's Final Acceptance of any part of the Work. Neither the District's Final Acceptance, the making of Final Payment, any provision in Contract Documents, nor the use or occupancy of the Work, in whole or in part, by District shall constitute acceptance of Work not in accordance with the Contract Documents nor relieve Developer or Developer's Performance Bond Surety from liability with respect to any warranties or responsibility for faulty or defective Work or materials, equipment and workmanship incorporated therein. The District and Developer shall agree in writing to the responsibilities assigned to each of them for payments, security, maintenance, heat, utilities, damage to the Work, insurance, the period for correction of the Work, and the commencement of warranties required by the Contract Documents. Any dispute as to responsibilities shall be resolved pursuant to the Claims and Disputes provisions herein, with the added provision that during the dispute process, the District shall have the right to occupy or use any portion of the Work that it needs or desires to use.

### **20.5.2 Inspection Prior to Occupancy or Use**

Immediately prior to partial occupancy or use, the District, Developer, and the Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

### **20.5.3 No Waiver**

Unless otherwise agreed upon, partial or entire occupancy or use of a portion or portions of the Work shall not constitute beneficial occupancy or District's acceptance of the Work not complying with the requirements of the Contract Documents.

## **21. Final Payment and Retention**

### **21.1 Final Payment**

Upon receipt of a final Application for Payment from Developer, the Architect will notify the District whether the Work is complete so that joint inspection of the Work can be scheduled. Thereafter, the District shall jointly inspect the Work and either accept the Work as complete or notify the Architect and Developer in writing of reasons why the Work is not complete. Upon District's acceptance of the Work of Developer as fully complete (that, absent unusual circumstances, will occur when the Punch List items have been satisfactorily completed), the District shall record a Notice of Completion with the County Recorder, and Developer shall, upon receipt of final payment from the District, pay the amount due Subcontractors.

### **21.2 Prerequisites for Final Payment**

The following conditions must be fulfilled prior to Final Payment:

**21.2.1** A full release of all Stop Payment Notices served in connection with the Work shall be submitted by Developer.

**21.2.2** A duly completed and executed conditional waiver and release upon final payment compliant with Civil Code section 8136 from each subcontractor of any tier and supplier to be paid from the final Tenant Improvement Payment.

**21.2.3** A duly completed and executed unconditional waiver and release upon Tenant Improvement Payment compliant with Civil Code section 8134 from each subcontractor of any tier and supplier that was paid from the previous Tenant Improvement Payment(s).

**21.2.4** A duly completed and executed "AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS" from Developer.

**21.2.5** Developer shall have made all corrections to the Work that are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and ordinances, or to fulfill any of the orders or directions of District required under the Contract Documents.

**21.2.6** Each Subcontractor shall have delivered to Developer all written guarantees, warranties, applications, and bonds required by the Contract Documents for its portion of the Work.

**21.2.7** Developer must have completed all requirements set forth under "Close-Out/Certification Procedures," including, without limitation, submission of an approved set of complete Record Drawings.



**21.2.8** Architect shall have issued its written approval that final payment can be made.

**21.2.9** Developer shall have delivered to the District all manuals and materials required by the Contract Documents, which must be approved by the District.

**21.2.10** Developer shall have completed final clean up as provided herein.

### **21.3 Retention**

**21.3.1** The retention, less any amounts disputed by the District or that the District has the right to withhold pursuant to provisions herein, shall be paid:

**21.3.1.1** After approval by the District of the Architect of the Application and Certificate of Payment.

**21.3.1.2** After the satisfaction of the conditions set forth herein.

**21.3.1.3** No less than forty-five (45) days after the recording of the Notice of Completion by District; and

**21.3.1.4** After receipt of a duly completed and executed unconditional waiver and release upon Final Payment compliant with Civil Code section 8138 from each subcontractor of any tier and supplier that was paid from the Final Payment.

**21.3.2** No interest shall be paid on any retention, or on any amounts withheld due to a failure of Developer to perform, in accordance with the terms and conditions of the Contract Documents, except as provided to the contrary in any Escrow Agreement between the District and Developer pursuant to Public Contract Code section 22300.

### **21.4 Substitution of Securities**

The District will permit the substitution of securities in accordance with the provisions of Public Contract Code section 22300.

## **22. Uncovering of Work**

If a portion of the Work is covered without Inspector or Architect approval or not in compliance with the Contract Documents, it must, if required in writing by the District, the Project Inspector, or the Architect, be uncovered for the Project Inspector's or the Architect's observation and be corrected, replaced and/or recovered at Developer's expense without change in the Guaranteed Maximum Price or Contract Time.

## **23. Nonconforming Work and Correction of Work**

### **23.1 Nonconforming Work**

**23.1.1** Developer shall promptly remove from Premises all Work identified by District as failing to conform to the Contract Documents whether incorporated or not. Developer shall promptly replace and re-execute its own Work to comply with the Contract Documents without additional expense to the District and shall bear the expense of making good all work of other contractors destroyed or damaged by any removal or replacement pursuant hereto and/or any delays to the District or other contractors caused thereby.

**23.1.2** If Developer does not commence to remove Work that District has identified as failing to conform to the Contract Documents within a reasonable time, not to exceed FORTY-EIGHT (48) hours after written notice and complete removal of work within a reasonable time, District may remove it and may store any material at Developer's expense. If Developer does not pay expense(s) of that removal within ten (10) days' time thereafter, District may, upon ten (10) days' written notice, sell any material at auction or at private sale and shall deduct all costs and expenses incurred by the District and/or District may withhold those amounts from payment(s) to Developer.

## **23.2 Correction of Work**

### **23.2.1 Correction of Rejected Work**

Pursuant to the notice provisions herein, Developer shall promptly correct the Work rejected by the District, the Architect, or the Project Inspector as failing to conform to the requirements of the Contract Documents, whether observed before or after Completion and whether or not fabricated, installed, or completed. Developer shall bear costs of correcting the rejected Work, including additional testing, inspections, and compensation for the Inspector's or the Architect's services and expenses made necessary thereby.

### **23.2.2 One-Year Warranty Corrections**

If, within one (1) year after the date of Completion of the Work or a designated portion thereof, or after the date for commencement of warranties established hereunder, or by the terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, Developer shall correct it promptly after receipt of written notice from the District to do so. This period of one (1) year shall be extended with respect to portions of the Work first performed after Completion by the period of time between Completion and the actual performance of the Work. This obligation hereunder shall survive District's acceptance of the Work under the Contract Documents and termination of the Contract Documents. The District shall give such notice promptly after discovery of the condition.

## **23.3 District's Right to Perform Work**

**23.3.1** If Developer should neglect to prosecute the Work properly or fail to perform any provisions of the Contract Documents, the District, after providing FORTY-EIGHT (48) hours' written notice and an opportunity to cure the failure, to Developer, may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due Developer.

**23.3.2** If it is found at any time, before or after completion of the Work, that Developer has varied from the Drawings and/or Specifications, including, but not limited to, variation in material, quality, form, or finish, or in the amount or value of the materials and labor used, District may require at its option:

**23.3.2.1** That all such improper Work be removed, remade or replaced, and all work disturbed by these changes be made good by Developer at no additional cost to the District.

**23.3.2.2** That the District deduct from any amount due Developer the sum of money equivalent to the difference in value between the work performed and that called for by the Drawings and Specifications; or

**23.3.2.3** That the District exercise any other remedy it may have at law or under the Contract Documents, including but not limited to the District hiring its own forces or another contractor to replace Developer's nonconforming Work, in which case the District shall either issue a deductive Change Order, a Construction Change Directive, or invoice Developer for the cost of that work. Developer shall pay any invoices within thirty (30) days of receipt of same or District may withhold those amounts from payment(s) to Developer.

## **24. Termination And Suspension**

The Parties' rights to terminate the Project are as indicated in the Facilities Lease. In the event of a termination of the Facilities Lease and notwithstanding any other provision in the Contract Documents, the Surety shall remain liable to all obligees under the Payment Bond and to the District under the Performance Bond for any claim related to the Project.

## **25. Claims Process**

### **25.1 Obligation to File Claims for Disputed Work**

**25.1.1** Should Developer otherwise seek extra time or compensation for any reason whatsoever ("Disputed Work"), then Developer shall first follow procedures set forth in the Contract Documents including, without limitation, Articles 15, 16 and 17, all of which are conditions precedent to submitting a Claim pursuant to Article 25. A Notice of Delay or Proposed Change Order are less formal procedures that proceed the formal claim and do not constitute a Claim. A Claim also does not include correspondence, RFIs, vouchers, invoices, progress payment applications, or other routine or authorized form of requests for progress payments in compliance with the Contract. If a dispute remains, then Developer shall give written notice to District that expressly invokes this Article 25 within the time limits set forth herein.

**25.1.2** Developer's sole and exclusive remedy for Disputed Work is to file a written claim setting forth Developer's position as required herein within the time limits set forth herein.

### **25.2 Duty to Perform during Claim Process**

Developer and its subcontractors shall continue to perform its Work under the Contract, including the Disputed Work, and shall not cause a delay of the Work during any dispute, claim, negotiation, mediation, or arbitration proceeding, except by written agreement by the District.

### **25.3 Definition of Claim**

**25.3.1** Pursuant to Public Contract Code section 9204, the term "Claim" means a separate demand by Developer sent by registered mail or certified mail with return receipt requested, for one or more of the following:

**25.3.1.1** A time extension, including without limitation, for relief of damages or penalties for delay assessed by the District under the Contract;

**25.3.1.2** Payment by the District of money or damages arising from work done by, or on behalf of, Developer pursuant to the Contract and payment of which is not otherwise expressly provided for or to which Developer is not otherwise entitled to; or

**25.3.1.3** An amount of payment disputed by the District.

## **25.4 Claims Presentation**

### **25.4.1 Form and Contents of Claim**

**25.4.1.1** If Developer intends to submit a Claim for an increase in the Guaranteed Maximum Price and/or Contract Time for any reason including, without limitation, the acts of District or its agents, Developer shall, within thirty (30) days after the event giving rise to the Claim, give notice of the Claim ("Notice of Potential Claim") in writing, specifically identifying Developer is invoking this Article 25 Claims Presentation. The Notice of Potential Claim shall provide Developer's preliminary request for an adjustment to the Guaranteed Maximum Price and/or Contract Time, with a description of the grounds therefore.

**25.4.1.2** Within thirty (30) days after serving the written Notice of Potential Claim, Developer shall provide a Claim including an itemized statement of the details and amounts of its Claim for any increase in the Guaranteed Maximum Price or Contract Time, as provided below, including a Time Impact Analysis and any and all other documentation substantiating Developer's claimed damages:

**25.4.1.2.1** The issues, events, conditions, circumstances and/or causes giving rise to the dispute;

**25.4.1.2.2** Citation to provisions in the Contract Documents, statute sections, and/or case law entitling Developer to an increase in the Guaranteed Maximum Price or Contract Time;

**25.4.1.2.3** The pertinent dates and/or durations and actual and/or anticipated effects on the Guaranteed Maximum Price, Contract Schedule milestones and/or Contract Time adjustments;

**25.4.1.2.4** The Time Impact Analysis of all time delays that shows actual time impact on the critical path; and

**25.4.1.2.5** The line-item costs for labor, material, and/or equipment, if applicable, for all cost impacts priced like a change order according to Article 17 and must be updated monthly as to cost and entitlement if a continuing claim.

**25.4.1.3** The Claim shall include the following certification by Developer:

**25.4.1.3.1** The undersigned Developer certifies under penalty of perjury that the attached dispute is made in good faith; that the supporting data is accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the adjustment for which Developer believes the District is liable; and that I am duly authorized to certify the claim on behalf of Developer.

**25.4.1.3.2** Furthermore, Developer understands that the value of the attached dispute expressly includes any and all of Developer's costs and expenses, direct and indirect, resulting from the Work performed on the Project, additional time required on the Project and/or resulting from delay to the Project including, without limitation, cumulative impacts. Any costs, expenses, damages, or time extensions not included are deemed waived.

**25.4.2** Developer shall bear all costs incurred in the preparation and submission of a Claim.

**25.4.3** Failure to timely submit a Claim and the requisite supporting documentation shall constitute a waiver of Developer's claim(s) against the District and Developer's Claim(s) for compensation or an extension of time shall be deemed waived, released, and discharged as to any entitlement for adjustment to Guaranteed Maximum Price and/or Contract Time.

## **25.5 Claim Resolution pursuant to Public Contract Code section 9204**

Developer may request to waive the claims procedure under Public Contract Code section 9204 and proceed directly to the commencement of a civil action or binding arbitration. If Developer chooses to proceed, Developer shall comply with the following steps:

### **25.5.1 STEP 1:**

**25.5.1.1** Upon receipt of a Claim by registered or certified mail, return receipt requested, including the documents necessary to substantiate it, the District shall conduct a reasonable review of the Claim and, within a period not to exceed 45 days, shall provide Developer a written statement identifying what portion of the Claim is disputed and what portion is undisputed. Upon receipt of a Claim, the District and Developer may, by mutual agreement, extend the time period to provide a written statement. If the District needs approval from its governing body to provide Developer a written statement identifying the disputed portion and the undisputed portion of the Claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of Claim sent by registered mail or certified mail, return receipt requested, the District shall have up to three (3) days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide Developer a written statement identifying the disputed portion and the undisputed portion.

**25.5.1.1.1** Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the District issues its written statement. Amounts not paid in a timely manner as required by this section, shall bear interest at seven percent (7%) per annum.

**25.5.1.2** Upon receipt of a Claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable. In this instance, District and Developer must comply with the sections below regarding Public Contract Code section 20104 et seq. and Government Code Claim Act Claims.

**25.5.1.3** If the District fails to issue a written statement, or to otherwise meet the time requirements of this section, this shall result in the Claim being deemed rejected in its entirety. A claim that is denied by reason of the District's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of Developer.

#### **25.5.2 STEP 2:**

**25.5.2.1** If Developer disputes the District's written response, or if the District fails to respond to a Claim within the time prescribed, Developer may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the District shall schedule a meet and confer conference within 30 days for settlement of the dispute. Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the District shall provide Developer a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed.

**25.5.2.2** Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the District issues its written statement. Amounts not paid in a timely manner as required by this section, shall bear interest at seven percent (7%) per annum.

#### **25.5.3 STEP 3:**

**25.5.3.1** Any disputed portion of the claim, as identified by Developer in writing, shall be submitted to nonbinding mediation, with the District and Developer sharing the associated costs equally. The District and Developer shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

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

**25.5.3.2** Unless otherwise agreed to by the District and Developer in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Public Contract Code section 20104.4 to mediate after litigation has been commenced.

#### **25.5.4 STEP 4:**

**25.5.4.1** If mediation under this section does not resolve the parties' dispute, the District may, but does not require arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program.

### **25.6 Subcontractor Pass-Through Claims**

**25.6.1** If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a District because privity of contract does not exist, the contractor may present to the District a Claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that Developer present a Claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the Claim be presented to the District shall furnish reasonable documentation to support the Claim.

**25.6.2** Within 45 days of receipt of this written request from a subcontractor, Developer shall notify the subcontractor in writing as to whether Developer presented the Claim to the District and, if Developer did not present the Claim, provide the subcontractor with a statement of the reasons for not having done so.

**25.6.3** Developer shall bind all its Subcontractors to the provisions of this section and will hold the District harmless against Claims by Subcontractors.

### **25.7 Government Code Claim Act Claim**

**25.7.1** If a Claim, or any portion thereof, remains in dispute upon satisfaction of all applicable Claim Resolution requirements, including those pursuant to Public Contract Code section 9204, Developer shall comply with all claims presentation requirements as provided in Chapter 1 (commencing with section 900) and Chapter 2 (commencing with section 910) of Part 3 of Division 3.6 of Title 1 of Government Code as a condition precedent to Developer's right to bring a civil action against the District.

**25.7.2** Developer shall bear all costs incurred in the preparation, submission and administration of a Claim. Any claims presented in accordance with the Government Code must affirmatively indicate Developer's prior compliance with the claims procedure herein of the claims asserted.

**25.7.3** For purposes of those provisions, the running of the time within which a claim pursuant to Public Contract Code section 20104.2 only must be presented to the District shall be tolled from the time the Developer submits its written claim pursuant to subdivision (a) until the time that the claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

**25.8 Claim Resolution pursuant to Public Contract Code section 20104 et seq.**

**25.8.1** In the event of a disagreement between the parties as to performance of the Work, the interpretation of this Contract, or payment or nonpayment for Work performed or not performed, the parties shall attempt to resolve all claims of three hundred seventy-five thousand dollars (\$375,000) or less which arise between Developer and District by those procedures set forth in Public Contract Code section 20104 et seq., to the extent applicable.

**25.8.1.1** Developer shall file with the District any written Claim, including the documents necessary to substantiate it, upon the application for final payment.

**25.8.1.2** For claims of less than fifty thousand dollars (\$50,000), the District shall respond in writing within forty-five (45) days of receipt of the Claim or may request in writing within thirty (30) days of receipt of the Claim any additional documentation supporting the claim or relating to defenses or claims the District may have against Developer.

**25.8.1.2.1** If additional information is required, it shall be requested and provided by mutual agreement of the parties.

**25.8.1.2.2** District's written response to the documented Claim shall be submitted to Developer within fifteen (15) days after receipt of the further documentation or within a period of time no greater than that taken by Developer to produce the additional information, whichever is greater.

**25.8.1.3** For claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the District shall respond in writing to all written Claims within sixty (60) days of receipt of the claim, or may request, in writing, within thirty (30) days of receipt of the Claim any additional documentation supporting the Claim or relating to defenses or claims the District may have against Developer.

**25.8.1.3.1** If additional information is required, it shall be requested and provided upon mutual agreement of the District and Developer.

**25.8.1.3.2** The District's written response to the claim, as further documented, shall be submitted to Developer within thirty (30) days after receipt of the further documentation, or within a period of time no greater than that taken by Developer to produce the additional information or requested documentation, whichever is greater.



**25.8.1.4** If Developer disputes the District's written response, or the District fails to respond within the time prescribed, Developer may so notify the District, in writing, either within fifteen (15) days of receipt of the District's response or within fifteen (15) days of the District's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the District shall schedule a meet and confer conference within thirty (30) days for settlement of the dispute.

**25.8.1.5** Following the meet and confer conference, if the claim or any portion of it remains in dispute, Developer shall file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions the running of the time within which a claim must be filed shall be tolled from the time Developer submits its written Claim until the time the Claim is denied, including any period of time utilized by the meet and confer process.

**25.8.1.6** For any civil action filed to resolve claims filed pursuant to this section, within sixty (60) days, but no earlier than thirty (30) days, following the filing of responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within fifteen (15) days by both parties of a disinterested third person as mediator, shall be commenced within thirty (30) days of the submittal, and shall be concluded within fifteen (15) days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.

**25.8.1.7** If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of the Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act, (commencing with Section 2016) of Chapter 1 of Title 4 of part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

**25.8.1.8** The District shall not fail to pay money as to any portion of a Claim which is undisputed except as otherwise provided in the Contract Documents. In any suit filed pursuant to this section, the District shall pay interest at the legal rate on any arbitration award or judgment. Interest shall begin to accrue on the date the suit is filed in a court of law.

**25.8.2** Developer shall bind its Subcontractors to the provisions of this Section and will hold the District harmless against disputes by Subcontractors.

## **25.9 Claims Procedure Compliance**

**25.9.1** Failure to submit and administer claims as required in Article 25 shall waive Developer's right to claim on any specific issues not included in a timely

submitted claim. Claim(s) not raised in a timely protest and timely claim submitted under this Article 25 may not be asserted in any subsequent litigation, Government Code Claim, or legal action.

**25.9.2** District shall not be deemed to waive any provision under this Article 25, if at District's sole discretion, a claim is administered in a manner not in accord with this Article 25. Waivers or modifications of this Article 25 may only be made by a signed change order approved as to form by legal counsel for both District and Developer; oral or implied modifications shall be ineffective.

## **25.10 Claim Resolution Non-Applicability**

**25.10.1** The procedures for dispute and claim resolution set forth in this Article shall not apply to the following:

**25.10.1.1** Personal injury, wrongful death or property damage claims.

**25.10.1.2** Latent defect or breach of warranty or guarantee to repair.

**25.10.1.3** Stop payment notices.

**25.10.1.4** District's rights set forth in the Article on Suspension and Termination.

**25.10.1.5** Disputes arising out of labor compliance enforcement by the Department of Industrial Relations; or

**25.10.1.6** District rights and obligations as a public entity set forth in applicable statutes; provided, however, that penalties imposed against a public entity by statutes, including, but not limited to, Public Contract Code sections 20104.50 and 7107, shall be subject to the Claim Resolution requirements provided in this Article.

## **25.11 Attorney's Fees**

**25.11.1** Should litigation be necessary to enforce any terms or provisions of this Contract, then each party shall bear its own litigation and collection expenses, witness fees, court costs and attorney's fees.

## **26. State Labor, Wage & Hour, Apprenticeship, And Related Provisions**

### **26.1 Labor Compliance and Enforcement**

Since this Project is subject to labor compliance and enforcement by the Department of Industrial Relations ("DIR"), Developer specifically acknowledges and understands that it shall perform the Work of this Agreement while complying with all the applicable provisions of Division 2, Part 7, Chapter 1, of the Labor Code and Title 8 of the California Code of Regulations, including, without limitation, the requirement that Developer and all Subcontractors shall timely furnish complete and accurate electronic certified payroll records directly to the DIR. The District may not issue payment if this requirement is not met.

### **26.2 Wage Rates, Travel, and Subsistence**

**26.2.1** Pursuant to the provisions of Article 2 (commencing at section 1770), Chapter 1, Part 7, Division 2, of the Labor Code of California, the general

prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this public work is to be performed for each craft, classification, or type of worker needed to execute the Contract Documents are on file at the District's principal office and copies will be made available to any interested party on request. Developer shall obtain and post a copy of these wage rates at the job site.

**26.2.2** Holiday and overtime work, when permitted by law, shall be paid for at a rate of at least one and one-half times the above specified rate of per diem wages, unless otherwise specified. The holidays upon which those rates shall be paid need not be specified by the District but shall be all holidays recognized in the applicable collective bargaining agreement. If the prevailing rate is not based on a collectively bargained rate, the holidays upon which the prevailing rate shall be paid shall be as provided in Section 6700 of the Government Code.

**26.2.3** Developer shall pay and shall cause to be paid each worker engaged in Work on the Project not less than the general prevailing rate of per diem wages determined by the Director of the Department of Industrial Relations ("DIR") ("Director"), regardless of any contractual relationship which may be alleged to exist between Developer or any Subcontractor and such workers.

**26.2.4** If, prior to execution of the Facilities Lease, the Director determines that there has been a change in any prevailing rate of per diem wages in the locality in which the Work under the Contract Documents is to be performed, such change shall not alter the wage rates in the Contract Documents subsequently awarded.

**26.2.5** Pursuant to Labor Code section 1775, Developer shall, as a penalty, forfeit the statutory amount (believed by the District to be currently two hundred dollars (\$200) to District for each calendar day, or portion thereof, for each worker paid less than the prevailing rates, determined by the District and/or the Director, for the work or craft in which that worker is employed for any public work done under Contract by Developer or by any Subcontractor under it. The difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate, shall be paid to each worker by Developer.

**26.2.6** Any worker employed to perform Work on the Project, which Work is not covered by any classification listed in the general prevailing wage rate of per diem wages determined by the Director, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to Work to be performed by him, and that minimum wage rate shall be retroactive to time of initial employment of the person in that classification.

**26.2.7** Pursuant to Labor Code section 1773.1, per diem wages are deemed to include employer payments for health and welfare, pension, vacation, travel time, subsistence pay, and apprenticeship or other training programs authorized by Labor Code section 3093, and similar purposes.

**26.2.8** Developer shall post at appropriate conspicuous points on the Project Site a schedule showing all determined minimum wage rates and all authorized deductions, if any, from unpaid wages actually earned. In addition, Developer

shall post a sign-in log for all workers and visitors to the Site, a list of all Subcontractors of any tier on the Site, and the required Equal Employment Opportunity poster(s).

### **26.3 Hours of Work**

**26.3.1** As provided in Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2, of the Labor Code, eight (8) hours of labor shall constitute a legal day of work. The time of service of any worker employed at any time by Developer or by any Subcontractor on any subcontract under the Contract Documents upon the Work or upon any part of the Work contemplated by the Contract Documents shall be limited and restricted by Developer to eight (8) hours per day, and forty (40) hours during any one week, except as hereinafter provided. Notwithstanding the provisions hereinabove set forth, Work performed by employees of Developer in excess of eight (8) hours per day and forty (40) hours during any one week, shall be permitted upon this public work upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half times the basic rate of pay.

**26.3.2** Developer shall keep and shall cause each Subcontractor to keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed by Developer in connection with the Work or any part of the Work contemplated by the Contract Documents. The record shall be kept open at all reasonable hours to the inspection of District and to the Division of Labor Standards Enforcement of the DIR.

**26.3.3** Pursuant to Labor Code section 1813, Developer shall, as a penalty, forfeit the statutory amount (believed by the District to be currently twenty-five dollars (\$25)) to the District for each worker employed in the execution of the Contract Documents by Developer or by any Subcontractor for each calendar day during which a worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of the provisions of Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2, of the Labor Code.

**26.3.4** Any Work necessary to be performed after regular working hours, or on Sundays or other holidays shall be performed without additional expense to the District.

### **26.4 Payroll Records**

**26.4.1** Developer shall upload, and shall cause each Subcontractor performing any portion of the Work under this Contract to upload, an accurate and complete certified payroll record ("CPR") electronically using DIR's eCPR System by uploading the CPRs by electronic XML file or entering each record manually using the DIR's iform (or current form) online no less than every 30 days while Work is being performed and within 30 days after the final day of Work performed on the Project and within ten (10) days of any request by the District or Labor Commissioner at <http://www.dir.ca.gov/Public-Works/Certified/Payroll-Reporting.html> or current application and URL, showing the name, address, social security number, work classification, straight time, and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee

employed by Developer and/or each Subcontractor in connection with the Work.

**26.4.1.1** The CPRs enumerated hereunder shall be filed directly with the DIR on a weekly basis or to the requesting party, whether the District or DIR, within ten (10) days after receipt of each written request. The CPRs from Developer and each Subcontractor for each week shall be provided on or before ten (10) days after the end of the Sunday to Saturday conventional week covered by the CPRs. District may not make any payment to Developer until:

**26.4.1.1.1** Developer and/or its Subcontractor(s) provide CPRs acceptable to the District and DIR.

**26.4.1.1.2** Any delay in Developer and/or its Subcontractor(s) providing CPRs to the District or DIR in a timely manner may directly delay the District's review and/or audit of the CPRs and Developer's payment.

**26.4.2** All CPRs shall be available for inspection at all reasonable hours at the principal office of Developer on the following basis:

**26.4.2.1** A certified copy of an employee's CPR shall be made available for inspection or furnished to the employee or his/her authorized representative on request.

**26.4.2.2** CPRs shall be made available for inspection or furnished upon request or as required by regulation to a representative of the District, Division of Labor Standards Enforcement, Division of Apprenticeship Standards, and/or the DIR.

**26.4.2.3** CPRs shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through the District, Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested CPRs have not been provided pursuant to the provisions herein, the requesting party shall, prior to being provided the records, reimburse the costs of preparation by Developer, Subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of Developer.

**26.4.3** Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by District, Division of Apprenticeship Standards, Division of Labor Standards Enforcement, or DIR shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of Developer awarded the Project under the Contract Documents or performing under the Contract Documents shall not be marked or obliterated.

**26.4.4** Developer shall inform District of the location of the records enumerated hereunder, including the street address, city, and county, and shall, within five (5) working days of a change in location of the records, provide a notice of change of location and address.

**26.4.5** In the event of noncompliance with the requirements of this section, Developer shall have ten (10) days in which to comply subsequent to receipt of written notice specifying in what respects Developer must comply with this section. Should noncompliance still be evident after the ten (10) day period, Developer shall, as a penalty, forfeit up to one hundred dollars (\$100) to District for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Labor Commissioner, these penalties shall be withheld from Tenant Improvement Payments then due.

**26.4.6 [Reserved]**

**26.5 [Reserved]**

**26.6 Apprentices**

**26.6.1** Developer acknowledges and agrees that, if the Contract Documents involve a dollar amount greater than or a number of working days greater than that specified in Labor Code section 1777.5, then this Contract is governed by the provisions of Labor Code Section 1777.5 and 29 CFR part 5. It shall be the responsibility of Developer to ensure compliance with this Article and with Labor Code section 1777.5 for all apprenticeship occupations.

**26.6.2** Apprentices of any crafts or trades may be employed and, when required by Labor Code section 1777.5, shall be employed provided they are properly registered in full compliance with the provisions of the Labor Code.

**26.6.3** Every apprentice shall be paid the standard wage paid to apprentices under the regulations of the craft or trade at which he/she is employed and shall be employed only at the work of the craft or trade to which she/he is registered.

**26.6.4** Only apprentices, as defined in section 3077 of the Labor Code, who are in training under apprenticeship standards and written apprentice agreements under Chapter 4 (commencing at section 3070), Division 3, of the Labor Code, are eligible to be employed. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which he/she is training.

**26.6.5** Pursuant to Labor Code section 1777.5, if that section applies to this Contract as indicated above, Developer and any Subcontractors employing workers in any apprenticeable craft or trade in performing any Work under this Contract shall apply to the applicable joint apprenticeship committee for a certificate approving Developer or Subcontractor under the applicable apprenticeship standards and fixing the ratio of apprentices to journeymen employed in performing the Work.

**26.6.6** Pursuant to Labor Code section 1777.5, if that section applies to this Contract as indicated above, Developer and any Subcontractor may be required to make contributions to the apprenticeship program.

**26.6.7** If Developer or Subcontractor willfully fails to comply with Labor Code section 1777.5, then, upon a determination of noncompliance by the Administrator of Apprenticeship, it shall:

**26.6.7.1** Be denied the right to bid on any subsequent project for one (1) year from the date of such determination.

**26.6.7.2** Forfeit, as a penalty, to District the full amount stated in Labor Code section 1777.7. Interpretation and enforcement of these provisions shall be in accordance with the rules and procedures of the California Apprenticeship Council and under the authority of the Chief of the Division of Apprenticeship Standards.

**26.6.7.3** Developer and all Subcontractors shall comply with Labor Code section 1777.6, which section forbids certain discriminatory practices in the employment of apprentices.

**26.6.7.4** Developer shall become fully acquainted with the law regarding apprentices prior to commencement of the Work. Special attention is directed to sections 1777.5, 1777.6, and 1777.7 of the Labor Code, and Title 8, California Code of Regulations, Section 200 et seq. Questions may be directed to the State Division of Apprenticeship Standards, 455 Golden Gate Avenue, 9th Floor, San Francisco, California 94102.

## **26.7 Skilled and Trained Workforce**

**26.7.1** Developer and its subcontractors at every tier hereby provide an enforceable commitment to comply with Public Contract Code section 2600 et seq., which requires use of a skilled and trained workforce to perform all work on the Contract or Project that falls within an apprenticeable occupation in the building and construction trades.

**26.7.1.1** "Apprenticeable Occupation" means an occupation for which the Chief of the Division of Apprenticeship Standards of the Department of Industrial Relations ("Chief") had approved an apprenticeship program pursuant to Section 3075 of the Labor Code before January 1, 2014.

**26.7.1.2** "Skilled and Trained Workforce" means a workforce that meets all of the following conditions:

**26.7.1.2.1** All of the workers are either skilled journeypersons or apprentices registered in an apprenticeship program approved by the Chief.

**26.7.1.2.2** That either (A) the number of the skilled journeypersons employed to perform work on the Contract or Project by Developer or its subcontractors at every tier are graduates of an apprenticeship program for the applicable occupation that was either approved by the Chief pursuant to Labor Code section 3075 or located outside California and approved for federal purposes pursuant to the apprenticeship regulations adopted by the federal Secretary of Labor, or (B) the hours of work performed by skilled journeypersons who have graduated from an approved apprenticeship program meet at least the percentages set forth in the following chart:

REQUIREMENT	EXCLUDED OCCUPATIONS
0%	Teamster
At least 30%	Acoustical installer, bricklayer, carpenter, cement mason, drywall installer or lather, marble mason, finisher, or setter, modular furniture or systems installer, operating engineer, pile driver, plasterer, roofer or waterproofer, stone mason, surveyor, terrazzo worker or finisher, and tile layer, setter, or finisher
At least 60%	All remaining apprenticeable occupations

**26.7.1.2.3** For an apprenticeable occupation in which no apprenticeship program has been approved by the Chief before January 1, 1995, up to one-half of the above graduation percentage requirements set forth in the above chart may be satisfied by skilled journeypersons who commenced working in the apprenticeable occupation before the Chief's approval of an apprenticeship program for that occupation in the county in which the Project is located.

**26.7.1.2.4** The contractor or subcontractor need not meet the apprenticeship graduation requirements if:

**26.7.1.2.4.1** During a calendar month, Developer or subcontractor employs skilled journeypersons to perform fewer than 10 hours of work on the Contract or Project; or

**26.7.1.2.4.2** The subcontractor was not a listed subcontractor under Public Contract Code section 4104 or a substitute for a listed subcontractor, and the subcontract does not exceed one-half of one percent (0.5%) of the price of the prime contract.

**26.7.1.3** "Skilled Journeyperson" means a worker who either:

**26.7.1.3.1** Graduated from an apprenticeship program for the applicable occupation that was approved by the Chief or located outside of California and approved for federal purposes pursuant to the apprenticeship regulations adopted by the federal Secretary of Labor; or

**26.7.1.3.2** Has at least as many hours of on-the-job experience in the applicable occupation as would be required to graduate from an apprenticeship program for the applicable occupation that is approved by the Chief.

**26.7.2** Developer and its subcontractors will demonstrate its compliance with the Skilled and Trained Workforce requirements by either of the following:

**26.7.2.1** Provide monthly reports to the District demonstrating that Developer and its subcontractors are complying with the requirements of Public Contract Code section 2600 et seq., which shall be a public



record under California Public Records Act, Government Code section 6250 et seq.; or

**26.7.2.2** Provide evidence that Developer and its subcontractors have agreed to be bound by: (1) a project labor agreement entered into by the District that binds all contractors and all its subcontractors at every tier performing work on the Project to use a skilled and trained workforce; (2) the extension or renewal of a project labor agreement entered into by the District prior to January 1, 2017; or (3) a project labor agreement that binds all contractors and all its subcontractors at every tier performing work on the Project to use a skilled and trained workforce.

**26.8 [Reserved]**

**26.9 Non-Discrimination**

**26.9.1** Developer herein agrees to comply with the provisions of the California Fair Employment and Housing Act as set forth in Part 2.8 of Division 3 of Title 2 of the California Government Code, commencing at section 12900; the Federal Civil Rights Act of 1964, as set forth in Public Law 88-352, and all amendments thereto; Executive Order 11246; and all administrative rules and regulations found to be applicable to Developer and Subcontractor.

**26.9.2** Special requirements for Federally Assisted Construction Contracts: During the performance of the requirement of the Contract Documents, Developer agrees to incorporate in all subcontracts the provisions set forth in Chapter 60-1.4(b) of Title 41 published in Volume 33 No. 104 of the Federal Register dated May 28, 1968.

**26.10 Labor First Aid**

Developer shall maintain emergency first aid treatment for Developer's laborers and mechanics on the Project which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C. § 651 et seq.) and the California Occupational Safety and Health Act of 1973 (Lab. Code, § 6300 et seq.; 8 Cal. Code of Regs., § 330 et seq.).

**27. [Reserved]**

**28. Miscellaneous**

**28.1 Assignment of Antitrust Actions**

Although this project may not have been formally bid, the following provisions may apply:

**28.1.1** Section 7103.5(b) of the Public Contract Code states:

In entering into a public works contract or subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and

Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgment by the parties.

**28.1.2** Section 4552 of the Government Code states in pertinent part:

In submitting a bid to a public purchasing body, the bidder offers and agrees that if the bid is accepted, it will assign to the purchasing body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, materials, or services by the bidder for sale to the purchasing body pursuant to the bid. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the bidder.

**28.1.3** Section 4553 of the Government Code states in pertinent part:

If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under this chapter, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery.

**28.1.4** Section 4554 of the Government Code states in pertinent part:

Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under this part if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action.

**28.1.5** Under this Article, "public purchasing body" is District and "bidder" is Developer.

**28.2 Excise Taxes**

If, under Federal Excise Tax Law, any transaction hereunder constitutes a sale on which a Federal Excise Tax is imposed and the sale is exempt from such Federal Excise Tax because it is a sale to a State or Local Government for its exclusive use, District, upon request, will execute documents necessary to show (1) that District is a political subdivision of the State for the purposes of such exemption, and (2) that the sale is for the exclusive use of District. No Federal Excise Tax for such materials shall be included in any Guaranteed Maximum Price.

**28.3 Taxes**

Guaranteed Maximum Price is to include any and all applicable sales taxes or other taxes that may be due in accordance with section 7051 et seq. of the Revenue and Taxation Code, Regulation 1521 of the State Board of Equalization or any other tax code that may be applicable.

#### **28.4 Shipments**

Developer is responsible for any or all damage or loss to shipments until delivered and accepted on Site, as indicated in the Contract Documents. There must be no charge for containers, packing, unpacking, drayage, or insurance. The total Guaranteed Maximum Price shall be all inclusive (including sales tax) and no additional costs of any type will be considered.

#### **28.5 Compliance with Government Reporting Requirements**

If this Contract is subject to federal or other governmental reporting requirements because of federal or other governmental financing in whole or in part for the Project of which it is part, or for any other reason, Developer shall comply with those reporting requirements at the request of the District at no additional cost.

[END OF DOCUMENT]

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**SUMMARY OF WORK**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS**

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

- A. General Conditions, including, without limitation, Site Access Conditions and Requirements;
- B. Special Conditions.

**1.02 SUMMARY OF WORK COVERED BY CONTRACT DOCUMENTS**

- A. The Work of this Contract consists of the following:

Selective demolition and construction necessary for the Modernization to existing school buildings, including associated civil, architectural, structural, plumbing, mechanical and/or electrical work as indicated in the Drawings and Specifications. Generally, these categories of work involve new finishes, adaptive re-use and modification of certain selected areas, new cabinetry, handicap accessibility retrofits, re-roofing, and adding HVAC to instructional areas, library and administrative areas and pertain to changing and expanding selected infrastructure utilities, and extensive modifications. The Project will involve the "phasing" and barricading of work areas as indicated on the Plans and enumerated in these Specifications.

**1.03 CONTRACTS**

- A. Perform the Work under a single, fixed-price Contract.

**1.04 WORK BY OTHERS**

- A. Work on the Project that will be performed and completed prior to the start of the Work of this Contract:

**[FILL IN OR MODIFY AS APPROPRIATE]**

- (1) Asbestos removal/abatement.
- (2) Lead paint removal/abatement.

- B. Work on the Project that will be performed by others concurrent with the Work of this Contract:

- (1) \_\_\_\_\_
- (2) \_\_\_\_\_

## **1.05 CODES, REGULATIONS, AND STANDARDS**

- A. The codes, regulations, and standards adopted by the state and federal agencies having jurisdiction shall govern minimum requirements for this Project. Where codes, regulations, and standards conflict with the Contract Documents, these conflicts shall be brought to the immediate attention of the District and the Architect.
- B. Codes, regulations, and standards shall be as published effective as of date of bid opening, unless otherwise specified or indicated.

## **1.06 PROJECT RECORD DOCUMENTS**

- A. Contractor shall maintain on Site one set of the following record documents; Contractor shall record actual revisions to the Work:
  - (1) Contract Drawings.
  - (2) Specifications.
  - (3) Addenda.
  - (4) Change Orders and other modifications to the Contract.
  - (5) Reviewed shop drawings, product data, and samples.
  - (6) Field test records.
  - (7) Inspection certificates.
  - (8) Manufacturer's certificates.
- B. Contractor shall store Record Documents separate from documents used for construction. Provide files, racks, and secure storage for Record Documents and samples.
- C. Contractor shall record information concurrent with construction progress.
- D. Specifications: Contractor shall legibly mark and record at each product section of the Specifications the description of the actual product(s) installed, including the following:
  - (1) Manufacturer's name and product model and number.
  - (2) Product substitutions or alternates utilized.
  - (3) Changes made by Addenda and Change Orders and written directives.

## **1.07 EXAMINATION OF EXISTING CONDITIONS**

- A. Contractor shall be held to have examined the Project Site and acquainted itself with the conditions of the Site and of the streets or roads approaching the Site.

- B. Prior to commencement of Work, Contractor shall survey the Site and existing buildings and improvements to observe existing damage and defects such as cracks, sags, broken, missing or damaged glazing, other building elements and Site improvements, and other damage.
- C. Should Contractor observe cracks, sags, and other damage to and defects of the Site and adjacent buildings, paving, and other items not indicated in the Contract Documents, Contractor shall immediately report same to the District and the Architect.

#### **1.08 CONTRACTOR'S USE OF PREMISES**

- A. If unoccupied and only with District's prior written approval, Contractor may use the building(s) at the Project Site without limitation for its operations, storage, and office facilities for the performance of the Work. If the District chooses to beneficially occupy any building(s), Contractor must obtain the District's written approval for Contractor's use of spaces and types of operations to be performed within the building(s) while so occupied. Contractor's access to the building(s) shall be limited to the areas indicated.
- B. If the space at the Project Site is not sufficient for Contractor's operations, storage, office facilities and/or parking, Contractor shall arrange and pay for any additional facilities needed by Contractor.
- C. Contractor shall not interfere with use of or access to occupied portions of the building(s) or adjacent property.
- D. Contractor shall maintain corridors, stairs, halls, and other exit-ways of building clear and free of debris and obstructions at all times.
- E. No one other than those directly involved in the demolition and construction, or specifically designated by the District or the Architect shall be permitted in the areas of work during demolition and construction activities.
- F. The Contractor shall install the construction fence and maintain that it will be locked when not in use. Keys to this fencing will be provided to the District.

#### **1.09 PROTECTION OF EXISTING STRUCTURES AND UTILITIES**

- A. The Drawings show above-grade and below-grade structures, utility lines, and other installations that are known or believed to exist in the area of the Work. Contractor shall locate these existing installations before proceeding with excavation and other operations that could damage same; maintain them in service, where appropriate; and repair damage to them caused by the performance of the Work. Should damage occur to these existing installations, the costs of repair shall be at the Contractor's expense and made to the District's satisfaction.
- B. Contractor shall be alert to the possibility of the existence of additional structures and utilities. If Contractor encounters additional structures and utilities, Contractor will immediately report to the District for disposition of same as indicated in the General Conditions.

#### **1.10 UTILITY SHUTDOWNS AND INTERRUPTIONS**

- A. Contractor shall give the District a minimum of three (3) days written notice in advance of any need to shut off existing utility services or to effect equipment interruptions. The District will set exact time and duration for shutdown, and will assist Contractor with shutdown. Work required to re-establish utility services shall be performed by the Contractor.
- B. Contractor shall obtain District's written approval as indicated in the General Conditions in advance of deliveries of material or equipment or other activities that may conflict with District's use of the building(s) or adjacent facilities.

#### **1.11 STRUCTURAL INTEGRITY**

- A. Contractor shall be responsible for and supervise each operation and work that could affect structural integrity of various building elements, both permanent and temporary.
- B. Contractor shall include structural connections and fastenings as indicated or required for complete performance of the Work.

**PART 2 – PRODUCTS Not Used.**

**PART 3 – EXECUTION Not Used.**

END OF DOCUMENT



**ALLOWANCE**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

A. Non-specified work.

**1.2 RELATED SECTIONS**

A. Document 01 10 00 (Summary of Work)

B. Document 01 29 00 (Payments and Completion)

C. Document 01 32 19 (Submittal Procedures)

**1.3 ALLOWANCES**

- A. Included in the Contract, a stipulated sum/price of **[INSERT AMOUNT]** as an allowance for Unforeseen Conditions within the limits set forth in the Contract Documents. This Allowance shall not be utilized without written approval by the District.
- B. Contractor's costs, without overhead and profit, for products, delivery, installation, labor, insurance, payroll, taxes, bonding and equipment rental will be included in Allowance Expenditure Directive authorizing expenditure of funds from this Allowance. No overhead and profit shall be added to the Allowance Expenditure Directive.
- C. Funds will be drawn from Allowance only with District approval evidenced by an Allowance Expenditure Directive.
- D. At Contract closeout, funds remaining in Allowance will be credited to District by Change Order.
- E. Whenever costs are more than the Allowance, the amount covered by the Allowance will be approved at cost. The Contract Price shall be adjusted by Change Order for amounts in excess of the Allowance.

**PART 2 PRODUCTS**

Not used.

**PART 3 EXECUTION**

Not used.

END OF DOCUMENT

**ALTERNATES AND UNIT PRICING**

**PART 1 – ALTERNATES**

**1.01 RELATED DOCUMENTS AND PROVISIONS**

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

- A. General Conditions;
- B. Special Conditions;
- C. Bid Form and Proposal;
- D. Instruction to Bidders.

**1.02 DESCRIPTION**

The items of work indicated below propose modifications to, substitutions for, additions 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.

**1.03 GENERAL**

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.

**1.04 BASE BID**

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

**1.05 ALTERNATES**

- A. \_\_\_\_\_
- B. \_\_\_\_\_

The above Alternate descriptions are general in nature and for reference purposes only. The Contract Documents, including, without limitation, the Drawings and Specifications, must be referred to for the complete scope of Work.

## **PART 2 - UNIT PRICING**

### **2.01 GENERAL**

Contractor shall completely state all required figures based on Unit Prices listed below. Where scope of Work is decreased, all Work pertaining to the item, whether specifically stated or not, shall be omitted and where scope of Work is increased, all work pertaining to that item required to render same ready for use on the Project in accordance with intention of Drawings and Specifications shall be included in an agreed upon price amount.

### **2.02 UNIT PRICES**

Furnish unit prices for each of the named items on a square foot, lineal foot, or per each basis, as applies. Unit prices shall include all labor, materials, services, profit, overhead, insurance, bonds, taxes, and all other incidental costs of Contractor, subcontractors, and supplier(s).

A. \_\_\_\_\_

B. \_\_\_\_\_

END OF DOCUMENT

**PRODUCT OPTIONS AND SUBSTITUTIONS**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS**

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

- A. Instructions to Bidders;
- B. General Conditions, including, without limitation, Substitutions For Specified Items; and
- C. Special Conditions.

**1.02 SUBSTITUTIONS OF MATERIALS AND EQUIPMENT**

- A. Catalog numbers and specific brands or trade names followed by the designation "or equal" are used in conjunction with material and equipment required by the Specifications to establish the standards of quality, utility, and appearance required. Substitutions which are equal in quality, utility, and appearance to those specified may be reviewed subject to the provisions of the General Conditions.
- B. Wherever more than one manufacturer's product is specified, the first-named product is the basis for the design used in the work and the use of alternative-named manufacturers' products or substitutes may require modifications in that design. If such alternatives are proposed by Contractor and are approved by the District and/or the Architect, Contractor shall assume all costs required to make necessary revisions and modifications of the design resulting from the substitutions requested by the Contractor.
- C. When materials and equipment are specified by first manufacturer's name and product number, second manufacturer's name and "or approved equal," supporting data for the second product, if proposed by Contractor, shall be submitted in accordance with the requirements for substitutions. The District's Board has found and determined that certain item(s) shall be used on this Project based on the purpose(s) indicated pursuant to Public Contract Code section 3400(c). These findings, as well as the products and brand or trade names, have been identified in the Notice to Bidders.
- D. The Contractor will not be allowed to substitute specified items unless the request for substitution is submitted as follows:
  - (1) District must receive any notice of request for substitution of a specified item a minimum of ten (10) calendar days prior to bid opening.

- (2) Within 35 days after the date of the Notice of Award, the Contractor shall submit data substantiating the request(s) for all substitution(s) containing sufficient information to assess acceptability of product or system and impact on Project, including, without limitation, the requirements specified in the Special Conditions and the technical Specifications. Insufficient information shall be grounds for rejection of substitution.
- E. If the District and/or Architect, in reviewing proposed substitute materials and equipment, require revisions or corrections to be made to previously accepted Shop Drawings and supplemental supporting data to be resubmitted, Contractor shall promptly do so. If any proposed substitution is judged by the District and/or Architect to be unacceptable, the specified material or equipment shall be provided.
- F. Samples may be required. Tests required by the District and/or Architect for the determination of quality and utility shall be made at the expense of Contractor, with acceptance of the test procedure first given by the District.
- G. In reviewing the supporting data submitted for substitutions, the District and/or Architect will use for purposes of comparison all the characteristics of the specified material or equipment as they appear in the manufacturer's published data even though all the characteristics may not have been particularly mentioned in the Contract Documents. If more than two (2) submissions of supporting data are required, the cost of reviewing the additional supporting data shall be borne by Contractor, and the District will deduct the costs from the Contract Price. The Contractor shall be responsible for any re-design costs occasioned by District's acceptance and/or approval of any substitute.
- H. The Contractor shall, in the event that a substitute is less costly than that specified, credit the District with one hundred percent (100%) of the net difference between the substitute and the originally specified material. In this event, the Contractor agrees to execute a deductive Change Order to reflect that credit. In the event Contractor furnishes a material, process, or article more expensive than that specified, the difference in the cost of that material, process, or article so furnished shall be borne by Contractor.
- I. In no event shall the District be liable for any increase in Contract Price or Contract Time due to any claimed delay in the evaluation of any proposed substitute or in the acceptance or rejection of any proposed substitute.

**PART 2 – PRODUCTS Not Used.**

**PART 3 – EXECUTION Not Used.**

END OF DOCUMENT

DOCUMENT 01 26 00

**CHANGES IN THE WORK**

**CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE PROVISIONS IN THE AGREEMENT, GENERAL CONDITIONS, AND SPECIAL CONDITIONS, IF USED, RELATED TO CHANGES AND/OR REQUESTS FOR CHANGES.**

END OF DOCUMENT

DOCUMENT 01 29 00

**APPLICATION FOR PAYMENT AND  
CONDITIONAL AND UNCONDITIONAL WAIVER AND RELEASE FORMS**

**CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS IN THE GENERAL  
CONDITIONS RELATED TO APPLICATIONS FOR PAYMENT AND/OR PAYMENTS.**

**CONDITIONAL WAIVER AND RELEASE  
ON PROGRESS PAYMENT  
(CIVIL CODE SECTION 8132)**

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Name of Claimant: \_\_\_\_\_

Name of Customer: \_\_\_\_\_

Job Location: \_\_\_\_\_

Owner: \_\_\_\_\_

Through Date: \_\_\_\_\_

**Conditional Waiver and Release**

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job through the Through Date of this document. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check: \_\_\_\_\_

Amount of Check: \$\_\_\_\_\_

Check Payable to: \_\_\_\_\_

**Exceptions**

This document does not affect any of the following:

- (1) Retentions.
- (2) Extras for which the claimant has not received payment.
- (3) The following progress payments for which the claimant has previously given a conditional waiver and release but has not received payment:

Date(s) of waiver and release: \_\_\_\_\_

Amount(s) of unpaid progress payment(s): \$\_\_\_\_\_

**SAN RAFAEL CITY SCHOOLS**

**APPLICATION FOR PAYMENT AND  
CONDITIONAL AND UNCONDITIONAL  
WAIVER AND RELEASE FORMS  
DOCUMENT 01 29 00-2**



- (4) Contract rights, including (A) a right based on rescission, abandonment, or breach of contract, and (B) the right to recover compensation for work not compensated by the payment.

Claimant's Signature: \_\_\_\_\_

Claimant's Title: \_\_\_\_\_

Date of Signature: \_\_\_\_\_

**UNCONDITIONAL WAIVER AND RELEASE  
ON PROGRESS PAYMENT  
(CIVIL CODE SECTION 8134)**

NOTICE TO CLAIMANT: THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Name of Claimant: \_\_\_\_\_

Name of Customer: \_\_\_\_\_

Job Location: \_\_\_\_\_

Owner: \_\_\_\_\_

Through Date: \_\_\_\_\_

**Unconditional Waiver and Release**

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job through the Through Date of this document. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. The claimant has received the following progress payment: \$\_\_\_\_\_

**Exceptions**

This document does not affect any of the following:

- (1) Retentions.
- (2) Extras for which the claimant has not received payment.
- (3) Contract rights, including (A) a right based on rescission, abandonment, or breach of contract, and (B) the right to recover compensation for work not compensated by the payment.

Claimant's Signature: \_\_\_\_\_

Claimant's Title: \_\_\_\_\_

Date of Signature: \_\_\_\_\_

**SAN RAFAEL CITY SCHOOLS**

**APPLICATION FOR PAYMENT AND  
CONDITIONAL AND UNCONDITIONAL  
WAIVER AND RELEASE FORMS  
DOCUMENT 01 29 00-4**

**CONDITIONAL WAIVER AND RELEASE  
ON FINAL PAYMENT  
(CIVIL CODE SECTION 8136)**

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Name of Claimant: \_\_\_\_\_

Name of Customer: \_\_\_\_\_

Job Location: \_\_\_\_\_

Owner: \_\_\_\_\_

**Conditional Waiver and Release**

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check:

Amount of Check: \$\_\_\_\_\_

Check Payable to: \_\_\_\_\_

**Exceptions**

This document does not affect any of the following: \_\_\_\_\_

Disputed claims for extras in the amount of: \$\_\_\_\_\_

Claimant's Signature: \_\_\_\_\_

Claimant's Title: \_\_\_\_\_

Date of Signature: \_\_\_\_\_

**UNCONDITIONAL WAIVER AND RELEASE  
ON FINAL PAYMENT  
(CIVIL CODE SECTION 8138)**

**NOTICE TO CLAIMANT:** THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Name of Claimant: \_\_\_\_\_

Name of Customer: \_\_\_\_\_

Job Location: \_\_\_\_\_

Owner: \_\_\_\_\_

**Unconditional Waiver and Release**

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for all labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. The claimant has been paid in full.

**Exceptions**

This document does not affect any of the following: \_\_\_\_\_

Disputed claims for extras in the amount of: \$\_\_\_\_\_

Claimant's Signature: \_\_\_\_\_

Claimant's Title: \_\_\_\_\_

Date of Signature: \_\_\_\_\_

**PROJECT MEETINGS**

**PART 1 – GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions; and
- B. Special Conditions.

**1.02 PROGRESS MEETINGS:**

- A. Contractor shall schedule and hold regular weekly progress meetings after a minimum of one week's prior written notice of the meeting date and time to all Invitees as indicated below.
- B. Location: Contractor's field office.
- C. The Contractor shall notify and invite the following entities ("Invitees"):
  - (1) District Representative.
  - (2) Contractor.
  - (3) Contractor's Project Manager.
  - (4) Contractor's Superintendent.
  - (5) Subcontractors, as appropriate to the agenda of the meeting.
  - (6) Suppliers, as appropriate to the agenda of the meeting.
  - (7) Construction Manager, if any.
  - (8) Architect
  - (9) Engineer(s), if any and as appropriate to the agenda of the meeting.
  - (10) Others, as appropriate to the agenda of the meeting.
- D. The District's and/or the Architect's Consultants will attend at their discretion, in response to the agenda.
- E. The District representative, the Construction Manager, and/or another District Agent shall take and distribute meeting notes to attendees and other concerned parties. If exceptions are taken to anything in the meeting notes,

those exceptions shall be stated in writing to the District within five (5) working days following District's distribution of the meeting notes.

**1.03 PRE-INSTALLATION/PERFORMANCE MEETING:**

- A. Contractor shall schedule a meeting prior to the start of each of the following portions of the Work: cutting and patching of plaster and roofing, and other weather-exposed and moisture-resistant products. Contractor shall invite all Invitees to this meeting, and others whose work may affect or be affected by the quality of the cutting and patching work.
- B. Contractor shall review in detail prior to this meeting, the manufacturer's requirements and specifications, applicable portions of the Contract Documents, Shop Drawings, and other submittals, and other related work. At this meeting, invitees shall review and resolve conflicts, incompatibilities, or inadequacies discovered or anticipated.
- C. Contractor shall review in detail Project conditions, schedule, requirements for performance, application, installation, and quality of completed Work, and protection of adjacent Work and property.
- D. Contractor shall review in detail means of protecting the completed Work during the remainder of the construction period.

**PART 2 - PRODUCTS Not Used.**

**PART 3 - EXECUTION Not Used.**

END OF DOCUMENT

**SCHEDULING OF WORK**

**PART 1 – GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS**

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

- A. General Conditions;
- B. Special Conditions;
- C. Summary of Work; and
- D. Submittals.

**1.02 SECTION INCLUDES**

- A. Scheduling of Work under this Contract shall be performed by Contractor in accordance with requirements of this Section.
  - (1) Development of schedule, cost and resource loading of the schedule, monthly payment requests, and project status reporting requirements of the Contract shall employ computerized Critical Path Method ("CPM") scheduling ("CPM Schedule").
  - (2) CPM Schedule shall be cost loaded based on Schedule of Values as approved by District.
  - (3) Submit schedules and reports as specified in the General Conditions.
- B. Upon Award of Contract, Contractor shall immediately commence development of Initial and Original CPM Schedules to ensure compliance with CPM Schedule submittal requirements.

**1.03 CONSTRUCTION SCHEDULE**

- A. Within ten (10) days of issuance of the Notice to Proceed and before request for first progress payment, the Contractor shall prepare and submit to the Project Manager a construction progress schedule conforming to the Milestone Schedule below.
- B. The Construction Schedule shall be continuously updated, and an updated schedule shall be submitted with each application for progress payment. Each revised schedule shall indicate the work actually accomplished during the previous period and the schedule for completion of the remaining work.

C. Milestone Schedule:

**ACTIVITY DESCRIPTION**

**REQUIRED COMPLETION**

**CONSTRUCTION STARTS**

**[DATE]**

**FINAL PROJECT COMPLETION**

**[DATE]**

**1.04 QUALIFICATIONS**

- A. Contractor shall employ experienced scheduling personnel qualified to use the latest version of [i.e., Primavera Project Planner]. Experience level required is set forth below. Contractor may employ such personnel directly or may employ a consultant for this purpose.
- (1) The written statement shall identify the individual who will perform CPM scheduling.
  - (2) Capability and experience shall be verified by description of construction projects on which individual has successfully applied computerized CPM.
  - (3) Required level of experience shall include at least two (2) projects of similar nature and scope with value not less than three fourths ( $\frac{3}{4}$ ) of the Total Bid Price of this Project. The written statement shall provide contact persons for referenced projects with current telephone and address information.
- B. District reserves the right to approve or reject Contractor's scheduler or consultant at any time. District reserves the right to refuse replacing of Contractor's scheduler or consultant, if District believes replacement will negatively affect the scheduling of Work under this Contract.

**1.05 GENERAL**

- A. Progress Schedule shall be based on and incorporate milestone and completion dates specified in Contract Documents.
- B. Overall time of completion and time of completion for each milestone shown on Progress Schedule shall adhere to times in the Contract, unless an earlier (advanced) time of completion is requested by Contractor and agreed to by District. Any such agreement shall be formalized by a Change Order.
- (1) District is not required to accept an early completion schedule, i.e., one that shows an earlier completion date than the Contract Time.
  - (2) Contractor shall not be entitled to extra compensation in event agreement is reached on an earlier completion schedule and Contractor completes its Work, for whatever reason, beyond completion date shown in its early completion schedule but within the Contract Time.



- (3) A schedule showing the work completed in less than the Contract Time, and that has been accepted by District, shall be considered to have Project Float. The Project Float is the time between the scheduled completion of the work and the Completion Date. Project Float is a resource available to both District and the Contractor.
- C. Ownership Project Float: Neither the District nor Contractor owns Project Float. The Project owns the Project Float. As such, liability for delay of the Completion Date rests with the party whose actions, last in time, actually cause delay to the Completion Date.
  - (1) For example, if Party A uses some, but not all of the Project Float and Party B later uses remainder of the Project Float as well as additional time beyond the Project Float, Party B shall be liable for the time that represents a delay to the Completion Date.
  - (2) Party A would not be responsible for the time since it did not consume the entire Project Float and additional Project Float remained; therefore, the Completion Date was unaffected by Party A.
- D. Progress Schedule shall be the basis for evaluating job progress, payment requests, and time extension requests. Responsibility for developing Contract CPM Schedule and monitoring actual progress as compared to Progress Schedule rests with Contractor.
- E. Failure of Progress Schedule to include any element of the Work, or any inaccuracy in Progress Schedule, will not relieve Contractor from responsibility for accomplishing the Work in accordance with the Contract. District's acceptance of schedule shall be for its use in monitoring and evaluating job progress, payment requests, and time extension requests and shall not, in any manner, impose a duty of care upon District, or act to relieve Contractor of its responsibility for means and methods of construction.
- F. Software: Use **[i.e., District Project Planner for Windows, latest version]**. Such software shall be compatible with Windows operating system. Contractor shall transmit contract file to District on compact disk at times requested by District.
- G. Transmit each item under the form approved by District.
  - (1) Identify Project with District Contract number and name of Contractor.
  - (2) Provide space for Contractor's approval stamp and District's review stamps.
  - (3) Submittals received from sources other than Contractor will be returned to the Contractor without District's review.

#### 1.06 INITIAL CPM SCHEDULE

- A. Initial CPM Schedule submitted for review at the pre-construction conference shall serve as Contractor's schedule for up to ninety (90) calendar days after the Notice to Proceed.

- B. Indicate detailed plan for the Work to be completed in first ninety (90) days of the Contract; details of planned mobilization of plant and equipment; sequence of early operations; procurement of materials and equipment. Show Work beyond ninety (90) calendar days in summary form.
- C. Initial CPM Schedule shall be time scaled.
- D. Initial CPM Schedule shall be cost and resource loaded. Accepted cost and resource loaded schedule will be used as basis for monthly progress payments until acceptance of the Original CPM Schedule. Use of Initial CPM Schedule for progress payments shall not exceed ninety (90) calendar days.
- E. District and Contractor shall meet to review and discuss the Initial CPM Schedule within seven (7) calendar days after it has been submitted to District.
  - (1) District's review and comment on the schedule shall be limited to Contract conformance (with sequencing, coordination, and milestone requirements).
  - (2) Contractor shall make corrections to schedule necessary to comply with Contract requirements and shall adjust schedule to incorporate any missing information requested by District. Contractor shall resubmit Initial CPM Schedule if requested by District.
- F. If, during the first ninety (90) days after Notice to Proceed, the Contractor is of the opinion that any of the Work included on its Initial CPM Schedule has been impacted, the Contractor shall submit to District a written Time Impact Evaluation ("TIE") in accordance with Article 1.12 of this Section. The TIE shall be based on the most current update of the Initial CPM Schedule.

#### **1.07 ORIGINAL CPM SCHEDULE**

- A. Submit a detailed proposed Original CPM Schedule presenting an orderly and realistic plan for completion of the Work in conformance with requirements as specified herein.
- B. Progress Schedule shall include or comply with following requirements:
  - (1) Time scaled, cost and resource (labor and major equipment) loaded CPM schedule.
  - (2) No activity on schedule shall have duration longer than fifteen (15) work days, with exception of submittal, approval, fabrication and procurement activities, unless otherwise approved by District.
    - (a) Activity durations shall be total number of actual work days required to perform that activity.
  - (3) The start and completion dates of all items of Work, their major components, and milestone completion dates, if any.

- (4) District furnished materials and equipment, if any, identified as separate activities.
- (5) Activities for maintaining Project Record Documents.
- (6) Dependencies (or relationships) between activities.
- (7) Processing/approval of submittals and shop drawings for all material and equipment required per the Contract. Activities that are dependent on submittal acceptance or material delivery shall not be scheduled to start earlier than expected acceptance or delivery dates.
  - (a) Include time for submittals, re-submittals and reviews by District. Coordinate with accepted schedule for submission of Shop Drawings, samples, and other submittals.
  - (b) Contractor shall be responsible for all impacts resulting from re-submittal of Shop Drawings and submittals.
- (8) Procurement of major equipment, through receipt and inspection at jobsite, identified as separate activity.
  - (a) Include time for fabrication and delivery of manufactured products for the Work.
  - (b) Show dependencies between procurement and construction.
- (9) Activity description; what Work is to be accomplished and where.
- (10) The total cost of performing each activity shall be total of labor, material, and equipment, excluding overhead and profit of Contractor. Overhead and profit of the General Contractor shall be shown as a separate activity in the schedule. Sum of cost for all activities shall equal total Contract value.
- (11) Resources required (labor and major equipment) to perform each activity.
- (12) Responsibility code for each activity corresponding to Contractor or Subcontractor responsible for performing the Work.
- (13) Identify the activities which constitute the controlling operations or critical path. No more than twenty-five (25%) of the activities shall be critical or near critical. Near critical is defined as float in the range of one (1) to (10) days.
- (14) Twenty (20) workdays for developing punch list(s), completion of punch-list items, and final clean up for the Work or any designated portion thereof. No other activities shall be scheduled during this period.
- (15) Interface with the work of other contractors, District, and agencies such as, but not limited to, utility companies.

- (16) Show detailed Subcontractor Work activities. In addition, furnish copies of Subcontractor schedules upon which CPM was built.
  - (a) Also furnish for each Subcontractor, as determined by District, submitted on Subcontractor letterhead, a statement certifying that Subcontractor concurs with Contractor's Original CPM Schedule and that Subcontractor's related schedules have been incorporated, including activity duration, cost and resource loading.
  - (b) Subcontractor schedules shall be independently derived and not a copy of Contractor's schedule.
  - (c) In addition to Contractor's schedule and resource loading, obtain from electrical, mechanical, and plumbing Subcontractors, and other Subcontractors as required by District, productivity calculations common to their trades, such as units per person day, feet of pipe per day per person, feet of wiring per day per person, and similar information.
  - (d) Furnish schedule for Contractor/Subcontractor CPM schedule meetings which shall be held prior to submission of Original CPM schedule to District. District shall be permitted to attend scheduled meetings as an observer.
- (17) Activity durations shall be in Work days.
- (18) Submit with the schedule a list of anticipated non-Work days, such as weekends and holidays. The Progress Schedule shall exclude in its Work day calendar all non-Work days on which Contractor anticipates critical Work will not be performed.
- C. Original CPM Schedule Review Meeting: Contractor shall, within sixty (60) days from the Notice to Proceed date, meet with District to review the Original CPM Schedule submittal.
  - (1) Contractor shall have its Project Manager, Project Superintendent, Project Scheduler, and key Subcontractor representatives, as required by District, in attendance. The meeting will take place over a continuous one (1) day period.
  - (2) District's review will be limited to submittal's conformance to Contract requirements including, but not limited to, coordination requirements. However, review may also include:
    - (a) Clarifications of Contract Requirements.
    - (b) Directions to include activities and information missing from submittal.
    - (c) Requests to Contractor to clarify its schedule.

- (3) Within five (5) days of the Schedule Review Meeting, Contractor shall respond in writing to all questions and comments expressed by District at the Meeting.

#### **1.08 ADJUSTMENTS TO CPM SCHEDULE**

- A. Adjustments to Original CPM Schedule: Contractor shall have adjusted the Original CPM Schedule submittal to address all review comments from original CPM Schedule review meeting and resubmit network diagrams and reports for District's review.
  - (1) District, within ten (10) days from date that Contractor submitted the revised schedule, will either:
    - (a) Accept schedule and cost and resource loaded activities as submitted, or
    - (b) Advise Contractor in writing to review any part or parts of schedule which either do not meet Contract requirements or are unsatisfactory for District to monitor Project's progress, resources, and status or evaluate monthly payment request by Contractor.
  - (2) District may accept schedule with conditions that the first monthly CPM Schedule update be revised to correct deficiencies identified.
  - (3) When schedule is accepted, it shall be considered the "Original CPM Schedule" which will then be immediately updated to reflect the current status of the work.
  - (4) District reserves right to require Contractor to adjust, add to, or clarify any portion of schedule which may later be discovered to be insufficient for monitoring of Work or approval of partial payment requests. No additional compensation will be provided for such adjustments, additions, or clarifications.
- B. Acceptance of Contractor's schedule by District will be based solely upon schedule's compliance with Contract requirements.
  - (1) By way of Contractor assigning activity durations and proposing sequence of Work, Contractor agrees to utilize sufficient and necessary management and other resources to perform work in accordance with the schedule.
  - (2) Upon submittal of schedule update, updated schedule shall be considered "current" CPM Schedule.
  - (3) Submission of Contractor's schedule to District shall not relieve Contractor of total responsibility for scheduling, sequencing, and pursuing Work to comply with requirements of Contract Documents, including adverse effects such as delays resulting from ill-timed Work.

- C. Submittal of Original CPM Schedule, and subsequent schedule updates, shall be understood to be Contractor's representation that the Schedule meets requirements of Contract Documents and that Work shall be executed in sequence indicated on the schedule.
- D. Contractor shall distribute Original CPM Schedule to Subcontractors for review and written acceptance, which shall be noted on Subcontractors' letterheads to Contractor and transmitted to District for the record.

#### **1.09 MONTHLY CPM SCHEDULE UPDATE SUBMITTALS**

- A. Following acceptance of Contractor's Original CPM Schedule, Contractor shall monitor progress of Work and adjust schedule each month to reflect actual progress and any anticipated changes to planned activities.
  - (1) Each schedule update submitted shall be complete, including all information requested for the Original CPM Schedule submittal.
  - (2) Each update shall continue to show all Work activities including those already completed. These completed activities shall accurately reflect "as built" information by indicating when activities were actually started and completed.
- B. A meeting will be held on approximately the twenty-fifth (25th) of each month to review the schedule update submittal and progress payment application.
  - (1) At this meeting, at a minimum, the following items will be reviewed: Percent (%) complete of each activity; Time Impact Evaluations for Change Orders and Time Extension Request; actual and anticipated activity sequence changes; actual and anticipated duration changes; and actual and anticipated Contractor delays.
  - (2) These meetings are considered a critical component of overall monthly schedule update submittal and Contractor shall have appropriate personnel attend. At a minimum, these meetings shall be attended by Contractor's General Superintendent and Scheduler.
  - (3) Contractor shall plan on the meeting taking no less than four (4) hours.
- C. Within five (5) working days after monthly schedule update meeting, Contractor shall submit the updated CPM Schedule update.
- D. Within five (5) work days of receipt of above noted revised submittals, District will either accept or reject monthly schedule update submittal.
  - (1) If accepted, percent (%) complete shown in monthly update will be basis for Application for Payment by the Contractor. The schedule update shall be submitted as part of the Contractor's Application for Payment.

- (2) If rejected, update shall be corrected and resubmitted by Contractor before the Application for Payment is submitted.
- E. Neither updating, changing or revising of any report, curve, schedule, or narrative submitted to District by Contractor under this Contract, nor District's review or acceptance of any such report, curve, schedule or narrative shall have the effect of amending or modifying in any way the Completion Date or milestone dates or of modifying or limiting in any way Contractor's obligations under this Contract.

#### **1.10 SCHEDULE REVISIONS**

- A. Updating the Schedule to reflect actual progress shall not be considered revisions to the Schedule. Since scheduling is a dynamic process, revisions to activity durations and sequences are expected on a monthly basis.
- B. To reflect revisions to the Schedule, the Contractor shall provide District with a written narrative with a full description and reasons for each Work activity revised. For revisions affecting the sequence of work, the Contractor shall provide a schedule diagram which compares the original sequence to the revised sequence of work. The Contractor shall provide the written narrative and schedule diagram for revisions two (2) working days in advance of the monthly schedule update meeting.
- C. Schedule revisions shall not be incorporated into any schedule update until the revisions have been reviewed by District. District may request further information and justification for schedule revisions and Contractor shall, within three (3) days, provide District with a complete written narrative response to District's request.
- D. If the Contractor's revision is still not accepted by District, and the Contractor disagrees with District's position, the Contractor has seven (7) calendar days from receipt of District's letter rejecting the revision to provide a written narrative providing full justification and explanation for the revision. The Contractor's failure to respond in writing within seven (7) calendar days of District's written rejection of a schedule revision shall be contractually interpreted as acceptance of District's position, and the Contractor waives its rights to subsequently dispute or file a claim regarding District's position.
- E. At District's discretion, the Contractor can be required to provide Subcontractor certifications of performance regarding proposed schedule revisions affecting said Subcontractors.

#### **1.11 RECOVERY SCHEDULE**

- A. If the Schedule Update shows a completion date twenty-one (21) calendar days beyond the Contract Completion Date, or individual milestone completion dates, the Contractor shall submit to District the proposed revisions to recover the lost time within seven (7) calendar days. As part of this submittal, the Contractor shall provide a written narrative for each revision made to recapture the lost time. If the revisions include sequence changes, the Contractor shall provide a schedule diagram comparing the original sequence to the revised sequence of work.

- B. The revisions shall not be incorporated into any schedule update until the revisions have been reviewed by District.
- C. If the Contractor's revisions are not accepted by District, District and the Contractor shall follow the procedures in paragraph 1.09.C, 1.09.D and 1.09.E above.
- D. At District's discretion, the Contractor can be required to provide Subcontractor certifications for revisions affecting said Subcontractors.

#### **1.12 TIME IMPACT EVALUATION ("TIE") FOR CHANGE ORDERS, AND OTHER DELAYS**

- A. When Contractor is directed to proceed with changed Work, the Contractor shall prepare and submit within fourteen (14) calendar days from the Notice to Proceed a TIE which includes both a written narrative and a schedule diagram depicting how the changed Work affects other schedule activities. The schedule diagram shall show how the Contractor proposes to incorporate the changed Work in the schedule and how it impacts the current schedule-update critical path. The Contractor is also responsible for requesting time extensions based on the TIE's impact on the critical path. The diagram must be tied to the main sequence of schedule activities to enable District to evaluate the impact of changed Work to the scheduled critical path.
- B. Contractor shall be required to comply with the requirements of Paragraph 1.09.A for all types of delays such as, but not limited to, Contractor/Subcontractor delays, adverse weather delays, strikes, procurement delays, fabrication delays, etc.
- C. Contractor shall be responsible for all costs associated with the preparation of TIEs, and the process of incorporating them into the current schedule update. The Contractor shall provide District with four (4) copies of each TIE.
- D. Once agreement has been reached on a TIE, the Contract Time will be adjusted accordingly. If agreement is not reached on a TIE, the Contract Time may be extended in an amount District allows, and the Contractor may submit a claim for additional time claimed by contractor.

#### **1.13 TIME EXTENSIONS**

- A. The Contractor is responsible for requesting time extensions for time impacts that, in the opinion of the Contractor, impact the critical path of the current schedule update. Notice of time impacts shall be given in accord with the General Conditions.
- B. Where an event for which District is responsible impacts the projected Completion Date, the Contractor shall provide a written mitigation plan, including a schedule diagram, which explains how (e.g., increase crew size, overtime, etc.) the impact can be mitigated. The Contractor shall also include a detailed cost breakdown of the labor, equipment, and material the Contractor would expend to mitigate District-caused time impact. The Contractor shall submit its mitigation plan to District within fourteen (14)



calendar days from the date of discovery of the impact. The Contractor is responsible for the cost to prepare the mitigation plan.

- C. Failure to request time, provide TIE, or provide the required mitigation plan will result in Contractor waiving its right to a time extension and cost to mitigate the delay.
- D. No time will be granted under this Contract for cumulative effect of changes.
- E. District will not be obligated to consider any time extension request unless the Contractor complies with the requirements of Contract Documents.
- F. Failure of the Contractor to perform in accordance with the current schedule update shall not be excused by submittal of time extension requests.
- G. If the Contractor does not submit a TIE within the required fourteen (14) calendar days for any issue, it is mutually agreed that the Contractor does not require a time extension for said issue.

#### **1.14 SCHEDULE REPORTS**

- A. Submit four (4) copies of the following reports with the Initial CPM Schedule, the Original CPM Schedule, and each monthly update.
- B. Required Reports:
  - (1) Two activity listing reports: one sorted by activity number and one by total Project Float. These reports shall also include each activity's early/late and actual start and finish dates, original and remaining duration, Project Float, responsibility code, and the logic relationship of activities.
  - (2) Cost report sorted by activity number including each activity's associated cost, percentage of Work accomplished, earned value- to date, previous payments, and amount earned for current update period.
  - (3) Schedule plots presenting time-scaled network diagram showing activities and their relationships with the controlling operations or critical path clearly highlighted.
  - (4) Cash flow report calculated by early start, late start, and indicating actual progress. Provide an exhibit depicting this information in graphic form.
  - (5) Planned versus actual resource (i.e., labor) histogram calculated by early start and late start.
- C. Other Reports:

In addition to above reports, District may request, from month to month, any two of the following reports. Submit four (4) copies of all reports.

- (1) Activities by early start.
  - (2) Activities by late start.
  - (3) Activities grouped by Subcontractors or selected trades.
  - (4) Activities with scheduled early start dates in a given time frame, such as fifteen (15) or thirty (30) day outlook.
- D. Furnish District with report files on compact disks containing all schedule files for each report generated.

#### **1.15 PROJECT STATUS REPORTING**

- A. In addition to submittal requirements for CPM scheduling identified in this Section, Contractor shall provide a monthly project status report (i.e., written narrative report) to be submitted in conjunction with each CPM Schedule as specified herein. Status reporting shall be in form specified below.
- B. Contractor shall prepare monthly written narrative reports of status of Project for submission to District. Written status reports shall include:
- (1) Status of major Project components (percent (%) complete, amount of time ahead or behind schedule) and an explanation of how Project will be brought back on schedule if delays have occurred.
  - (2) Progress made on critical activities indicated on CPM Schedule.
  - (3) Explanations for any lack of work on critical path activities planned to be performed during last month.
  - (4) Explanations for any schedule changes, including changes to logic or to activity durations.
  - (5) List of critical activities scheduled to be performed next month.
  - (6) Status of major material and equipment procurement.
  - (7) Any delays encountered during reporting period.
  - (8) Contractor shall provide printed report indicating actual versus planned resource loading for each trade and each activity. This report shall be provided on weekly and monthly basis.
    - (a) Actual resource shall be accumulated in field by Contractor, and shall be as noted on Contractor's daily reports. These reports will be basis for information provided in computer-generated monthly and weekly printed reports.
    - (b) Contractor shall explain all variances and mitigation measures.

- (9) Contractor may include any other information pertinent to status of Project. Contractor shall include additional status information requested by District at no additional cost.
- (10) Status reports, and the information contained therein, shall not be construed as claims, notice of claims, notice of delay, or requests for changes or compensation.

#### **1.16 WEEKLY SCHEDULE REPORT**

At the Weekly Progress Meeting, the Contractor shall provide and present a time-scaled three (3) week look-ahead schedule that is based and correlated by activity number to the current schedule (i.e., Initial, Original CPM, or Schedule Update).

#### **1.17 DAILY CONSTRUCTION REPORTS**

On a daily basis, Contractor shall submit a daily activity report to District for each workday, including weekends and holidays when worked. Contractor shall develop the daily construction reports on a computer-generated database capable of sorting daily Work, manpower, and man-hours by Contractor, Subcontractor, area, sub-area, and Change Order Work. Upon request of District, furnish computer disk of this data base. Obtain District's written approval of daily construction report data base format prior to implementation. Include in report:

- A. Project name and Project number.
- B. Contractor's name and address.
- C. Weather, temperature, and any unusual site conditions.
- D. Brief description and location of the day's scheduled activities and any special problems and accidents, including Work of Subcontractors. Descriptions shall be referenced to CPM scheduled activities.
- E. Worker quantities for its own Work force and for Subcontractors of any tier.
- F. Equipment, other than hand tools, utilized by Contractor and Subcontractors.

#### **1.18 PERIODIC VERIFIED REPORTS**

Contractor shall complete and verify construction reports on a form prescribed by the Division of the State Architect and file reports on the first day of February, May, August, and November during the preceding quarter year; at the completion of the Contract; at the completion of the Work; at the suspension of Work for a period of more than one (1) month; whenever the services of Contractor or any of Contractor's Subcontractors are terminated for any reason; and at any time a special verified report is required by the Division of the State Architect. Refer to section 4-336 and section 4-343 of Part 1, Title 24 of the California Code of Regulations.

**PART 2 – PRODUCTS Not Used.**

**PART 3 - EXECUTION Not Used.**

END OF DOCUMENT

**SUBMITTALS**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions, including, without limitation, Contractor's Submittals and Schedules, Drawings and Specifications;
- B. Special Conditions.

**1.02 SECTION INCLUDES:**

- A. Definitions:
  - (1) Shop Drawings and Product Data are as indicated in the General Conditions and include, but are not limited to, fabrication, erection, layout and setting drawings, formwork and falsework drawings, manufacturers' standard drawings, descriptive literature, catalogues, brochures, performance and test data, wiring and control diagrams. In addition, there are other drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems, and methods of construction as may be required to show that the materials, equipment or systems and all positions conform to the requirement of the Contract Documents, including, without limitation, the Drawings.
  - (2) "Manufactured" applies to standard units usually mass-produced; "fabricated" means specifically assembled or made out of selected materials to meet design requirements. Shop Drawings shall establish the actual detail of manufactured or fabricated items, indicated proper relation to adjoining work and amplify design details of mechanical and electrical equipment in proper relation to physical spaces in the structure.
  - (3) Manufacturer's Instructions: Where any item of Work is required by the Contract Documents to be furnished, installed, or performed, at a minimum, in accordance with a specified product manufacturer's instructions, the Contractor shall procure and distribute copies of these to the District, the Architect, and all other concerned parties and shall furnish, install, or perform the work, at a minimum, in accordance with those instructions.
- B. Samples, Shop Drawings, Product Data, and other items as specified, in accordance with the following requirements:
  - (1) Contractor shall submit all Shop Drawings, Product Data, and Samples to the District, the Architect, the Project Inspector, and the Construction Manager.

- (2) Contractor shall comply with all time frames herein and in the General Conditions and, in any case, shall submit required information in sufficient time to permit proper consideration and action before ordering any materials or items represented by such Shop Drawings, Product Data, and/or Samples.
- (3) Contractor shall allow sufficient time so that no delay occurs due to required lead time in ordering or delivery of any item to the Site. Contractor shall be responsible for any delay in progress of Work due to its failure to observe these requirements.
- (4) Time for completion of Work shall not be extended on account of Contractor's failure to promptly submit Shop Drawings, Product Data, and/or Samples.
- (5) Reference numbers on Shop Drawings shall have Architectural and/or Engineering Contract Drawings reference numbers for details, sections, and "cuts" shown on Shop Drawings. These reference numbers shall be in addition to any numbering system that Contractor chooses to use or has adopted as standard.
- (6) When the magnitude or complexity of submittal material prevents a complete review within the stated time frame, Contractor shall make this submittal in increments to avoid extended delays.
- (7) Contractor shall certify on submittals for review that submittals conform to Contract requirements. Also certify that Contractor-furnished equipment can be installed in allocated space. In event of any variance, Contractor shall specifically state in transmittal and on Shop Drawings, portions vary and require approval of a substitute. Submittals shall not be used as a means of requesting a substitution.
- (8) Unless specified otherwise, sampling, preparation of samples, and tests shall be in accordance with the latest standard of the American Society for Testing and Materials.
- (9) Upon demand by Architect or District, Contractor shall submit samples of materials and/or articles for tests or examinations and consideration before Contractor incorporates same in Work. Contractor shall be solely responsible for delays due to sample(s) not being submitted in time to allow for tests. Acceptance or rejection will be expressed in writing. Work shall be equal to approved samples in every respect. Samples that are of value after testing will remain the property of Contractor.

C. Submittal Schedule:

- (1) Contractor shall prepare its proposed submittal schedule that is coordinated with the proposed construction schedule and submit both to the District within ten (10) days after the date of the Notice to Proceed. Contractor's proposed schedules shall become the Project Construction Schedule and the Project Submittal Schedule after each is approved by the District.

- (2) Contractor is responsible for all lost time should the initial submittal be rejected, marked "revise and resubmit", etc.
- (3) All Submittals shall be forwarded to the District by the date indicated on the approved Submittal Schedule, unless an earlier date is necessary to maintain the Construction Schedule, in which case those Submittals shall be forwarded to the District so as not to delay the Construction Schedule.
- (4) Contractor may be assessed \$100 a day for each day it is late in submitting a shop drawing or sample. No extensions of time will be granted to Trade Contractor or any Subcontractor because of its failure to have shop drawings and samples submitted in accordance with the Schedule.

### **1.03 SHOP DRAWINGS:**

- A. Contractor shall submit one reproducible transparency and six (6) opaque reproductions. The District will review and return the reproducible copy and one (1) opaque reproduction to Contractor.
- B. Before commencing installation of any Work, the Contractor shall submit and receive approval of all drawings, descriptive data, and material list(s) as required to accomplish Work.
- C. Review of Shop Drawings is regarded as a service to assist Contractor and in all cases original Contract Documents shall take precedence as outlined under General Conditions.
- D. No claim for extra time or payment shall be based on work shown on Shop Drawings unless the claim is (1) noted on Contractor's transmittal letter accompanying Shop Drawings and (2) Contractor has complied with all applicable provisions of the General Conditions, including, without limitation, provisions regarding changes and payment, and all required written approvals.
- E. District shall not review Shop Drawings for quantities of materials or number of items supplied.
- F. District's and/or Architect's review of Shop Drawing will be general. District and/or Architect review does not relieve Contractor of responsibility for dimensions, accuracy, proper fitting, construction of Work, furnishing of materials, or Work required by Contract Documents and not indicated on Shop Drawings. The District's and/or Architect's review of Shop Drawings is not to be construed as approving departures from Contract Documents.
- G. Review of Shop Drawings and Schedules does not relieve Contractor from responsibility for any aspect of those Drawings or Schedules that is a violation of local, County, State, or Federal laws, rules, ordinances, or rules and regulations of commissions, boards, or other authorities or utilities having jurisdiction.
- H. Before submitting Shop Drawings for review, Contractor shall check Shop Drawings of its subcontractors for accuracy, and confirm that all Work

contiguous with and having bearing on other work shown on Shop Drawings is accurately drawn and in conformance with Contract Documents.

- I. Submitted drawings and details must bear stamp of approval of Contractor:
  - (1) Stamp and signature shall clearly certify that Contractor has checked Shop Drawings for compliance with Drawings.
  - (2) If Contractor submits a Shop Drawing without an executed stamp of approval, or whenever it is evident (despite stamp) that Drawings have not been checked, the District and/or Architect will not consider them and will return them to the Contractor for revision and resubmission. In that event, it will be deemed that Contractor has not complied with this provision and Contractor shall bear risk of all delays to same extent as if it had not submitted any Shop Drawings or details.
- J. Submission of Shop Drawings (in either original submission or when resubmitted with correction) constitutes evidence that Contractor has checked all information thereon and that it accepts and is willing to perform Work as shown.
- K. Contractor shall pay for cost of any changes in construction due to improper checking and coordination. Contractor shall be responsible for all additional costs, including coordination. Contractor shall be responsible for costs incurred by itself, the District, the Architect, the Project Inspector, the Construction Manager, any other Subcontractor or contractor, etc., due to improperly checked and/or coordination of submittals.
- L. Shop Drawings must clearly delineate the following information:
  - (1) Project name and address.
  - (2) Specification number and description.
  - (3) Architect's name and project number.
  - (4) Shop Drawing title, number, date, and scale.
  - (5) Names of Contractor, Subcontractor(s) and fabricator.
  - (6) Working and erection dimensions.
  - (7) Arrangements and sectional views.
  - (8) Necessary details, including complete information for making connections with other Work.
  - (9) Kinds of materials and finishes.
  - (10) Descriptive names of materials and equipment, classified item numbers, and locations at which materials or equipment are to be installed in the Work. Contractor shall use same reference identification(s) as shown on Contract Drawings.

- M. Contractor shall prepare composite drawings and installation layouts when required to solve tight field conditions.
- (1) Shop Drawings shall consist of dimensioned plans and elevations and must give complete information, particularly as to size and location of sleeves, inserts, attachments, openings, conduits, ducts, boxes, structural interferences, etc.
  - (2) Contractor shall coordinate these composite Shop Drawings and installation layouts in the field between itself and its Subcontractor(s) for proper relationship to the Work, the work of other trades, and the field conditions. The Contractor shall check and approve all submittal(s) before submitting them for final review.

#### **1.04 PRODUCT DATA OR NON REPRODUCIBLE SUBMITTALS:**

- A. Contractor shall submit manufacturer's printed literature in original form. Any fading type of reproduction will not be accepted. Contractor must submit a minimum of six (6) each, to the District. District shall return one (1) to the Contractor, who shall reproduce whatever additional copies it requires for distribution.
- B. Contractor shall submit six (6) copies of a complete list of all major items of mechanical, plumbing, and electrical equipment and materials in accordance with the approved Submittal Schedule, except as required earlier to comply with the approved Construction Schedule. Other items specified are to be submitted prior to commencing Work. Contractor shall submit items of like kind at one time in a neat and orderly manner. Partial lists will not be acceptable.
- C. Submittals shall include manufacturer's specifications, physical dimensions, and ratings of all equipment. Contractor shall furnish performance curves for all pumps and fans. Where printed literature describes items in addition to that item being submitted, submitted item shall be clearly marked on sheet and superfluous information shall be crossed out. If highlighting is used, Contractor shall mark all copies.
- D. Equipment submittals shall be complete and include space requirements, weight, electrical and mechanical requirements, performance data, and supplemental information that may be requested.
- E. Imported Materials Certification must be submitted at least ten (10) days before material is delivered.

#### **1.05 SAMPLES:**

- A. Contractor shall submit for approval Samples as required and within the time frame in the Contract Documents. Materials such as concrete, mortar, etc., which require on-site testing will be obtained from Project Site.
- B. Contractor shall submit four (4) samples except where greater or lesser number is specifically required by Contract Documents including, without limitation, the Specifications.



- (1) Samples must be of sufficient size and quality to clearly illustrate functional characteristics, with integrally related parts and attachment devices.
  - (2) Samples must show full range of texture, color, and pattern.
- C. Contractor shall make all Submittals, unless it has authorized Subcontractor(s) to submit and Contractor has notified the District in writing to this effect.
- D. Samples to be shipped prepaid or hand-delivered to the District.
- E. Contractor shall mark samples to show name of Project, name of Contractor submitting, Contract number and segment of Work where representative Sample will be used, all applicable Specifications Sections and documents, Contract Drawing Number and detail, and ASTM or FS reference, if applicable.
- F. Contractor shall not deliver any material to Site prior to receipt of District's and/or Architect's completed written review and approval. Contractor shall furnish materials equal in every respect to approved Samples and execute Work in conformance therewith.
- G. District's and/or Architect's review, acceptance, and/or approval of Sample(s) will not preclude rejections of any material upon discovery of defects in same prior to final acceptance of completed Work.
- H. After a material has been approved, no change in brand or make will be permitted.
- I. Contractor shall prepare its Submittal Schedule and submit Samples of materials requiring laboratory tests to specified laboratory for testing not less than ninety (90) days before such materials are required to be used in Work.
- J. Samples which are rejected must be resubmitted promptly after notification of rejection and be marked "Resubmitted Sample" in addition to other information required.
- K. Field Samples and Mock-Ups are to be removed by Contractor at District's direction:
  - (1) Size: As Specified.
  - (2) Furnish catalog numbers and similar data, as requested.

#### **1.06 REVIEW AND RESUBMISSION REQUIREMENTS:**

- A. The District will arrange for review of Sample(s), Shop Drawing(s), Product Data, and other submittal(s) by appropriate reviewer and return to Contractor as provided below within twenty-one (21) days after receipt or within twenty-one (21) days after receipt of all related information necessary for such review, whichever is later.
- B. One (1) copy of product or materials data will be returned to Contractor with the review status.

- C. Samples to be incorporated into the Work will be returned to Contractor, together with a written notice designating the Sample with the appropriate review status and indicating errors discovered on review, if any. Other Samples will not be returned, but the same notice will be given with respect thereto, and that notice shall be considered a return of the Sample.
- D. Contractor shall revise and resubmit any Sample(s), Shop Drawing(s), Product Data, and other submittal(s) as required by the reviewer. Such resubmittals will be reviewed and returned in the same manner as original Sample(s), Shop Drawing(s), Product Data, and other submittal(s), within fourteen (14) days after receipt thereof or within fourteen (14) days after receipt of all related information necessary for such review. Such resubmittal shall not delay the Work.
- E. Contractor may proceed with any of the Work covered by Sample(s), Shop Drawing(s), Product Data, and other submittal(s) upon its return if designated as no exception taken, or revise as noted, provided the Contractor proceeds in accordance with the District and/or the Architect's notes and comments.
- F. Contractor shall not begin any of the work covered by a Sample(s), Shop Drawing(s), Product Data, and other submittal(s), designated as revise and resubmit or rejected, until a revision or correction thereof has been reviewed and returned to Contractor.
- G. Sample(s), Shop Drawing(s), Product Data, and other submittal(s) designated as revise and resubmit or rejected and requiring resubmittal, shall be revised or corrected and resubmitted to the District no later than fourteen (14) days or a shorter period as required to comply with the approved Construction Schedule, after its return to Contractor.
- H. Neither the review nor the lack of review of any Sample(s), Shop Drawing(s), Product Data, and other submittal(s) shall waive any of the requirements of the Contract Documents, or relieve Contractor of any obligation thereunder.
- I. District's and/or Architect's review of Shop Drawings does not relieve the Contractor of responsibility for any errors that may exist. Contractor is responsible for the dimensions and design of adequate connections and details and for satisfactory construction of all the Work.

**PART 2 – PRODUCTS Not Used.**

**PART 3 - EXECUTION Not Used.**

END OF DOCUMENT

**SITE STANDARDS**

**PART 1 – GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions, including without limitation, Site Access, Conditions, and Regulations;
- B. Special Conditions;
- C. Drug-Free Workplace Certification;
- D. Tobacco-Free Environment Certification;
- E. Criminal Background Investigation/Fingerprinting Certification;
- F. Temporary Facilities and Controls.

**1.02 REQUIREMENTS OF THE DISTRICT:**

- A. Drug-Free Schools and Safety Requirements:
  - (1) All school sites and other District Facilities have been declared "Drug-Free Zones." No drugs, alcohol and/or smoking are allowed at any time in any buildings and/or grounds on District property. No students, staff, visitors, or contractors are to use drugs on these sites.
  - (2) Smoking and the use of tobacco products by all persons is prohibited on or in District property. District property includes school buildings, school grounds, school-owned vehicles and vehicles owned by others while on District property. Contractor shall post: "Non-Smoking Area" in a highly visible location in each work area, staging area, and parking area. Contractor may designate a smoking area outside of District property within the public right-of-way, provided that this area remains quiet and unobtrusive to adjacent neighbors. This smoking area is to be kept clean at all times.
  - (3) Contractor shall ensure that no alcohol, firearms, weapons, or controlled substances enter or are used at the Site. Contractor shall immediately remove from the Site and terminate the employment of any employee(s) found in violation of this provision.
- B. Language: Profanity or other unacceptable and/or loud language will not be tolerated, "Cat calls" or other derogatory language toward students, staff, volunteers, parents or public will not be allowed.

C. Disturbing the Peace (Noise and Lighting):

- (1) Contractor shall observe the noise ordinance of the Site at all times including, without limitation, all applicable local, city, and/or state laws, ordinances, and/or regulations regarding noise and allowable noise levels.
- (2) The use of radios, etc., shall be controlled to keep all sound at a level that cannot be heard beyond the immediate area of use. District reserves the right to prohibit the use of radios at the Site, except for mobile phones or other handheld communication radios.
- (3) If portable lights are used after dark, all light must be located so as not to direct light into neighboring property.

D. Traffic:

- (1) Driving on the Premises shall be limited to periods when students and public are not present. If driving or deliveries must be made during the school hours, two (2) or more ground guides shall lead the vehicle across the area of travel. In no case shall driving take place across playgrounds or other pedestrian paths during recess, lunch, and/or class period changes. The speed limit on-the Premises shall be five (5) miles per hour (maximum) or less if conditions require.
- (2) All paths of travel for deliveries, including without limitation, material, equipment, and supply deliveries, shall be reviewed and approved by District in advance. Any damage will be repaired to the pre-damaged condition by the Contractor.
- (3) District shall designate a construction entry to the Site. If Contractor requests, District determines it is required, and to the extent possible, District shall designate a staging area so as not to interfere with the normal functioning of school facilities. Location of gates and fencing shall be approved in advance with District and at Contractor's expense.
- (4) Parking areas shall be reviewed and approved by District in advance. No parking is to occur under the drip line of trees or in softscape areas that could otherwise be damaged.

- E. All of the above shall be observed and complied with by the Contractor and all workers on the Site. Failure to follow these directives could result in individual(s) being suspended or removed from the work force at the discretion of the District. The same rules and regulations shall apply equally to delivery personnel, inspectors, consultants, and other visitors to the Site.

**PART 2 - PRODUCTS Not Used.**

**PART 3 - EXECUTION Not Used.**

END OF DOCUMENT

**REGULATORY REQUIREMENTS**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions, including, without limitation, Obtaining of Permits, Licenses and Registrations and Work to Comply with All Applicable Laws and Regulations;
- B. Special Conditions; and
- C. Quality Control.

**1.02 DESCRIPTION:**

This section covers the general requirements for regulatory requirements pertaining to the Work and is supplementary to all other regulatory requirements mentioned or referenced elsewhere in the Contract Documents.

**1.03 REQUIREMENTS OF REGULATORY AGENCIES:**

- A. All statutes, ordinances, laws, rules, codes, regulations, standards, and the lawful orders of all public authorities having jurisdiction over the Work, are hereby incorporated into these Contract Documents as if repeated in full herein and are intended to be included in any reference to Code or Building Code, unless otherwise specified, including, without limitation, the references in the list below. Contractor shall make available at the Site copies of all the listed documents applicable to the Work as the District and/or Architect may request, including, without limitation, applicable portions of the California Code of Regulations ("CCR").
  - (1) California Building Standards Administrative Code, Part 1, Title 24, CCR.
  - (2) California Building Code (CBC), Part 2, Title 24, CCR; (International Building Code volumes 1-2 and California Amendments).
  - (3) California Electrical Code (CEC), Part 3, Title 24, CCR; (National Electrical Code and California Amendments).
  - (4) California Mechanical Code (CMC), Part 4, Title 24, CCR; (Uniform Mechanical Code and California Amendments).
  - (5) California Plumbing Code (CPC), Part 5, Title 24, CCR; (Uniform Plumbing Code and California Amendments).

- (6) California Fire Code (CFC), Part 9, Title 24, CCR; (International Fire Code and California Amendments).
- (7) California Green Building Standards Code (CALGreen), Part 11, Title 24, CCR.
- (8) California Referenced Standards Code, Part 12, Title 24, CCR.
- (9) State Fire Marshal Regulations, Public Safety, Title 19, CCR.
- (10) Partial List of Applicable National Fire Protection Association (NFPA) Standards:
  - (a) NFPA 13 - Automatic Sprinkler System.
  - (b) NFPA 14 - Standpipes Systems.
  - (c) NFPA 17A - Wet Chemical System
  - (d) NFPA 24 - Private Fire Mains.
  - (e) (California Amended) NFPA 72 - National Fire Alarm Codes.
  - (f) NFPA 253 - Critical Radiant Flux of Floor Covering System.
  - (g) NFPA 2001 - Clean Agent Fire Extinguishing Systems.
- (11) California Division of the State Architect interpretation of Regulations ("DSA IR"), including, without limitation:
  - (a) DSA IR A-6 — Construction Change Document Submittal and Approval Processes.
  - (b) DSA IR A-7 — Project Inspector Certification and Approval.
  - (c) DSA IR A-8 — Project Inspector and Assistant Inspector Duties and Performance.
  - (d) DSA IR A-12 — Assistant Inspector Approval.
- (12) DSA Procedures ("DSA PR")
  - (a) DSA PR 13-01 – Construction Oversight Process
  - (b) DSA PR 13-02 – Project Certification Process

B. This 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 bids are opened and as it pertains to school construction including, without limitation:

- (1) Test and testing laboratory per Section 4-335. District shall pay for the testing laboratory.
- (2) Special inspections per Section 4-333(c).
- (3) Deferred Approvals per section 4-317(g).
- (4) Verified reports per Sections 4-336 & 4-343(c).
- (5) Duties of the Architect & Engineers shall be per Sections 4-333(a) and 4-341.
- (6) Duties of the Contractor shall be per Section 4-343.
- (7) Duties of Project Inspector shall be per Section 4-334.
- (8) Addenda and Construction Change Documents per Section 4-338.

Contractor shall keep and make available all applicable parts of the most current version of Title 24 referred to in the plans and specifications at the Site during construction.

C. Items of deferred approval shall be clearly marked on the first sheet of the Architect's and/or Engineer's approved Drawings. All items later submitted for approval shall be per Title 24 requirements to the DSA.

- (1) Contractor shall submit the following to Architect for review and endorsement:
  - (a) Product information on proposed material/system supplier.
  - (b) Drawings, specifications, and calculations prepared, signed, and stamped by an architect or engineer licensed in the State of California for that portion of the Work.
  - (c) All other requirements as may be required by DSA.
- (2) Cost of preparing and submitting documentation per DSA Deferred Approval requirements including required modifications to Drawings and Specifications, whether or not indicated in the Contract Documents, shall be borne by Contractor.
- (3) Contractor shall not begin fabrication and installation of deferred approval items without first obtaining DSA approval of Drawings and Specifications.
- (4) Schedule of Work Subject to DSA Deferred Approval: Window wall systems exceeding 10 feet in span.

**PART 2 – PRODUCTS Not Used.**

**PART 3 – EXECUTION Not Used.**

END OF DOCUMENT

**ABBREVIATIONS AND ACRONYMS**

**PART 1 – GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions including without limitation, Definitions;
- B. Special Conditions.

**1.02 DOCUMENT INCLUDES:**

- A. Abbreviations used throughout the Contract Documents.
- B. Reference to a technical society, organization, or body is by abbreviation, as follows:

1.	AA	The Aluminum Association
2.	AASHTO	American Association of State Highway and Transportation Officials
3.	ABPA	Acoustical and Board Products Association
4.	ACI	American Concrete Institute
5.	AGA	American Gas Association
6.	AGC	Associated General Contractors of America
7.	AHC	Architectural Hardware Consultant
8.	AHRI	Air Conditioning, Heating, Refrigeration Institute
9.	AI	Asphalt Institute
10.	AIA	American Institute of Architects
11.	AISC	American Institute of Steel Construction
12.	AISI	American Iron and Steel Institute
13.	AMCA	Air Movement and Control Association
14.	ANSI	American National Standards Institute
15.	APA	APA – The Engineered Wood Association
16.	ASCE	American Society of Civil Engineers
17.	ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
18.	ASME	American Society of Mechanical Engineers
19.	ASTM	American Society of Testing and Materials International
20.	AWPA	American Wood Protection Association
21.	AWPI	American Wood Preservers Institute
22.	AWS	American Welding Society
23.	AWSC	American Welding Society Code
24.	AWI	Architectural Woodwork Institute
25.	AWWA	American Water Works Association
26.	BIA	The Brick Industry Association



27.	CCR	California Code of Regulations
28.	CLFMI	Chain Link Fence Manufacturers Institute
29.	CRA	California Redwood Association
30.	CRSI	Concrete Reinforcing Steel Institute
31.	CS	Commercial Standards
32.	CSI	Construction Specifications Institute
33.	CTI	Cooling Technology Institute
34.	FGIA	Fenestration and Glazing Industry Alliance
35.	FGMA	Flat Glass Manufacturers' Association
36.	FIA	Factory Insurance Association
37.	FM	Factory Mutual Global
38.	FS/FED SPEC	Federal Specification
39.	FTI	Facing Title Institute
40.	GA	Gypsum Association
41.	IAPMO	International Association of Plumbing and Mechanical Officials
42.	ICC	International Code Council
43.	IEEE	Institute of Electrical and Electronics Engineers
44.	IES	Illuminating Engineering Society
45.	MCAC	Mason Contractors Association of California
46.	MIMA	Mineral Wool Insulation Manufacturers Association
47.	MLMA	Metal Lath Manufacturers Association
48.	MS/MIL SPEC	Military Specifications
49.	NAAMM	National Association of Architectural Metal Manufacturers
50.	NBHA	National Builders Hardware Association
51.	NCMA	National Concrete Masonry Association
52.	NCSEA	National Council of Structural Engineers Associations
53.	NEC	National Electrical Code
54.	NEMA	National Electrical Manufacturers Association
55.	NIST	National Institute of Standards and Technology
56.	NSI	Natural Stone Institute
57.	NTMA	National Terrazzo and Mosaic Association, Inc.
58.	ORS	Office of Regulatory Services (California)
59.	OSHA	Occupational Safety and Health Act
60.	PCI	Precast/Prestressed Concrete Institute
61.	PCA	Portland Cement Association
62.	PCA	Painting Contractors Association
63.	PDI	Plumbing Drainage Institute
64.	PEI	Porcelain Enamel Institute, Inc.
65.	PG&E	Pacific Gas & Electric Company
66.	PS	Product Standards
67.	SDI	Steel Door Institute; Steel Deck Institute
68.	SJI	Steel Joist Institute
69.	SSPC	Society for Protective Coatings
70.	TCNA	Tile Council of North America, Inc.
71.	TPI	Truss Plate Institute
72.	UBC	Uniform Building Code
73.	UL	Underwriters Laboratories Code

74.	UMC	Uniform Mechanical Code
75.	USDA	United States Department of Agriculture
76.	VI	Vermiculite Institute
77.	WCLIB	West Coast Lumber Inspection Bureau
78.	WDMA	Window and Door Manufacturers Association
79.	WEUSER	Western Electric Utilities Service Engineering Requirements
80.	WIC	Woodwork Institute of California

**PART 2 - PRODUCTS Not Used.**

**PART 3 - EXECUTION Not Used.**

END OF DOCUMENT

**DEFINITIONS**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS**

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

- A. General Conditions including without limitation, Definitions;
- B. Special Conditions.

**1.02 QUALITY ASSURANCE**

- A. For products or workmanship specified by association, trade, or Federal Standards, Contractor shall comply with requirements of the standard, except when more rigid requirements are specified in the Contract Documents, or are required by applicable codes.
- B. Contractor shall conform to current reference standard publication date in effect on the date of bid opening.
- C. Contractor shall obtain copies of standards unless specifically required not to by the Contract Documents.
- D. Contractor shall maintain a copy of all standards at jobsite during submittals, planning, and progress of the specific Work, until final completion, unless specifically required not to by the Contract Documents.
- E. Should specified reference standards conflict with Contract Documents, Contractor shall request clarification from the District and/or the Architect before proceeding.
- F. The contractual relationship of the parties to the Contract shall not be altered from the contractual relationship as indicated in the Contract Documents by mention or inference otherwise in any referenced document.
- G. Governing Codes shall be as shown in the Contract Documents including, without limitation, the Specifications.

END OF DOCUMENT

**REFERENCES****PART 1 - GENERAL****1.01 SCHEDULE OF REFERENCES:**

The following information is intended only for the general assistance of the Contractor, and the District does not represent that all of the information is current. It is the Contractor's responsibility to verify the correct information for each of the entities listed.

AA	The Aluminum Association 1400 Crystal Drive, Suite 430 Arlington, VA 22202 <a href="http://www.aluminum.org">www.aluminum.org</a>	703/358-2960
AABC	Associated Air Balance Council 2401 Pennsylvania Avenue NW, Suite 330 Washington, DC 20037 <a href="http://www.aabc.com">www.aabc.com</a>	202/737-0202
AASHTO	American Association of State Highway and Transportation Officials 555 12th St. NW - Suite 1000 Washington, DC 20004 <a href="http://www.transportation.org">www.transportation.org</a>	202/624-5800
AATCC	American Association of Textile Chemists and Colorists P.O. Box 12215 Research Triangle Park, NC 27709-2215 <a href="http://www.aatcc.org">www.aatcc.org</a>	919/549-8141
ACA	American Coatings Association 901 New York Ave., NW, Suite 300 West Washington, DC 20001 <a href="http://www.paint.org">www.paint.org</a>	202/462-6272
ACI	American Concrete Institute 38800 Country Club Dr. Farmington Hills, MI 48331-3439 <a href="http://www.concrete.org">www.concrete.org</a>	248/848-3800
ACPA	American Concrete Pipe Association 5605 N. MacArthur Blvd., Suite 340 Irving, TX 75038 <a href="http://www.concrete-pipe.org">www.concrete-pipe.org</a>	972/506-7216

ADC	Air Duct Council 1901 N. Roselle Road, Suite 800 Schaumburg, IL 60195 <a href="http://www.flexibleduct.org">www.flexibleduct.org</a>	847/706-6750
AF&PA	American Forest and Paper Association 1101 K Street, NW, Suite 700 Washington, DC 20005 <a href="http://www.afandpa.org">www.afandpa.org</a>	202/463-2700
AGA	American Gas Association 400 North Capitol Street, NW, Suite 450 Washington, DC 20001 <a href="http://www.aga.org">www.aga.org</a>	202/824-7000
AGC	Associate General Contractors of America 2300 Wilson Blvd., Suite 300 Arlington, VA 22201 <a href="http://www.agc.org">www.agc.org</a>	703/548-3118
AHA	American Hardboard Association 1210 West Northwest Highway Palatine, IL 60067 <a href="http://domensino.com/AHA/default.htm">http://domensino.com/AHA/default.htm</a>	847/934-8800
AI	Asphalt Institute 2696 Research Park Drive Lexington, KY 40511-8480 <a href="http://www.asphaltinstitute.org">www.asphaltinstitute.org</a>	859/288-4960
AIA	The American Institute of Architects 1735 New York Ave., NW Washington, DC 20006-5292 <a href="http://www.aia.org">www.aia.org</a>	202/626-7300
AISC	American Institute of Steel Construction 130 East Randolph Street, Suite 2000 Chicago, IL 60601 <a href="http://www.aisc.org">www.aisc.org</a>	312.670.2400
AISI	American Iron and Steel Institute 25 Massachusetts Ave., NW, Suite 800 Washington, DC 20001 <a href="http://www.steel.org">www.steel.org</a>	202/452-7100
AITC	American Institute of Timber Construction 1010 South 336th Street, #210 Federal Way, WA 98003-7394 <a href="https://www.plib.org/aitc/">https://www.plib.org/aitc/</a>	253/835-3344

ALI	Associated Laboratories, Inc. P.O. Box 152837 Dallas, TX 75315 <a href="http://www.assoc-labs.com">www.assoc-labs.com</a>	214/565-0593
ALSC	American Lumber Standards Committee, Inc. 7470 New Technology Way, Suite F Frederick, MD 21703 <a href="http://www.alsc.org">www.alsc.org</a>	301/972-1700
AMCA	Air Movement and Control Association International, Inc. 30 W. University Drive Arlington Heights, IL 60004 <a href="http://www.amca.org">www.amca.org</a>	847/394-0150
AMPP (formerly SSPC)	Association for Materials Protection and Performance (merger of Society for Protective Coatings and National Association of Corrosion Engineers International) (formerly Steel Structures Painting Council) 800 Trumbull Drive Pittsburgh, PA 15205 <a href="http://www.sspc.org">www.sspc.org</a>	412/281-2331 877/281-7772
ANLA	AmericanHort (merger of American Nursery & Landscape Association and OFA – The Association of Horticultural Professionals) 2130 Stella Court Columbus, OH 43215 <a href="http://www.americanhort.org">www.americanhort.org</a>	614/487-1117
ANSI	American National Standards Institute 1899 L Street, NW, 11th Floor Washington, DC 20036 <a href="http://www.ansi.org">www.ansi.org</a>	202/293-8020
APA	APA-The Engineered Wood Association 7011 S. 19th Street Tacoma, WA 98466-5333 <a href="http://www.apawood.org">www.apawood.org</a>	253/565-6600

APA	Architectural Precast Association 325 John Knox Rd, Suite L-103 Tallahassee, FL 32303 <a href="http://www.archprecast.org">www.archprecast.org</a>	850/205-5637
APCIA	American Property Casualty Insurance Association (merger of American Insurance Association (formerly the National Board of Fire Underwriters) with the Property Casualty Insurers Association of America) 555 12th St, NW, Suite 550 Washington DC 20004 <a href="http://www.apci.org">www.apci.org</a>	202/828-7100
AHRI	Air Conditioning and Refrigeration Institute (now Air-Conditioning, Heating, & Refrigeration Institute) 2311 Wilson Blvd, Suite 400 Arlington, VA 22201 <a href="http://www.ahrinet.org">www.ahrinet.org</a>	703/524-8800
ARMA	Asphalt Roofing Manufacturers Association 2331 Rock Spring Road Forest Hill, MD 21050 <a href="http://www.asphaltroofing.org">www.asphaltroofing.org</a>	443/640-1075
ASA	The Acoustical Society of America Suite 300 1305 Walt Whitman Road Melville, NY 11747-4300 <a href="https://acousticalsociety.org/">https://acousticalsociety.org/</a>	516/576-2360
ASCE	American Society of Civil Engineers 1801 Alexander Bell Drive Reston, VA 20191 <a href="http://www.asce.org">www.asce.org</a>	800/548-2723 703/295-6300
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers 180 Technology Parkway Peachtree Corners, GA 30092 <a href="http://www.ashrae.org">www.ashrae.org</a>	800/527-4723 404/636-8400
ASLA	American Society of Landscape Architects 636 Eye Street, NW Washington, DC 20001-3736 <a href="http://www.asla.org">www.asla.org</a>	202/898-2444
ASME	American Society of Mechanical Engineers Two Park Avenue New York, NY 10016-5990 <a href="http://www.asme.org">www.asme.org</a>	800/834-2763

ASPE	American Society of Plumbing Engineers 6400 Shafer Court, Suite 350 Rosemont, IL 60018 <a href="http://aspe.org">http://aspe.org</a>	847/296-0002
ASQ	American Society for Quality P.O. Box 3005 Milwaukee, WI 53201-3005 or 600 North Plankinton Avenue Milwaukee, WI 53203 <a href="http://asq.org">http://asq.org</a>	800/248-1946 414/272-8575
ASSE	American Society of Sanitary Engineering 18927 Hickory Creek Dr., Suite 220 Mokena, IL 60448 <a href="http://www.asse-plumbing.org">www.asse-plumbing.org</a>	708/995-3019
ASTM	ASTM International 100 Barr Harbor Drive PO Box C700 West Conshohocken, PA, 19428-2959 <a href="http://www.astm.org">www.astm.org</a>	610/832-9500
AWCI	Association of the Wall and Ceiling Industry 513 West Broad Street, Suite 210 Falls Church, VA 22046 <a href="http://www.awci.org">www.awci.org</a>	703/538-1600
AWPA	American Wood Protection Association (formerly American Wood Preservers Institute) P.O. Box 361784 Birmingham, AL 35236-1784 <a href="http://www.awpa.com">www.awpa.com</a>	205/733-4077
AWS	American Welding Society 8669 NW 36 Street, Suite 130 Miami, FL 33166 <a href="http://www.aws.org">www.aws.org</a>	800/443-9353 305/443-9353
AWI	Architectural Woodwork Institute 46179 Westlake Drive, Suite 120 Potomac Falls, VA 20165-5874 <a href="http://www.awinet.org">www.awinet.org</a>	571/323-3636
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235 <a href="http://www.awwa.org">www.awwa.org</a>	800/926-7337 303/794-7711



BHMA	Builders Hardware Manufacturers Association 355 Lexington Avenue, 15th Floor New York, NY 10017 <a href="http://www.buildershardware.com">www.buildershardware.com</a>	212/297-2122
BIA	The Brick Industry Association 12007 Sunrise Valley Drive, Suite 430 Reston, VA 20191 <a href="http://www.gobrick.com">www.gobrick.com</a>	703/620-0010
CGA	Compressed Gas Association 8484 Westpark Drive, Suite 220 McLean, VA 22102 <a href="http://www.cganet.com">www.cganet.com</a>	703/788-2700
CISCA	Ceilings & Interior Systems Construction Association 1010 Jorie Blvd, Suite 30 Oak Brook, IL 60523 <a href="http://www.cisca.org">www.cisca.org</a>	630/584-1919
CISPI	Cast Iron Soil Pipe Institute 2401 Fieldcrest Dr. Mundelein, IL 60060 <a href="http://www.cispi.org">www.cispi.org</a>	224/864-2910
CLFMI	Chain Link Fence Manufacturers Institute 10015 Old Columbia Road, Suite B-215 Columbia, MD 21046 <a href="http://chainlinkinfo.org">chainlinkinfo.org</a>	301/596-2583
CPA	Composite Panel Association 19465 Deerfield Avenue, Suite 306 Leesburg, VA 20176 <a href="http://www.compositepanel.org">www.compositepanel.org</a>	703/724-1128
CPSC	Consumer Product Safety Commission 4330 East-West Highway Bethesda, MD 20814 <a href="http://www.cpsc.gov">www.cpsc.gov</a>	800/638-2772
CRA	California Redwood Association 818 Grayson Road, Suite 201 Pleasant Hill, CA 94523 <a href="http://www.calredwood.org">www.calredwood.org</a>	925/935-1499

CRI	Carpet and Rug Institute 100 S. Hamilton Street Dalton, GA 30722-2048 <a href="http://www.carpet-rug.org">www.carpet-rug.org</a>	706/278-3176
CRSI	Concrete Reinforcing Steel Institute 933 N. Plum Grove Road Schaumburg, IL 60173-4758 <a href="http://www.crsi.org">www.crsi.org</a>	847/517-1200
CSI	The Construction Specifications Institute 123 North Pitt St, Suite 450 Alexandria, VA 22314 <a href="http://www.csinet.org">www.csinet.org</a>	800/689-2900
CTIOA	Ceramic Tile Institute of America 12061 Jefferson Blvd. Culver City, CA 90230-6219 <a href="http://www.ctioa.org">www.ctioa.org</a>	310/574-7800
DHA	Decorative Hardwoods Association (formerly Hardwood Plywood & Veneer Association) 42777 Trade West Dr. Sterling, VA 20166 <a href="https://www.decorativehardwoods.org/">https://www.decorativehardwoods.org/</a>	703/435-2900
DHI	Door and Hardware Institute (formerly National Builders Hardware Association) 2001 K Street NW, 3rd Floor North Washington, DC 20006 <a href="http://www.dhi.org">www.dhi.org</a>	202/367-1134
DIPRA	Ductile Iron Pipe Research Association P.O. Box 190306 Birmingham, AL 35219 <a href="http://www.dipra.org">www.dipra.org</a>	205/402-8700
DOC	U.S. Department of Commerce 1401 Constitution Ave., NW Washington, DC 20230 <a href="http://www.commerce.gov">www.commerce.gov</a>	202/482-2000
DOT	U.S. Department of Transportation 1200 New Jersey Avenue, SE Washington, DC 20590 <a href="http://www.dot.gov">www.dot.gov</a>	855/368-4200
EJMA	Expansion Joint Manufacturers Association, Inc. 25 North Broadway Tarrytown, NY 10591 <a href="http://www.ejma.org">www.ejma.org</a>	914/332-0040

EPA	Environmental Protection Agency Ariel Rios Building 1200 Pennsylvania Avenue, N.W. Washington, DC 20460 <a href="http://www.epa.gov">www.epa.gov</a>	202/272-0167
FCICA	Floor Covering Installation Contractors Association 800 Roosevelt Rd., Bldg. C, Suite 312 Glen Ellyn, IL 60137 <a href="http://www.fcica.com">www.fcica.com</a>	630/672-3702
FGIA	Fenestration and Glazing Industry Alliance 1900 E Golf Rd, Suite 1250 Schaumburg, IL 60173 <a href="https://fgiaonline.org/">https://fgiaonline.org/</a>	847/303-5664
FM Global	Factory Mutual Insurance Company Amy Daley Global Practice Leader – Education, Public Entities, Health Care FM Global 270 Central Avenue Johnston, RI 02919-4949 <a href="http://www.fmglobal.com">www.fmglobal.com</a>	401/275-3000 401/275-3029
FS	General Services Administration (GSA) Index of Federal Specifications, Standards and Commercial Item Descriptions 470 East L'Enfant Plaza, SW, Suite 8100 Washington, DC 20407 <a href="http://www.gsa.gov">www.gsa.gov</a>	202/619-8925
GA	The Gypsum Association 962 Wayne Ave., Suite 620 Silver Spring, MD 20910 <a href="http://www.gypsum.org">www.gypsum.org</a>	301/277-8686
HMA	Hardwood Manufacturers Association One Williamsburg Place, Suite 108 Warrendale, PA 15086 <a href="http://hmamembers.org">http://hmamembers.org</a>	412/244-0440

IAPMO	International Association of Plumbing and Mechanical Officials (formerly the Western Plumbing Officials Association) 4755 E. Philadelphia St. Ontario, CA 91761 <a href="http://www.iapmo.org">www.iapmo.org</a>	909/472-4100
ICC	International Code Council 500 New Jersey Avenue, NW, 6th Floor Washington, DC 20001 <a href="http://www.iccsafe.org">www.iccsafe.org</a>	888/422-7233
IEEE	Institute of Electrical and Electronics Engineers 3 Park Avenue, 17th Floor New York, NY 10016-5997 <a href="http://www.ieee.org">www.ieee.org</a>	212/419-7900
IES	Illuminating Engineering Society 120 Wall Street, Floor 17 New York, NY 10005-4001 <a href="http://www.ies.org">www.ies.org</a>	212/248-5000
ITRK	Intertek Testing Services 3933 US Route 11 Cortland, NY 13045 <a href="http://www.intertek.com">www.intertek.com</a>	607/753-6711
MCAA	Mechanical Contractors Association of America 1385 Piccard Drive Rockville, MD 20850 <a href="http://www.mcaa.org">www.mcaa.org</a>	301/869-5800
MMPA (formerly WMMPA)	Moulding & Millwork Producers Association (formerly Wood Moulding & Millwork Producers Association) 507 First Street Woodland, CA 95695 <a href="http://www.wmmpa.com">www.wmmpa.com</a>	530/661-9591 800/550-7889
MSS	Manufacturers Standardization Society (MSS) of the Valve and Fittings Industry, Inc. 127 Park Street, NE Vienna, VA 22180-4602 <a href="http://mss-hq.org">http://mss-hq.org</a>	703/281-6613
NAAMM	National Association of Architectural Metal Manufacturers 800 Roosevelt Rd. Bldg. C, Suite 312 Glen Ellyn, IL 60137 <a href="http://www.naamm.org">www.naamm.org</a>	630/942-6591

NAIMA	North American Insulation Manufacturers Association P.O. Box 1906 Alexandria, VA 22313 <a href="https://insulationinstitute.org/">https://insulationinstitute.org/</a>	703/684-0084
NALP	National Association of Landscape Professionals (formerly Professional Landcare Network) 12500 Fair Lakes Circle, Suite 200 Fairfax, VA 22033 <a href="https://www.landscapeprofessionals.org/">https://www.landscapeprofessionals.org/</a>	703/736-9666
NAPA	National Asphalt Pavement Association 6406 Ivy Lane, Suite 350 Greenbelt, MD 20770-1441 <a href="http://www.asphaltpavement.org">www.asphaltpavement.org</a>	888/468-6499 301/731-4748
NCSPA	National Corrugated Steel Pipe Association 14070 Proton Road, Suite 100 Dallas, TX 75244 <a href="http://www.ncspa.org">www.ncspa.org</a>	972/850-1907
NCMA	National Concrete Masonry Association 13750 Sunrise Valley Drive Herndon, VA 20171-4662 <a href="http://www.ncma.org">www.ncma.org</a>	703/713-1900
NEBB	National Environmental Balancing Bureau 8575 Grovemont Circle Gaithersburg, MD 20877 <a href="http://www.nebb.org">www.nebb.org</a>	301/977-3698
NECA	National Electrical Contractors Association 1201 Pennsylvania Ave. NW Washington, D.C., 20004 <a href="http://www.necanet.org">www.necanet.org</a>	202/991-6300
NEMA	National Electrical Manufacturers Association 1300 North 17th Street N, Suite 900 Rosslyn, VA 22209 <a href="http://www.nema.org">www.nema.org</a>	703/841-3200
NEII	National Elevator Industry, Inc. 5537 SW Urish Road Topeka, KS 66610 <a href="https://nationalelevatorindustry.org/">https://nationalelevatorindustry.org/</a>	703/589-9985
NFPA	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02169-7471 <a href="http://www.nfpa.org">www.nfpa.org</a>	800/344-3555 855/274-8525

NGA (formerly GANA)	National Glass Association (merged with Glass Association of North America) 1945 Old Gallows Road Suite 750 Vienna, VA 22182 <a href="http://www.glass.org">www.glass.org</a>	866/342-5642 Ext 127
NHLA	National Hardwood Lumber Association PO Box 34518 Memphis, TN 38184 <a href="http://www.nhla.com">www.nhla.com</a>	901/377-1818
NIA	National Insulation Association 516 Herndon Pkwy., Ste. D Herndon, VA 20170 <a href="http://www.insulation.org">www.insulation.org</a>	703/464-6422
NRCA	National Roofing Contractors Association 10255 W. Higgins Road, Suite 600 Rosemont, IL 60018-5607 <a href="http://www.nrca.net">www.nrca.net</a>	847/299-9070
NSF	NSF International 789 N. Dixboro Road Ann Arbor, MI 48113-0140 <a href="http://www.nsf.org">www.nsf.org</a>	800/673-6275 734/769-8010
NSI	Natural Stone Institute (formerly Marble Institute of America) 380 E. Lorain St. Oberlin, OH 44074 <a href="https://www.naturalstoneinstitute.org/">https://www.naturalstoneinstitute.org/</a>	440/250-9222
NTMA	National Terrazzo and Mosaic Association 209 N. Crockett Street, Suite 2 PO Box 2605 Fredericksburg, TX 78624 <a href="http://www.ntma.com">www.ntma.com</a>	800/323-9736
OSHA	Occupational Safety and Health Act U.S. Department of Labor Occupational Safety & Health Administration 200 Constitution Ave., NW Washington, DC 20210 <a href="http://www.osha.gov">www.osha.gov</a>	800/321-OSHA (6742)

PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077 or 200 Massachusetts Ave NW, Suite 200 Washington, DC 20001 <a href="http://www.cement.org">www.cement.org</a>	847/966-6200 202/408-9494
PCA	Painting Contractors Association (formerly Painting and Decorating Contractors of America) 2316 Millpark Drive Maryland Heights, MO 63043 <a href="https://www.pcapainted.org/">https://www.pcapainted.org/</a>	800/322-7322
PCI	Precast/Prestressed Concrete Institute 8770 W. Bryn Mawr Ave., Suite 1150 Chicago, IL 60631 <a href="http://www.pci.org">www.pci.org</a>	312/786-0300
PDI	Plumbing & Drainage Institute 800 Turnpike Street, Suite 300 North Andover, MA 01845 <a href="http://pdionline.org">http://pdionline.org</a>	978/557-0720 800/589-8956
PEI	Porcelain Enamel Institute, Inc. P.O. Box 920220 Norcross, GA 30010 <a href="http://www.porcelainenamel.com">www.porcelainenamel.com</a>	770/676-9366
PG&E	Pacific Gas & Electric Company P.O. Box 997300 Sacramento, CA 95899-7300 <a href="http://www.pge.com">www.pge.com</a>	800/743-5000
PLIB	Pacific Lumber Inspection Bureau (formerly West Coast Lumber Inspection Bureau) 1010 South 336th Street, Suite 210 Federal Way, WA 98003-7394 <a href="https://www.plib.org/">https://www.plib.org/</a>	253/835-3344
RFCI	Resilient Floor Covering Institute 115 Broad Street, Suite 201 La Grange, GA 30240 <a href="http://www.rfci.com">www.rfci.com</a>	706/882-3833
SDI	Steel Deck Institute P.O. Box 426 Glenshaw, PA 15116 <a href="http://www.sdi.org">www.sdi.org</a>	412/487-3325

SDI	Steel Door Institute 30200 Detroit Road Westlake, OH 44145 <a href="http://www.steeldoor.org">www.steeldoor.org</a>	440/899-0010
SJI	Steel Joist Institute 140 West Evans Street, Suite 203 Florence, SC 29501 <a href="http://steeljoist.org">http://steeljoist.org</a>	843/407-4091
SMA	Stucco Manufacturers Association 5753 E Santa Ana Cyn Rd, #G-156 Anaheim, CA 92807 <a href="http://www.stuccomfgassoc.com">www.stuccomfgassoc.com</a>	714/473-9579
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association 4201 Lafayette Center Drive Chantilly, VA 20151-1219 <a href="http://www.smacna.org">www.smacna.org</a>	703/803-2980
SPI	SPI: The Plastics Industry Trade Association, Inc. 1425 K St. NW, Suite 500 Washington, DC 20005 <a href="http://www.plasticsindustry.org">www.plasticsindustry.org</a>	202/974-5200
TCA	The Tile Council of North America 100 Clemson Research Blvd. Anderson, SC 29625 <a href="http://www.tcnatile.com">www.tcnatile.com</a>	864/646-8453
TPI	Truss Plate Institute 2670 Crain Highway, Suite 203 Waldorf, MD 20601 <a href="http://www.tpinst.org">www.tpinst.org</a>	240/587-5582
TPI	Turfgrass Producers International 444 E. Roosevelt Road #346 Lombard, IL 60148 <a href="http://www.turfgrasssod.org">www.turfgrasssod.org</a>	800/405-8873 847/649-5555
TCIA	Tree Care Industry Association (formerly the National Arborist Association) 670 N Commercial Street, Suite 201 Manchester, NH 03101 <a href="http://www.tcia.org">www.tcia.org</a>	603/314-5380 800/733-2622



TVI	The Vermiculite Institute c/o The Schundler Company 10 Central Street Nahant, MA 01908 <a href="http://www.vermiculiteinstitute.org">www.vermiculiteinstitute.org</a>	732/287-2244
UL	Underwriters Laboratories Inc. 333 Pfingsten Road Northbrook, IL 60062-2096 <a href="http://www.ul.com">www.ul.com</a>	847/272-8800 877/854-3577
UNI	Uni-Bell PVC Pipe Association 201 E. John Carpenter Freeway, Suite 750 Irving, TX 75062 <a href="http://www.uni-bell.org">www.uni-bell.org</a>	972/243-3902
USDA	U.S. Department of Agriculture 1400 Independence Ave., S.W. Washington, DC 20250 <a href="http://www.usda.gov">www.usda.gov</a>	202/720-2791
WA	Wallcoverings Association 35 E Wacker Dr., Suite 850 Chicago, IL 60601 <a href="http://www.wallcoverings.org">www.wallcoverings.org</a>	312/224-2574
WCMA	Window Covering Manufacturers Association 355 Lexington Avenue 15th Floor New York, NY 10017 <a href="http://www.wcmanet.org">www.wcmanet.org</a>	212/297-2122
WDMA	Window & Door Manufacturers Association 2001 K Street NW, 3rd Floor North Washington, D.C. 20006 <a href="http://www.wdma.com">www.wdma.com</a>	202/367-1157
WI	Woodwork Institute 1455 Response Road, Suite 110 Sacramento, CA 95815 <a href="http://www.wicnet.org">www.wicnet.org</a>	916/372-9943
WRI	Wire Reinforcement Institute 942 Main Street, Suite 300 Hartford, CT 06103 <a href="http://www.wirereinforcementinstitute.org">www.wirereinforcementinstitute.org</a>	860/240-9545
WWCA	Western Wall & Ceiling Contractors Association 1910 N. Lime St. Orange, CA 92865 <a href="http://www.wwcca.org">www.wwcca.org</a>	714/221-5520

WWPA	Western Wood Products Association (formerly Redwood Inspection Service) 1500 SW First Ave., Suite 870 Portland, OR 97201 <a href="http://www.wwpa.org">www.wwpa.org</a>	503/224-3930
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**PART 2 - PRODUCTS Not Used.**

**PART 3 - EXECUTION Not Used.**

END OF DOCUMENT

**MATERIALS AND EQUIPMENT**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS**

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

- A. General Conditions, including, without limitation, Purchase of Materials and Equipment;
- B. Special Conditions;
- C. Imported Materials Certification.

**1.02 MATERIAL AND EQUIPMENT**

- A. Only items approved by the District and/or Design Professional shall be used.
- B. Contractor shall submit lists of products and other product information in accordance with the Contract Documents, including, without limitation, the provisions regarding the submittals.

**1.03 MATERIAL AND EQUIPMENT COLORS**

- A. The District and/or Architect will provide a schedule of colors.
- B. No individual color selections will be made until after approval of all pertinent materials and equipment and after receipt of appropriate samples in accordance with the Contract Documents, including, without limitation, the provisions regarding the submittals.
- C. Contractor shall request priority in writing for any item requiring advance ordering to maintain the approved Construction Schedule.

**1.04 DELIVERY, STORAGE, AND HANDLING**

- A. Contractor shall deliver manufactured materials in original packages, containers, or bundles (with seals unbroken), bearing name or identification mark of manufacturer.
- B. Contractor shall deliver fabrications in as large assemblies as practicable; where specified as shop-primed or shop-finished, package or crate as required to preserve such priming or finish intact and free from abrasion.
- C. Contractor shall store materials in such a manner as necessary to properly protect them from damage. Materials or equipment damaged by handling, weather, dirt, or from any other cause will not be accepted.

- D. Materials are not acceptable that have been warehoused for long periods of time, stored or transported in improper environment, improperly packaged, inadequately labeled, poorly protected, excessively shipped, deviated from normal distribution pattern, or reassembled.
- E. Contractor shall store material so as to cause no obstructions of sidewalks, roadways, access to the Site or buildings, and underground services. Contractor shall protect material and equipment furnished under Contract.
- F. Contractor may store materials on Site with prior written approval by the District, all material shall remain under Contractor's control and Contractor shall remain liable for any damage to the materials. Should the Project Site not have storage area available, the Contractor shall provide for off-site storage at a bonded warehouse and with appropriate insurance coverage at no cost to District.
- G. When any room in Project is used as a shop or storeroom, the Contractor shall be responsible for any repairs, patching, or cleaning necessary due to that use. Location of storage space shall be subject to prior written approval by District.

## **PART 2 - PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Manufacturers listed in various sections of Contract Documents are names of those manufacturers that are believed to be capable of supplying one or more of items specified therein.
- B. The listing of a manufacturer does not imply that every product of that manufacturer is acceptable as meeting the requirements of the Contract Documents.

### **2.02 FACILITIES AND EQUIPMENT**

Contractor shall provide, install, maintain, and operate a complete and adequate facility for handling, the execution, disposal, and distribution of material and equipment as required for proper and timely performance of Work connected with Contract.

### **2.03 MATERIAL REFERENCE STANDARDS**

Where material is specified solely by reference to "standard specifications" and if requested by District, Contractor shall submit for review data on actual material proposed to be incorporated into Work of Contract listing name and address of vendor, manufacturer, or producer, and trade or brand names of those materials, and data substantiating compliance with standard specifications.

## **PART 3 - EXECUTION**

### **3.01 WORKMANSHIP**

- A. Where not more specifically described in any other Contract Documents, workmanship shall conform to methods and operations of best standards and accepted practices of trade or trades involved and shall include items of fabrication, construction, or installation regularly furnished or required for completion (including finish and for successful operation, as intended).
- B. Work shall be executed by tradespersons skilled in their respective lines of Work. When completed, parts shall have been durably and substantially built and present a neat appearance.

### **3.02 COORDINATION**

- A. Contractor shall coordinate installation of Work so as to not interfere with installation of others. Adjustment or rework because of Contractor's failure to coordinate will be at no additional cost to District.
- B. Contractor shall examine in-place work for readiness, completeness, fitness to be concealed or to receive other work, and in compliance with Contract Documents. Concealing or covering Work constitutes acceptance of additional cost which will result should in-place Work be found unsuitable for receiving other Work or otherwise deviating from the requirements of the Contract Documents.

### **3.03 COMPLETENESS**

Contractor shall provide all portions of the Work, unless clearly stated otherwise, installed complete and operational with all elements, accessories, anchorages, utility connections, etc., in manner to assure well-balanced performance, in accordance with manufacturer's recommendations and by Contract Documents. For example, electric water coolers require water, electricity, and drain services; roof drains require drain system; sinks fit within countertop, etc. Terms such as "installed complete," "operable condition," "for use intended," "connected to all utilities," "terminate with proper cap," "adequately anchored," "patch and refinish," "to match similar," should be assumed to apply in all cases, except where completeness of functional or operable condition is specifically stated as not required.

### **3.04 APPROVED INSTALLER OR APPLICATOR**

Installation by a manufacturer's approved installer or applicator is an understood part of Specifications and only approved installer or applicator is to provide on-site Work where specified manufacturer has on-going program of approving (i.e. certifying, bonding, re-warranting) installers or applicators. Newly established relationships between a manufacturer and an installer or applicator who does not have other approved applicator work in progress or completed is not approved for this Project.

### **3.05 MANUFACTURER'S RECOMMENDATIONS**

All installations shall be in accordance with manufacturer's published recommendations and specific written directions of manufacturer's representative. Should Contract Documents differ from recommendations of manufacturer or directions of his representative, Contractor shall analyze differences, make recommendations to the District and the Architect in writing, and shall not proceed until interpretation or clarification has been issued by the District and/or the Architect.

END OF DOCUMENT

**QUALITY CONTROL**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions, including, without limitation, Inspector, Inspections and Tests, Uncovering of Work and Non-conforming of Work and Correction of Work;
- B. Special Conditions.

**1.02 RELATED CODES:**

- A. The Work is governed by requirements of Title 24, California Code of Regulations ("CCR"), and the Contractor shall keep a copy of these available at the job Site for ready reference during construction.
- B. The Division of the State Architect ("DSA") shall be notified at or before the start of construction.

**1.03 OBSERVATION AND SUPERVISION:**

- A. The District and Architect or their appointed representatives will review the Work and the Contractor shall provide facilities and access to the Work at all times as required to facilitate this review. Administration by the Architect and any consulting Structural Engineer will be in accordance with applicable regulations, including, without limitation, CCR, Part 1, Title 24, Section 4-341.
- B. One or more Project Inspector(s) approved by DSA and employed by or in contract with the District, referred to hereinafter as the "Project Inspector", will observe the work in accordance with CCR, Part 1, Title 24, Sections 4-333(b) and 4-342:
  - (1) The Project Inspector and Special Inspector(s) shall have access to the Work wherever it is in preparation or progress for ascertaining that the Work is in accordance with the Contract Documents and all applicable code sections. The Contractor shall provide facilities and operation of equipment as needed, and access as required and shall provide assistance for sampling or measuring materials.
  - (2) The Project Inspector will notify the District and Architect and call the attention of the Contractor to any observed failure of Work or material to conform to Contract Documents.
  - (3) The Project Inspector shall observe and monitor all testing and inspection activities required.

The Contractor shall conform with all applicable laws as indicated in the Contract Documents, including, without limitation, to CCR, Part 1, Title 24, Section 4-343. The Contractor shall supervise and direct the Work and maintain a competent superintendent on the job who is authorized to act in all matters pertaining to the Work. The Contractor's superintendent shall also inspect all materials, as they arrive, for compliance with the Contract Documents. Contractor shall reject defective Work or materials immediately upon delivery or failure of the Work or material to comply with the Contract Documents. The Contractor shall submit verified reports as indicated in the Contract Documents, including, without limitation, the Specifications and as required by Part 1, Title 24, Section 4-336.

#### **1.04 TESTING AGENCIES:**

- A. Testing agencies and tests shall be in conformance with the General Documents and the requirements of Part 1, Title 24, Section 4- 335.
- B. Testing and inspection in connection with earthwork shall be under the direction of the District's consulting soils engineer, if any, referred to hereinafter as the "Soils Engineer."
- C. Testing and inspection of construction materials and workmanship shall be performed by a qualified laboratory, referred to hereinafter as the "Testing Laboratory." The Testing Laboratory shall be under direction of an engineer registered in the State of California, shall conform to requirements of ASTM E329, and shall be employed by or in contract with the District.

#### **1.05 TESTS AND INSPECTIONS:**

- A. The Contractor shall be responsible for notifying the District and Project Inspector of all required tests and inspections. Contractor shall notify the District and Project Inspector at least seventy-two hours (72) hours in advance of performing any Work requiring testing or inspection.
- B. The Contractor shall provide access to Work to be tested and furnish incidental labor, equipment, and facilities to facilitate all inspections and tests.
- C. The District will pay for first inspections and tests required by the "CCR", and other inspections or tests that the District and/or the Architect may direct to have made, including the following principal items:
  - (1) Tests and observations for earthwork and paving.
  - (2) Tests for concrete mix designs, including tests of trial batches.
  - (3) Tests and inspections for structural steel work.
  - (4) Field tests for framing lumber moisture content.
  - (5) Additional tests directed by the District that establish that materials and installation comply with the Contract Documents.
  - (6) Tests and observations of welding and expansion anchors.



- D. The District may at its discretion, pay and then back charge the Contractor for:
  - (1) Retests or reinspections, if required, and tests or inspections required due to Contractor error or lack of required identifications of material.
  - (2) Uncovering of work in accordance with Contract Documents.
  - (3) Testing done on weekends, holidays, and overtime will be chargeable to the Contractor for the overtime portion.
  - (4) Testing done off Site.
- E. Testing and inspection reports and certifications:
  - (1) If initially received by Contractor, Contractor shall provide to each of the following a copy of the agency or laboratory report of each test or inspection or certification.
    - (a) The District;
    - (b) The Construction Manager, if any;
    - (c) The Architect;
    - (d) The Consulting Engineer, if any;
    - (e) Other engineers on the Project, as appropriate;
    - (f) The Project Inspector; and
    - (g) The Contractor.
  - (2) When the test or inspection is one required by the CCR, a copy of the report shall also be provided to the DSA.

## **PART 2 - PRODUCTS**

### **2.01 TYPE OF TESTS AND INSPECTIONS**

- A. Testing and inspection shall be in accordance with DSA Form 103 (or current version)
- B. Slump Test  
ASTM C 143
- C. Concrete Tests

Testing agency shall test concrete used in the work per the following paragraphs:

- (1) Compressive Strength:

- (a) Minimum number of tests required: One (1) set of three (3) cylinders for each 100 cubic yards (Sec. 2604(h) 01) of concrete or major fraction thereof, placed in one (1) day. See Title 24, Section 2605(g).
- (b) Two cylinders of each set shall be tested at twenty-eight (28) days. One (1) cylinder shall be held in reserve and tested only when directed by the Architect or District.
- (c) Concrete shall test the minimum ultimate compressive strength in twenty-eight 28 days, as specified on the structural drawings.
- (d) In the event that the twenty-eight (28) day test falls below the minimum specified strength, the effective concrete in place shall be tested by taking cores in accordance with UBC Standard No. 26-13 and tested as required for cylinders.
- (e) In the event that the test on core specimens falls below the minimum specified strength, the concrete will be deemed defective and shall be removed and replaced upon such direction of the Architect, and in a manner acceptable to the Division of the State Architect.

D. Reinforcing, Steel

E. Structural Steel Per Title 24 and as noted:

- (1) Material: Steel per Table in Title 24, Section 2712.
- (2) Qualification of Welders (UBC Std. 27-6).
- (3) Shop fabrication (Section 2712(d). Structural steel only).
- (4) Shop and field welding (Section 2712(e)).

**PART 3 - EXECUTION Not Used.**

END OF DOCUMENT

**TEMPORARY FACILITIES AND CONTROLS**

**PART 1 – GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions;
- B. Special Conditions;
- C. Site Standards; and
- D. Construction Waste Management and Disposal.

**1.02 TEMPORARY UTILITIES:**

- A. Electric Power and Lighting:
  - (1) Contractor will pay for power during the course of the Work. To the extent power is available in the building(s) or on the Site, Contractor may use the District's existing utilities by making prearranged payments to the District for the utilities used by Contractor and all Subcontractors. Contractor shall be responsible for providing temporary facilities required to deliver that power service from its existing location in the building(s) or on the Site to point of intended use.
  - (2) Contractor shall verify characteristics of power available in building(s) or on the Site. Contractor shall take all actions required to make modifications where power of higher voltage or different phases of current are required. Contractor shall be fully responsible for providing that service and shall pay all costs required therefor.
  - (3) Contractor shall furnish, wire for, install, and maintain temporary electrical lights wherever it is necessary to provide illumination for the proper performance and/or observation of the Work: a minimum of 20 foot-candles for rough work and 50 foot-candles for finish work.
  - (4) Contractor shall be responsible for maintaining existing lighting levels in the project vicinity should temporary outages or service interruptions occur.
- B. Heat and Ventilation:
  - (1) Contractor shall provide temporary heat to maintain environmental conditions to facilitate progress of the Work, to meet specified minimum conditions for the installation and curing of materials, and to

protect materials and finishes from damage due to improper temperature and humidity conditions. Portable heaters shall be standard units complete with controls.

- (2) Contractor shall provide forced ventilation and dehumidification, as required, of enclosed areas for proper installation and curing of materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors, and gases.
- (3) Contractor shall pay the costs of installation, maintenance, operation, and removal of temporary heat and ventilation, including costs for fuel consumed, required for the performance of the Work.

C. Water:

- (1) Contractor shall pay for water used during the course of the Work. Contractor shall coordinate and pay for installation or use of water meter in compliance with local water agency requirements. To the extent water is then available in the building(s) or on the Site, Contractor may use the District's existing utilities by making prearranged payments to the District for the utilities used by Contractor and all Subcontractors. Contractor shall be responsible for providing temporary facilities required to deliver such utility service from its existing location in the building(s), on the Site, or other location approved by the local water agency, to point of intended use.
- (2) Contractor shall use backflow preventers on water lines at point of connection to District's water supply. Backflow preventers shall comply with requirements of Uniform Plumbing Code.
- (3) Contractor shall make potable water available for human consumption.

D. Sanitary Facilities:

- (1) Contractor shall provide sanitary temporary facilities in no fewer numbers than required by law and such additional facilities as may be directed by the Inspector for the use of all workers. The facilities shall be maintained in a sanitary condition at all times and shall be left at the Site until removal is directed by the Inspector or Contractor completes all other work at the Site.
- (2) Use of toilet facilities in the Work under construction shall not be permitted except by consent of the Inspector and the District.

E. Telephone Service:

- (1) Contractor shall arrange with local telephone service company for telephone service as required for the performance of the Work. Contractor shall, at a minimum, provide in its field office one line for telephone and one line for fax machine.
- (2) Contractor shall pay the costs for telephone and fax lines installation, maintenance, service, and removal.

F. Fire Protection:

- (1) Contractor shall provide and maintain fire extinguishers and other equipment for fire protection. Such equipment shall be designated for use for fire protection only and shall comply with all requirements of the California Fire, State Fire Marshall and/or its designee.
- (2) Where on-site welding and burning of steel is unavoidable, Contractor shall provide protection for adjacent surfaces.

G. Trash Removal:

- (1) Contractor shall provide trash removal on a timely basis. Under no circumstance shall Contractor use District trash service.

H. Field Office:

- (1) If Contractor chooses to provide a field office, it shall be an acceptable construction trailer that is well-lit and ventilated. The construction trailer shall be equipped with shelves, desks, filing cabinet, chairs, and such other items of equipment needed. Trailer and equipment are the property of the Contractor and must be removed from the Site upon completion of the Work. Contractor may use the corridor adjacent to the construction area for an office area, if approved in writing by District.
- (2) Contractor shall provide any additional electric lighting and power required for the trailer. Contractor shall make adequate provisions for heating and cooling as required.

I. Temporary Facilities:

- (1)

**1.03 CONSTRUCTION AIDS:**

A. Plant and Equipment:

- (1) Contractor shall furnish, operate, and maintain a complete plant for fabricating, handling, conveying, installing, and erecting materials and equipment; and for conveyances for transporting workers. Include elevators, hoists, debris chutes, and other equipment, tools, and appliances necessary for performance of the Work.
- (2) Contractor shall maintain plant and equipment in safe and efficient operating condition. Damages due to defective plant and equipment, and uses made thereof, shall be repaired by Contractor at no expense to the District.

B. None of the District's tools and equipment shall be used by Contractor for the performance of the Work.

#### **1.04 BARRIERS AND ENCLOSURES:**

- A. Contractor shall obtain the District's written permission for locations and types of temporary barriers and enclosures, including fire-rated materials proposed for use, prior to their installation.
- B. Contractor shall provide and maintain temporary enclosures to prevent public entry and to protect persons using other buildings and portions of the Site and/or Premises, the public, and workers. Contractor shall also protect the Work and existing facilities from the elements, and adjacent construction and improvements, persons, and trees and plants from damage and injury from demolition and construction operations.
- C. Contractor shall provide site access to existing facilities for persons using other buildings and portions of the Site, the public, and for deliveries and other services and activities.
- D. Tree and Plant Protection:
  - (1) Contractor shall preserve and protect existing trees and plants on the Premises that are not designated or required to be removed, and those adjacent to the Premises.
  - (2) Contractor shall provide barriers to a minimum height of 4'-0" around drip line of each tree and plant, around each group of trees and plants, as applicable, in the proximity of demolition and construction operations, or as denoted on the Plans.
  - (3) Contractor shall not park trucks, store materials, perform Work or cross over landscaped areas. Contractor shall not dispose of paint thinners, water from cleaning, plastering or concrete operations, or other deleterious materials in landscaped areas, storm drain systems, or sewers. Plant materials damaged as a result of the performance of the Work shall, at the option of the District and at Contractor's expense, either be replaced with new plant materials equal in size to those damaged or by payment of an amount representing the value of the damaged materials as determined by the District.
  - (4) Contractor shall remove soil that has been contaminated during the performance of the Work by oil, solvents, and other materials which could be harmful to trees and plants, and replace with good soil, at Contractor's expense.
  - (5) Excavation around Trees:
    - (a) Excavation within drip lines of trees shall be done only where absolutely necessary and with written permission from the District.
    - (b) Where trenching for utilities is required within drip lines, tunneling under and around roots shall be by hand digging and shall be approved by the District. Main lateral roots and taproots shall not be cut. All roots 2 inches in diameter and

larger shall be tunneled under and heavily wrapped with wet burlap so as to prevent scarring or excessive drying. Smaller roots that interfere with installation of new work may be cut with prior approval by the District. Roots must first be cut with a Vermeer, or equivalent, root cutter prior to any trenching.

- (c) Where excavation for new construction is required within drip line of trees, hand excavation shall be employed to minimize damage to root system. Roots shall be relocated in backfill areas wherever possible. If encountered immediately adjacent to location of new construction, roots shall be cut approximately 6 inches back from new construction.
- (d) Approved excavations shall be carefully backfilled with the excavated materials approved for backfilling. Backfill shall conform to adjacent grades without dips, sunken areas, humps, or other surface irregularities. Do not use mechanical equipment to compact backfill. Tamp carefully using hand tools, refilling and tamping until Final Acceptance as necessary to offset settlement.
- (e) Exposed roots shall not be allowed to dry out before permanent backfill is placed. Temporary earth cover shall be provided, or roots shall be wrapped with four layers of wet, untreated burlap and temporarily supported and protected from damage until permanently relocated and covered with backfill.
- (f) Accidentally broken roots should be sawed cleanly 3 inches behind ragged end.

#### **1.05 SECURITY:**

The Contractor shall be responsible for project security for materials, tools, equipment, supplies, and completed and partially completed Work.

#### **1.06 TEMPORARY CONTROLS:**

##### **A. Noise Control:**

- (1) Contractor acknowledges that adjacent facilities may remain in operation during all or a portion of the Work period, and it shall take all reasonable precautions to minimize noise as required by applicable laws and the Contract Documents.
- (2) Notice of proposed noisy operations, including without limitation, operation of pneumatic demolition tools, concrete saws, and other equipment, shall be submitted to the District a minimum of forty-eight (48) hours in advance of their performance.

##### **B. Noise and Vibration:**

- (1) Equipment and impact tools shall have intake and exhaust mufflers.

- (2) Contractor shall cooperate with District to minimize and/or cease the use of noisy and vibratory equipment if that equipment becomes objectionable by its longevity.

C. Dust and Dirt:

- (1) Contractor shall conduct demolition and construction operations to minimize the generation of dust and dirt, and prevent dust and dirt from interfering with the progress of the Work and from accumulating in the Work and adjacent areas including, without limitation, occupied facilities.
- (2) Contractor shall periodically water exterior demolition and construction areas to minimize the generation of dust and dirt.
- (3) Contractor shall ensure that all hauling equipment and trucks carrying loads of soil and debris shall have their loads sprayed with water or covered with tarpaulins, and as otherwise required by local and state ordinance.
- (4) Contractor shall prevent dust and dirt from accumulating on walks, roadways, parking areas, and planting, and from washing into sewer and storm drain lines.

D. Water:

- (1) Contractor shall not permit surface and subsurface water, and other liquids, to accumulate in or about the vicinity of the Premises. Should accumulation develop, Contractor shall control the water or other liquid, and suitably dispose of it by means of temporary pumps, piping, drainage lines, troughs, ditches, dams, or other methods.

E. Pollution:

- (1) No burning of refuse, debris, or other materials shall be permitted on or in the vicinity of the Premises.
- (2) Contractor shall comply with applicable regulatory requirements and anti-pollution ordinances during the conduct of the Work including, without limitation, demolition, construction, and disposal operations.

F. Lighting:

- (1) If portable lights are used after dark, all light must be located so as not to direct light into neighboring property.

**1.07 JOB SIGN(S):**

A. General:

- (1) Contractor shall provide and maintain a Project identification sign with the design, text, and colors designated by the District and/or the Design Professional; locate sign as approved by the District.



- (2) Signs other than the specified Project sign and or signs required by law, for safety, or for egress, shall not be permitted, unless otherwise approved in advance by the District.

B. Materials:

- (1) Structure and Framing: Structurally sound, new or used wood or metal; wood shall be nominal 3/4-inch exterior grade plywood.
- (2) Sign Surface: Minimum 3/4-inch exterior grade plywood.
- (3) Rough Hardware: Galvanized.
- (4) Paint: Exterior quality, of type and colors selected by the District and/or the Design Professional.

C. Fabrication:

- (1) Contractor shall fabricate to provide smooth, even surface for painting.
- (2) Size: 4'-0" x 8'-0", unless otherwise indicated.
- (3) Contractor shall paint exposed surfaces of supports, framing, and surface material with exterior grade paint: one coat of primer and one coat of finish paint.
- (4) Text and Graphics: As indicated.

**1.08 PUBLICITY RELEASES:**

- A. Contractor shall not release any information, story, photograph, plan, or drawing relating information about the Project to anyone, including press and other public communications medium, including, without limitation, on website(s) without the written permission of the District.

**PART 2 – PRODUCTS Not used.**

**PART 3 – EXECUTION Not used.**

END OF DOCUMENT

**CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions;
- B. Special Conditions; and
- C. Temporary Facilities and Controls.

**1.02 SECTION INCLUDES:**

- A. Administrative and procedural requirements for the following:
  - (1) Salvaging non-hazardous construction waste.
  - (2) Recycling non-hazardous construction waste.
  - (3) Disposing of non-hazardous construction waste.

**1.03 DEFINITIONS:**

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

#### **1.04 PERFORMANCE REQUIREMENTS:**

- A. General: Develop waste management plan that results in end-of Project rates for salvage/recycling of sixty-five percent (65%) by weight (or by volume, but not a combination) of total waste generated by the Work.

#### **1.05 SUBMITTALS:**

- A. Waste Management Plan: Submit waste management plan within 30 days of date established for commencement of the Work.
- B. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit copies of report. Include the following information:
  - (1) Material category.
  - (2) Generation point of waste.
  - (3) Total quantity of waste in tons or cubic yards.
  - (4) Quantity of waste salvaged, both estimated and actual in tons or cubic yards.
  - (5) Quantity of waste recycled, both estimated and actual in tons or cubic yards.
  - (6) Total quantity of waste recovered (salvaged plus recycled) in tons or cubic yards.
  - (7) Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- C. Waste Reduction Calculations: Before request for final payment, submit copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- D. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- E. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- F. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- G. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

- H. CHPS Submittal: CHPS letter template for Credit ME2.0 and ME2.1, signed by Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met.
- I. Qualification Data: For Waste Management Coordinator.
- J. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- K. Submittal procedures and quantities are specified in Document 01 33 00.

#### **1.06 QUALITY ASSURANCE:**

- A. Waste Management Coordinator Qualifications: LEED Accredited Professional by U.S. Green Building Council.
- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Waste Management Conference: Conduct conference at Project site to comply with requirements. Review methods and procedures related to waste management including, but not limited to, the following:
  - (1) Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
  - (2) Review requirements for documenting quantities of each type of waste and its disposition.
  - (3) Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
  - (4) Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
  - (5) Review waste management requirements for each trade.

#### **1.07 WASTE MANAGEMENT PLAN:**

- A. General: Develop plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measurement throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
- (1) Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
  - (2) Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
  - (3) Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
  - (4) Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
  - (5) Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
  - (6) Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.

## **PART 2 - PRODUCTS Not Used.**

## **PART 3 - EXECUTION**

### **3.01 PLAN IMPLEMENTATION:**

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
- (1) Comply with Document 01 50 00 for operation, termination, and removal requirements.
- B. [Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.]
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.

- (1) Distribute waste management plan to everyone concerned within 3 days of submittal return.
  - (2) Distribute waste management plan to entities when they first begin work on site. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
  - (1) Designate and label specific areas of Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
  - (2) Comply with Document 01 50 00 for controlling dust and dirt, environmental protection, and noise control.

### **3.02 RECYCLING CONSTRUCTION WASTE:**

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to the Contractor.
- C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.
  - (1) Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project Site. Include list of acceptable and unacceptable materials at each container and bin.
    - (a) Inspect containers and bins for contamination and remove contaminated materials if found.
  - (2) Stockpile processed materials on site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
  - (3) Stockpile materials away from construction area. Do not store within drip line of remaining trees.
  - (4) Store components off the ground and protect from the weather.
  - (5) Remove recyclable waste off District property and transport to recycling receiver or processor.

- D. Packaging:
  - (1) Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
  - (2) Polystyrene Packaging: Separate and bag material.
  - (3) Pallets: As much as possible, require deliveries using pallets to remove pallets from Project Site. For pallets that remain on Site, break down pallets into component wood pieces and comply with requirements for recycling wood.
  - (4) Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- E. Site-Clearing Wastes: Chip brush, branches, and trees on site.
- F. Wood Materials:
  - (1) Clean Cut-Offs of Lumber: Grind or chip into small pieces.
  - (2) Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
- G. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.
  - (1) Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

### **3.03 DISPOSAL OF WASTE:**

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project Site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
  - (1) Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on site.
  - (2) Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Transport waste materials off District property and legally dispose of them.

END OF DOCUMENT

**FIELD OFFICES**

**PART 1 – GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions;
- B. Special Conditions; and
- C. Temporary Facilities and Controls.

**1.02 SECTION INCLUDES:**

- A. Requirements for Field Offices and Field Office Trailers.

**1.03 SUMMARY:**

- A. General: Contractor shall provide District's Field Office Trailer and contents, for District's use exclusively, during the term of the Contract.
- B. Property: Trailer, furniture, furnishings, equipment, and the like, supplied by the Contractor with the Office Trailer shall remain the property of the Contractor; District property items installed, delivered, and the like by District within the Office Trailer will remain District's property.
- C. Modifications: District reserves the right to modify the trailer or contents, or both, as may be deemed proper by District.
- D. Condition: Trailer and contents shall be clean, neat, substantially finished, in good, proper, and safe condition for use, operation, and the like; the trailer and contents shall not be required to be new.
- E. Installation Timing: Provide safe, fully furnished, functional, proper, complete, and finished trailer properly ready for entire use, within fourteen (14) calendar days of District's notification of the issuance of Notice to Proceed.

**1.04 SUBMITTALS:**

- A. General: Submit submittals to District in quantity, format, type, and the like, as specified herein.
- B. Office Trailer Data: One (1) copy of manufacturer's descriptive data, technical descriptions, regulatory compliance, industry standards, installation, removal, and maintenance instructions.



- C. Equipment Data: Two (2) copies of manufacturer data for each type of equipment, if directed by District.
- D. Furniture and Furnishings Data: Two (2) copies of manufacturer data for each type of equipment, if directed by District.
- E. Plans: One (1) reproducible copy of appropriately scaled plans of trailer layout. Plans shall include, but not be limited to: lighting; furniture; equipment; telephone and electrical outlets; and the like.
- F. Product Samples: One (1) complete and entire unit of each type, if directed by District.

#### **1.05 QUALITY ASSURANCE**

- A. Standards: In the event that provisions of codes, regulations, safety orders, Contract Documents, referenced manufacturer's specifications, manufacturer's instructions, industry standards, and the like, are in conflict, the more restrictive and higher quality shall govern.
- B. Installer: Installer or Installers engaged by Contractor must have a minimum of five (5) years of documented and properly authenticated successful experience of specialization in the installation of the items or systems, or both, specified herein.
- C. Manufacturer: Contractor shall obtain products from nationally and industry recognized Manufacturer with five (5) years minimum, of immediately recent, continuous, documented and properly authenticated successful experience of specialization in the manufacture of the product specified herein.
- D. State Personnel Training: Provide proper training for maintenance and operations, including emergency procedures, and the like, as directed by District.
- E. Units: Shall be sound and free of defects, and shall not include any damage or defect that will impair the safety, installation, performance, or the durability of the entire Office Trailer and appurtenant systems.

#### **1.06 REGULATORY REQUIREMENTS**

- A. General: Work shall be executed in accordance with applicable Codes, Regulations, Statutes, Enactments, Rulings, Laws, each authority having jurisdiction, and including, but not limited to, Regulatory Requirements specified herein.
- B. California Building Standards Code ("CBSC").
- C. California Code of Regulations, Title 25, Chapter 3, Sub Chapter 2, Article 3 ("CCR").
- D. Coach Insignia: Trailer shall display California Commercial Coach Insignia; such insignia shall be deemed to show that the trailer is in accordance with the Construction and Fire Safety requirements of CCR.

## **PART 2 – PRODUCTS**

### **2.01 FIELD OFFICE TRAILER**

- A. General: Provide entire Field Office Trailer of type, function, operation, capacity, size, complete with controls, safety devices, accessories, and the like, for proper and durable installation. Partitions, walls, ceiling, and other interior and exterior surfaces shall be appropriately finished, including, but not limited to, trim, painting, wall base, floor covering, suspended or similar ceiling, and the like; provide systems, components, units, nuts, bolts, screws, anchoring devices, fastening devices, washers, accessories, adhesives, sealants, and other items of type, grade, and class required for the particular use, not identified but required for a complete, weather-tight, appropriately operating, and finished installation.
- B. Manufacturers: General Electric Capital Modular Space; The Space Place, Inc.; or equal.
- C. Program: Provide a wheel-mounted trailer with stairs, landings, platforms, ramps, and the like, in good, proper, safe, clean, and properly finished condition; with proper heavy duty locks, and other proper and effective security at all doors, windows, and the like. Trailer shall be maintained in good, proper, safe, clean, and properly finished condition during the Contract.
  - (1) Nominal Trailer Size: Four hundred eighty (480) square feet, minimum.
  - (2) Stairs, Platform: Properly finished stairs, platforms, and ramps.
  - (3) Doors: Two (2), three (3) foot wide exterior doors with locksets; finished ramp, steps, and entry platform at each exterior door.
  - (4) Keys: Submit five (5) keys for each door, window, furniture unit, and the like. There shall be no other key copies or originals available; each key shall be identified for District; and shall be labeled, or tagged or both, as directed by District.
  - (5) HVAC:
  - (6) Lighting: Sixty-five (65) foot-candles illumination minimum at any point, at thirty (30) inches above finished floor throughout from fluorescent light source, exclusively, or as directed by District.
  - (7) Electrical Outlets: One (1) duplex outlet evenly spaced every twelve (12) linear horizontal feet of wall face, and electrical service ready for use.
  - (8) Telephones and Telephone Outlets: Two (2) telephone lines wired, connected to telephone utility service, and ready for use, and two (2) telephone instruments, each with two (2)-line capability, speed dial and hands-free feature. Locate each outlet as directed by District.

- (9) Voicemail Messaging System or Answering Machine: One (1) unit, two (2)-line; digital.

## **2.02 FIELD OFFICE TRAILER ITEMS**

- A. General: Provide the Field Office Trailer with the following arranged into two (2) workstations:
  - (1) Desks: Two (2) desks: thirty-six (36) inches by sixty (60) inches; steel, laminated plastic top; locking, one (1) or two (2) file drawers single pedestal; steel; provide five (5) keys to District.
  - (2) Tables: Two (2) tables; thirty-six (36) inches by sixty (60) inches; twenty-nine (29) inches high; steel, laminated plastic top tables; one (1) at each desk.
  - (3) Chairs: Two (2) chairs: swivel; steel; with seat cushion and arms; one (1) at each desk.
  - (4) Waste Baskets: Two (2) waste baskets, one at each desk.
- B. Furniture and Equipment: Provide in the space located to effect efficient and logical use.
  - (1) File cabinet: One (1); four (4) drawer; lateral; steel locking.
  - (2) Plan Table: One (1) plan table: thirty-six (36) inches deep by seventy-two (72) inches wide by forty-two (42) inches high; adjustable; wood or steel; with lockable plan and pencil drawers.
  - (3) Drafting Stool: One (1) drafting stool; swiveling; steel; padded; adjustable; with footrest and casters.
  - (4) Bookshelf: One (1) bookshelf: thirty-six (36) inches deep by seventy-two (72) inches wide by forty-two (42) inches high; adjustable; wood or steel; with lockable plan and pencil drawer.
  - (5) Plan Rack: One (1) wheel mounted plan rack.
  - (6) Waste Baskets: One (1) large waste basket.
  - (7) Coat/Hat Hanger: Wall mounted with minimum capacity for four (4) garments and ten (10) hats.
  - (8) Document Management System: Shall include an integrated high-volume printer, copier, and facsimile machine, including stand, base, and storage cabinet; and shall include the following features:
    - (a) Type: Laser, dry electrostatic transfer, plain paper, digital, multi-function imaging system.
    - (b) Network: Ethernet or Token Ring network ready, Plug-and-Play.

- (c) Print, send/receive facsimile from any connected workstation.
- (d) Resolution: Six hundred (600) dots per inch by six hundred (600) dots per inch, minimum.
- (e) Print Speed: Twenty (20) pages per minute, minimum.
- (f) Copies: Twenty (20) copies per minute, minimum.
- (g) Document Handler: Forty (40) sheet, minimum
- (h) Collator: Forty (40) bin, minimum, with stapling.
- (i) Duplexing: Capable.
- (j) Paper Size: Capable of handling paper sizes to eleven (11) inches by seventeen (17) inches.
- (k) Paper Cassettes: One (1) each for eight and one half (8.5) inches by eleven (11) inches, eight and one half (8.5) inches by fourteen (14) inches, and eleven (11) inches by seventeen (17) inches paper sizes; minimum two hundred fifty (250) sheets per cassette.
- (l) Reduction/Enlargement: Capable of reduction to twenty-five percent (25%) and enlargement to two hundred percent (200%).
- (m) Facsimile Electronic Storage: Capable of storing minimum of fifty (50) speed dial numbers, group faxing and broadcast faxing.
- (n) Facsimile Scanning: Capable of scanning into memory a minimum of one hundred (100) pages with maximum scan time of three (3) seconds per page.
- (o) Halftone: Sixty-four (64) levels.
- (p) Redial: Automatic and Manual.
- (9) Maintenance: Contractor shall purchase service agreements for each unit of equipment for the duration of the project plus two (2) months, and shall maintain all equipment in proper working condition. Service agreements shall include provision for replacement of toner cartridges and other items required to effect proper unit use. Service agreements shall also provide for:
  - (a) Unlimited Service Calls.
  - (b) Same Day Response.
  - (c) All parts, labor, preventative maintenance and mileage.

- (d) All chemicals, such as toner, fixing agent, and the like.
  - (e) System training and setup.
- (10) Portable Toilets: Two (2); each shall include a urinal; each unit shall be a properly enclosed chemical unit conforming to ANSI Z4.3.
- (a) Location: As directed by District.
  - (b) Maintenance: Maintain each unit and surrounding areas in a clean, hygienic and orderly manner, at all time. Empty, clean, and sanitize each unit each day at a location and time as directed by District.
  - (c) Removal: Relocate, or remove from the site, each Portable Toilet. Upon such directive by District, the Contractor shall forthwith relocate or remove each Portable Toilet and submit the affected areas to a condition which existed prior to the installation of each Portable Toilet, within three (3) calendar days, or as directed by District in writing, at no cost to District.

## **2.03 UTILITY AND SERVICES**

- A. Telephone Service: Contractor shall provide and interface the entire telephone service, and shall properly and timely pay for telephone service for District's non-long-distance use.
- B. Electrical Service: Provide all proper connections and continuously pay for service for the duration of the Work.

## **2.04 FINISHES**

- A. General: Manufacturer standard finish system over surfaces properly cleaned, pretreated, and prepared to obtain proper bond; all visible surfaces shall be coated.
- B. Finish: Color as selected by District from manufacturer standard palette.

## **PART 3 – EXECUTION**

### **3.01 INSTALLATION**

- A. General: Properly prepare area and affected items to receive the Work. Set Work accurately in location, alignment, and elevation; rigidly, securely, and firmly anchor to appropriate structure; install plumb, straight, square, level, true, without racking, rigidly anchored to proper solid blocking, substrate, and the like; provide appropriate type and quantity of reinforcements, fasteners, adhesives, self-adhesive and other tapes; lubricants, coatings, accessories, and the like, as required for a complete, structurally rigid, stable, sound, and appropriately finished installation, in accordance with manufacturer's published instructions, and as indicated. The more restrictive and higher quality requirement shall govern. Moving parts shall be properly secured, without binding, looseness, noise, and the like.

- B. Installation: Install in accordance with 25 CCR 3.2.3 and as directed by District; jack up trailer and level both ways; mount on proper concrete piers with all load off wheels; provide required tie down and accessories per Section 4368 of referenced CCR, and as directed by District.
- C. Rejected Work: Work, materials, unit, items, systems, and the like, not accepted by District shall be deemed rejected, and shall forthwith be removed and replaced with proper and new Work, materials, unit, items, systems, and the like at no cost to District.
- D. Standard: Comply with manufacturer's published instructions, or with instructions as shown or indicated; the more restrictive and higher quality requirement shall govern.
- E. Location: As directed by District.
- F. Fire Resistance: Construct and install in accordance with UL requirements.
- G. Maintenance: Contractor shall maintain trailer and adjacent areas in a safe, clean and hygienic condition throughout the duration of the Work, and as directed by District. Properly repair or replace furniture or other items, as directed by District. Properly remove unsafe, damaged, or broken furniture, or similar items, and replace with safe and proper items. Contractor shall pay cost of all services, repair, and maintenance, or replacement of each item.
- H. Janitorial Service: Provide professional janitorial services, including, but not limited to, trash, waste paper baskets, fill paper dispensers; clean and dust all furniture, files, and the like; sweep and mop resilient and similar flooring; and vacuum carpeting and similar flooring.
  - (1) Frequency: Two (2) times per week, minimum.
- I. Removal: Properly remove the Office Trailer and contents from the Site upon completion of the Contract, or as directed by District in writing. Forthwith properly patch and repair affected areas; replace damaged items with new items. Carefully and properly inventory, clean, pack, store, and protect District property; submit District property to District at a date, time and location as directed by District.

END OF DOCUMENT

**OWNER-FURNISHED PRODUCTS**

**PART 1 – GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS**

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

- A. General Conditions;
- B. Special Conditions; and
- C. Materials and Equipment.

**1.02 SECTION INCLUDES**

- A. Requirements for the following:
  - (1) Installing Owner-furnished materials and equipment.
  - (2) Providing necessary utilities, connections and rough-ins.

**1.03 DEFINITIONS**

- A. Owner: District, who is providing/furnishing materials and equipment.
- B. Installing Contactor: Contractor, who is installing the materials and equipment furnished by the Owner.

**1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING**

- A. Receive, store and handle products in accordance with the manufacturer's instructions.
- B. Protect equipment items as required to prevent damage during storage and construction.

**PART 2 – PRODUCTS**

**2.01 GENERAL PRODUCT REQUIREMENTS**

- A. Installing Contractor's Responsibilities:
  - (1) Verify mounting and utility requirements for Owner-furnished materials and equipment items.
  - (2) Provide mounting and utility rough in for all items where required.

- (a) Rough in locations, sizes, capacities, and similar type items shall be as indicated and required by product manufacturer.

B. Owner and Installing Contractor(s) Responsibilities:

- (1) Owner-Furnished/Contractor Installed ("OFCI"): Furnished by the Owner; installed by the Installing Contractor.
  - (a) General: Owner and Installing Contractor(s) will coordinate deliveries of materials and equipment to coincide with the construction schedule.
  - (b) Owner will furnish specified materials and equipment delivered to the site. Owner/vendor's representative shall be present on Site at the time of delivery to comply with the contract requirements and Specifications Section 01 43 00, Materials and Equipment, Article 1.04.
  - (c) The Owner furnishing specified materials and equipment is responsible to provide manufacturer guarantees as required by the Contract to the Installing Contractor.
  - (d) The Installing Contractor shall:
    - 1) Review, verify and accept the approved manufacturer's submittal/Shop Drawings for all materials and equipment required to be installed by the Installer Contractor and furnished by the Owner. Any discrepancies, including but not limited to possible space conflicts, should be brought to the attention of the Project Manager and/or Program Manager, if applicable.
    - 2) Coordinate timely delivery. Installing Contractor shall receive materials and equipment at Site when delivered and give written receipt at time of delivery, noting visible defects or omissions; if such declaration is not given, the Installing Contractor shall assume responsibility for such defects and omissions.
    - 3) Store materials and equipment until ready for installation and protect from loss and damage. Installing Contractor is responsible for providing adequate storage space.
    - 4) Coordinate with other bid package contractors and field measurement to ensure complete installation.
    - 5) Uncrate, assemble, and set in place.
    - 6) Provide adequate supports.
    - 7) Install materials and equipment in accordance with manufacturer's recommendations, instructions, and



Shop Drawings, supply labor and material required, and make mechanical, plumbing, and electrical connections required to operate equipment.

- 8) Be certified by equipment manufacturer for installation of the specific equipment supplied by the Owner.
- 9) Provide anchorage and/or bracing as required for seismic restraint per Title 24, UBC Standard 27-11 and all other applicable codes.
- 10) Provide the contract-required warranty and guarantee for all work, materials and equipment, and installation upon its completion and acceptance by the District. Guarantee includes all costs associated with the removal, shipping to and from the Site, and re-installation of any equipment found to be defective.

C. Compatibility with Space and Service Requirements:

- (1) Equipment items shall be compatible with space limitations indicated and as shown on the Contract Documents and specified in other sections of the Specifications.
- (2) Modifications to equipment items required to conform to space limitations specified for rough in shall not cause additional cost to the District.

D. Manufacturer's printed descriptions, specifications, and instructions shall govern the Work unless specifically indicated or specified otherwise.

## **2.02 FURNISHED MATERIALS AND EQUIPMENT**

- A. All furnished materials and equipment are indicated or scheduled on the Contract Documents.

## **PART 3 – EXECUTION**

### **3.01 INSTALLATION**

- A. Install equipment items in accordance with the manufacturer's instructions.
- B. Set equipment items securely in place, rigidly or flexibly mounted in accordance with manufacturers' directions.
- C. Make electrical and mechanical connections as indicated and required.
- D. Touch-up and restore damaged or defaced finishes to the Owner's satisfaction.

### **3.02 CLEANING AND PROTECTION**

- A. Repair or replace items not acceptable to the Architect or Owner.

- B. Upon completion of installation, clean equipment items in accordance with manufacturer's recommendations, and protect from damage until final acceptance of the Work by the Owner.

END OF DOCUMENT

## SECTION 01 66 00

### **PRODUCT DELIVERY, STORAGE AND HANDLING**

#### **PART 1 - GENERAL**

##### **1.01 RELATED DOCUMENTS AND PROVISIONS**

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

- A. General Conditions, including, without limitation, Site Access, Conditions and Requirements;
- B. Special Conditions.

##### **1.02 PRODUCTS**

- A. Products are as defined in the General Conditions.
- B. Contractor shall not use and/or reuse materials and/or equipment removed from existing Premises, except as specifically permitted by the Contract Documents.
- C. Contractor shall provide interchangeable components of the same manufacturer, for similar components.

##### **1.03 TRANSPORTATION AND HANDLING**

- A. Contractor shall transport and handle Products in accordance with manufacturer's instructions.
- B. Contractor shall promptly inspect shipments to confirm that Products comply with requirements, quantities are correct, and products are undamaged.
- C. Contractor shall provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

##### **1.04 STORAGE AND PROTECTION**

- A. Contractor shall store and protect Products in accordance with manufacturer's instructions, with seals and labels intact and legible. Contractor shall store sensitive products in weather-tight, climate controlled enclosures.
- B. For exterior storage of fabricated Products, Contractor shall place on sloped supports, above ground.
- C. Contractor shall provide off-site storage and protection when Site does not permit on-site storage or protection.

- D. Contractor shall cover products subject to deterioration with impervious sheet covering and provide ventilation to avoid condensation.
- E. Contractor shall store loose granular materials on solid flat surfaces in a well-drained area and prevent mixing with foreign matter.
- F. Contractor shall provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.
- G. Contractor shall arrange storage of Products to permit access for inspection and periodically inspect to assure Products are undamaged and are maintained under specified conditions.

**PART 2 – PRODUCTS Not Used.**

**PART 3 - EXECUTION Not Used.**

END OF DOCUMENT

**FIELD ENGINEERING**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions, including, without limitation, Site Investigation, and Soils Investigation Report;
- B. Special Conditions;
- C. Site-Visit Certification.

**1.02 REQUIREMENTS INCLUDED:**

- A. Contractor shall provide and pay for field engineering services by a California-registered engineer, required for the project, including, without limitations:
  - (1) Survey work required in execution of the Project.
  - (2) Civil or other professional engineering services specified, or required to execute Contractor's construction methods.

**1.03 QUALIFICATIONS OF SURVEYOR OR ENGINEERS:**

Contractor shall only use a qualified licensed engineer or registered land surveyor, to whom District makes no objection.

**1.04 SURVEY REFERENCE POINTS:**

- A. Existing basic horizontal and vertical control points for the Project are those designated on the Drawings.
- B. Contractor shall locate and protect control points prior to starting Site Work and preserve all permanent reference points during construction. In addition Contractor shall:
  - (1) Make no changes or relocation without prior written notice to District and Architect.
  - (2) Report to District and Architect when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
  - (3) Require surveyor to replace Project control points based on original survey control that may be lost or destroyed.

### **1.05 RECORDS:**

Contractor shall maintain a complete, accurate log of all control and survey work as it progresses.

### **1.06 SUBMITTALS:**

- A. Contractor shall submit name and address of Surveyor and Professional Engineer to District and Architect prior to its/their work on the Project.
- B. On request of District and Architect, Contractor shall submit documentation to verify accuracy of field engineering work, at no additional cost to the District.
- C. Contractor shall submit a certificate signed by registered engineer or surveyor certifying that elevations and locations of improvements are in conformance or nonconformance with Contract Documents.

### **PART 2 – PRODUCTS Not Used.**

### **PART 3 - EXECUTION**

#### **3.01 COMPLIANCE WITH LAWS:**

Contractor is responsible for meeting all applicable codes, OSHA, safety and shoring requirements.

#### **3.02 NONCONFORMING WORK:**

Contractor is responsible for any re-surveying required by correction of nonconforming work.

END OF DOCUMENT

**CUTTING AND PATCHING**

**PART 1 – GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions, including, without limitation, Inspector, Inspections, and Tests, Integration of Work, Nonconforming Work, and Correction of Work, and Uncovering Work;
- B. Special Conditions;
- C. Hazardous Materials Procedures and Requirements;
- D. Hazardous Materials Certification;
- E. Lead-Based Paint Certification;
- F. Imported Materials Certification.

**1.02 CUTTING AND PATCHING:**

- A. Contractor shall be responsible for all cutting, fitting, and patching, including associated excavation and backfill, required to complete the Work or to:
  - (1) Make several parts fit together properly.
  - (2) Uncover portions of Work to provide for installation of ill-timed Work.
  - (3) Remove and replace defective Work.
  - (4) Remove and replace Work not conforming to requirements of Contract Documents.
  - (5) Remove Samples of installed Work as specified for testing.
  - (6) Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.
  - (7) Attaching new materials to existing remodeling areas – including painting (or other finishes) to match existing conditions.
- B. In addition to Contract requirements, upon written instructions from the District, Contractor shall uncover Work to provide for observations of covered Work in accordance with the Contract Documents; remove samples of installed materials for testing as directed by District; and remove Work to provide for alteration of existing Work.

- C. Contractor shall not cut or alter Work, or any part of it, in such a way that endangers or compromises the integrity of the Work, the Project, or work of others.

### **1.03 SUBMITTALS:**

- A. Prior to any cutting or alterations that may affect the structural safety of Project, or work of others, and well in advance of executing such cutting or alterations, Contractor shall submit written notice to District pursuant to the applicable notice provisions of the Contract Documents, requesting consent to proceed with the cutting or alteration, including the following:
  - (1) The work of the District or other trades.
  - (2) Structural value or integrity of any element of Project.
  - (3) Integrity or effectiveness of weather-exposed or weather-resistant elements or systems.
  - (4) Efficiency, operational life, maintenance or safety of operational elements.
  - (5) Visual qualities of sight-exposed elements.
- B. Contractor's Request shall also include:
  - (1) Identification of Project.
  - (2) Description of affected Work.
  - (3) Necessity for cutting, alteration, or excavations.
  - (4) Effects of Work on District, other trades, or structural or weatherproof integrity of Project.
  - (5) Description of proposed Work:
    - (a) Scope of cutting, patching, alteration, or excavation.
    - (b) Trades that will execute Work.
    - (c) Products proposed to be used.
    - (d) Extent of refinishing to be done.
  - (6) Alternates to cutting and patching.
  - (7) Cost proposal, when applicable.
  - (8) The scheduled date the Contractor intends to perform the Work and the duration of time to complete the Work.



- (9) Written permission of District or other District contractor(s) whose work will be affected.

#### **1.04 QUALITY ASSURANCE:**

- A. Contractor shall ensure that cutting, fitting, and patching shall achieve security, strength, weather protection, appearance for aesthetic match, efficiency, operational life, maintenance, safety of operational elements, and the continuity of existing fire ratings.
- B. Contractor shall ensure that cutting, fitting, and patching shall successfully duplicate undisturbed adjacent profiles, materials, textures, finishes, colors, and that materials shall match existing construction. Where there is dispute as to whether duplication is successful or has been achieved to a reasonable degree, the District's decision shall be final.

#### **1.05 PAYMENT FOR COSTS:**

- A. 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 Contractor and/or deducted from the Contract by the District.
- B. 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. Contractor shall provide written cost proposals prior to proceeding with cutting and patching.

### **PART 2 - PRODUCTS**

#### **2.01 MATERIALS:**

- A. Contractor shall provide for replacement and restoration of Work removed. Contractor shall comply with the Contract Documents and with the Industry Standard(s), for the type of Work, and the Specification requirements for each specific product involved. If not specified, Contractor shall first recommend a product of a manufacturer or appropriate trade association for approval by the District.
- B. Materials to be cut and patched include those damaged by the performance of the Work.

### **PART 3 – EXECUTION**

#### **3.01 INSPECTION:**

- A. Contractor shall inspect existing conditions of the Site and the Work, including elements subject to movement or damage during cutting and patching, excavating and backfilling. After uncovering Work, Contractor shall inspect conditions affecting installation of new products.

- B. Contractor shall report unsatisfactory or questionable conditions in writing to District as indicated in the General Conditions and shall proceed with Work as indicated in the General Conditions by District.

### **3.02 PREPARATION:**

- A. Contractor shall provide shoring, bracing and supports as required to maintain structural integrity for all portions of the Project, including all requirements of the Project.
- B. Contractor shall provide devices and methods to protect other portions of Project from damage.
- C. Contractor shall, provide all necessary protection from weather and extremes of temperature and humidity for the Project, including without limitation, any work that may be exposed by cutting and patching Work. Contractor shall keep excavations free from water.

### **3.03 ERECTION, INSTALLATION AND APPLICATION:**

- A. With respect to performance, Contractor shall:
  - (1) Execute fitting and adjustment of products to provide finished installation to comply with and match specified tolerances and finishes.
  - (2) Execute cutting and demolition by methods that will prevent damage to other Work, and provide proper surfaces to receive installation of repairs and new Work.
  - (3) Execute cutting, demolition excavating, and backfilling by methods that will prevent damage to other Work and damage from settlement.
- B. Contractor shall employ original installer or fabricator to perform cutting and patching for:
  - (1) Weather-exposed surfaces and moisture-resistant elements such as roofing, sheet metal, sealants, waterproofing, and other trades.
  - (2) Sight-exposed finished surfaces.
- C. Contractor shall execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes as shown or specified in the Contract Documents including, without limitation, the Drawings and Specifications.
- D. Contractor shall fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces. Contractor shall conform to all Code requirements for penetrations or the Drawings and Specifications, whichever calls for a higher quality or more thorough requirement. Contractor shall maintain integrity of both rated and non-rated fire walls, ceilings, floors, etc.
- E. Contractor shall restore Work which has been cut or removed. Contractor shall install new products to provide completed Work in accordance with

requirements of the Contract Documents and as required to match surrounding areas and surfaces.

- F. Contractor shall refinish all continuous surfaces to nearest intersection as necessary to match the existing finish to any new finish.

END OF DOCUMENT

**ALTERATION PROJECT PROCEDURES**

**PART 1 – GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions, including, without limitation, Integration of Work, Purchase of Materials and Equipment, Uncovering of Work and Non-conforming Work and Correction of Work and Trenches;
- B. Special Conditions.

**PART 2 - PRODUCTS**

**2.01 PRODUCTS FOR PATCHING AND EXTENDING WORK:**

- A. New Materials: As specified in the Contract Documents including, without limitation, in the Specifications, Contractor shall match existing products, conditions, and work for patching and extending work.
- B. Type and Quality of Existing Products: Contractor shall determine by inspection, by testing products where necessary, by referring to existing conditions and to the Work as a standard.

**PART 3 - EXECUTION**

**3.01 EXAMINATION:**

- A. Contractor shall verify that demolition is complete and that areas are ready for installation of new Work.
- B. By beginning restoration Work, Contractor acknowledges and accepts the existing conditions.

**3.02 PREPARATION:**

- A. Contractor shall cut, move, or remove items as necessary for access to alterations and renovation Work. Contractor shall replace and restore these at completion.
- B. Contractor shall remove unsuitable material not as salvage unless otherwise indicated in the Contract Documents. Unsuitable material may include, without limitation, rotted wood, corroded metals, and deteriorated masonry and concrete. Contractor shall replace materials as specified for finished Work.

- C. Contractor shall remove debris and abandoned items from all areas of the Site and from concealed spaces.
- D. Contractor shall prepare surface and remove surface finishes to provide for proper installation of new Work and finishes.
- E. Contractor shall close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity. Contractor shall insulate ductwork and piping to prevent condensation in exposed areas. Contractor shall insulate building cavities for thermal and/or acoustical protection, as detailed.

### **3.03 INSTALLATION:**

- A. Contractor shall coordinate Work of all alternations and renovations to expedite completion and to accommodate District occupancy.
- B. Designated Areas and Finishes: Contractor shall complete all installations in all respects, including operational, mechanical work and electrical work.
- C. Contractor shall remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to original or specified condition.
- D. Contractor shall refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with a neat and square or straight transition to adjacent finishes.
- E. Contractor shall install products as specified in the Contract Documents, including without limitation, the Specifications.

### **3.04 TRANSITIONS:**

- A. Where new Work abuts or aligns with existing, Contractor shall perform a smooth and even transition. Patched Work must match existing adjacent work in texture and appearance.
- B. When finished surfaces are cut so that a smooth transition with new Work is not possible, Contractor shall terminate existing surface along a straight line at a natural line of division and make a recommendation for resolution to the District and the Architect for review and approval.

### **3.05 ADJUSTMENTS:**

- A. Where removal of partitions or walls results in adjacent spaces becoming one, Contractor shall rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
- B. Where a change of plane of 1/4 inch or more occurs, Contractor shall submit a recommendation for providing a smooth transition to the District and the Architect for review and approval.

- C. Contractor shall trim and seal existing wood doors and shall trim and paint metal doors as necessary to clear new floor finish and refinish trim as required.
- D. Contractor shall fit Work at penetrations of surfaces.

### **3.06 REPAIR OF DAMAGED SURFACES:**

- A. Contractor shall patch or replace portions of existing surfaces, which are damaged, lifted, discolored, or showing other imperfections, in the area where the Work is performed.
- B. Contractor shall repair substrate prior to patching finish.

### **3.07 CULTIVATED AREAS AND OTHER SURFACE IMPROVEMENTS:**

- A. Cultivated or planted areas and other surface improvements which are damaged by actions of the Contractor shall be restored by Contractor to their original condition or better, where indicated.
- B. Contractor shall protect and replace, if damaged, all existing guard posts, barricades, and fences.
- C. Contractor shall give special attention to avoid damaging or killing trees, bushes and/or shrubs on the Premises and/or identified in the Contract Documents, including without limitation, the Drawings.

### **3.08 FINISHES:**

- A. Contractor shall finish surfaces as specified in the Contract Documents, including without limitations, the provisions of all Divisions of the Specifications.
- B. Contractor shall finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, Contractor shall refinish entire surface to nearest intersections.

### **3.09 CLEANING:**

- A. Contractor shall continually clean the Site and the Premises as indicated in the Contract Documents, including without limitation, the provisions in the General Conditions and the Specifications regarding cleaning.

END OF DOCUMENT

**CONTRACT CLOSEOUT AND FINAL CLEANING**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS**

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

- A. General Conditions, including, without limitation, Completion of Work;
- B. Special Conditions;
- C. Temporary Facilities and Controls.

**1.02 CLOSEOUT PROCEDURES**

Contractor shall comply with all closeout provisions as indicated in the General Conditions.

**1.03 FINAL CLEANING**

- A. Contractor shall execute final cleaning prior to final inspection.
- B. Contractor shall clean interior and exterior glass and all surfaces exposed to view; remove temporary labels, tape, stains, and foreign substances, polish transparent and glossy surfaces, wax and polish new vinyl floor surfaces, vacuum carpeted and soft surfaces.
- C. Contractor shall clean equipment and fixtures to a sanitary condition.
- D. Contractor shall replace filters of operating equipment.
- E. Contractor shall clean debris from roofs, gutters, down spouts, and drainage systems.
- F. Contractor shall clean Site, sweep paved areas, and rake clean landscaped surfaces.
- G. Contractor shall remove waste and surplus materials, rubbish, and construction facilities from the Site and surrounding areas.

**1.04 ADJUSTING**

Contractor shall adjust operating products and equipment to ensure smooth and unhindered operation.

## **1.05 RECORD DOCUMENTS AND SHOP DRAWINGS**

- A. Contractor shall legibly mark each item to record actual construction, including:
  - (1) Measured depths of foundation in relation to finish floor datum.
  - (2) Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permit surface improvements.
  - (3) Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
  - (4) Field changes of dimension and detail.
  - (5) Details not on original Contract Drawings
  - (6) Changes made by modification(s).
  - (7) References to related Shop Drawings and modifications.
- B. Contractor will provide one set of Record Drawings to District.
- C. Contractor shall submit all required documents to District and/or Architect prior to or with its final Application for Payment.

## **1.06 INSTRUCTION OF DISTRICT PERSONNEL**

- A. Before final inspection, at agreed upon times, Contractor shall instruct District's designated personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. For equipment requiring seasonal operation, Contractor shall perform instructions for other seasons within six months or by the change of season.
- C. Contractor shall use operation and maintenance manuals as basis for instruction. Contractor shall review contents of manual with personnel in detail to explain all aspects of operation and maintenance.
- D. Contractor shall prepare and insert additional data in Operation and Maintenance Manual when the need for such data becomes apparent during instruction.
- E. Contractor shall review contents of manual with personnel in detail to explain all aspects of operation and maintenance.

## **1.07 SPARE PARTS AND MAINTENANCE MATERIALS**

- A. Contractor shall provide products, spare parts, maintenance, and extra materials in quantities specified in the Specifications and in Manufacturer's recommendations.



- B. Contractor shall provide District with all required Operation and Maintenance Data at one time. Partial or piecemeal submissions of Operation and Maintenance Data will not be accepted.

**PART 2 – PRODUCTS Not Used.**

**PART 3 – EXECUTION Not Used.**

END OF DOCUMENT

**OPERATION AND MAINTENANCE DATA**

**PART 1 – GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions, including, without limitation, Completion of the Work;
- B. Special Conditions.

**1.02 QUALITY ASSURANCE:**

Contractor shall prepare instructions and data by personnel experienced in maintenance and operation of described products.

**1.03 FORMAT:**

- A. Contractor shall prepare data in the form of an instructional manual entitled "OPERATIONS AND MAINTENANCE MANUAL & INSTRUCTIONS" ("Manual").
- B. Binders: Contractor shall use commercial quality, 8-1/2 by 11 inch, three-side rings, with durable plastic covers; two inch maximum ring size. When multiple binders are used, Contractor shall correlate data into related consistent groupings.
- C. Cover: Contractor shall identify each binder with typed or printed title "OPERATION AND MAINTENANCE MANUAL & INSTRUCTIONS"; and shall list title of Project and identify subject matter of contents.
- D. Contractor shall arrange content by systems process flow under section numbers and sequence of Table of Contents of the Contract Documents.
- E. Contractor shall provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- F. Text: The content shall include Manufacturer's printed data, or typewritten data on 24 pound paper.
- G. Drawings: Contractor shall provide with reinforced punched binder tab and shall bind in with text; folding larger drawings to size of text pages.

**1.04 CONTENTS, EACH VOLUME:**

- A. Table of Contents: Contractor shall provide title of Project; names, addresses, and telephone numbers of the Architect, any engineers, subconsultants, Subcontractor(s), and Contractor with name of responsible parties; and schedule of products and systems, indexed to content of the volume.

- B. For Each Product or System: Contractor shall list names, addresses, and telephone numbers of Subcontractor(s) and suppliers, including local source of supplies and replacement parts.
- C. Product Data: Contractor shall mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- D. Drawings: Contractor shall supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Contractor shall not use Project Record Documents as maintenance drawings.
- E. Text: Contractor shall include any and all information as required to supplement product data. Contractor shall provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- F. Warranties and Bonds: Contractor shall bind in one copy of each.

#### **1.05 MANUAL FOR MATERIALS AND FINISHES:**

- A. Building Products, Applied Materials, and Finishes: Contractor shall include product data, with catalog number, size, composition, and color and texture designations. Contractor shall provide information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Contractor shall include Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture Protection and Weather Exposed Products: Contractor shall include product data listing applicable reference standards, chemical composition, and details of installation. Contractor shall provide recommendations for inspections, maintenance, and repair.
- D. Additional Requirements: Contractor shall include all additional requirements as specified in the Specifications.
- E. Contractor shall provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

#### **1.06 MANUAL FOR EQUIPMENT AND SYSTEMS:**

- A. Each Item of Equipment and Each System: Contractor shall include description of unit or system, and component parts and identify function, normal operating characteristics, and limiting conditions. Contractor shall include performance curves, with engineering data and tests, and complete nomenclature, and commercial number of replaceable parts.
- B. Panelboard Circuit Directories: Contractor shall provide electrical service characteristics, controls, and communications.

- C. Contractor shall include color coded wiring diagrams as installed.
- D. Operating Procedures: Contractor shall include start-up, break-in, and routine normal operating instructions and sequences. Contractor shall include regulation, control, stopping, shut-down, and emergency instructions. Contractor shall include summer, winter, and any special operating instructions.
- E. Maintenance Requirements: Contractor shall include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- F. Contractor shall provide servicing and lubrication schedule, and list of lubricants required.
- G. Contractor shall include manufacturer's printed operation and maintenance instructions.
- H. Contractor shall include sequence of operation by controls manufacturer.
- I. Contractor shall provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- J. Contractor shall provide control diagrams by controls manufacturer as installed.
- K. Contractor shall provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- L. Contractor shall provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- M. Contractor shall provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- N. Additional Requirements: Contractor shall include all additional requirements as specified in Specification(s).
- O. Contractor shall provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

**1.07 SUBMITTAL:**

- A. Contractor shall submit to the District for review two (2) copies of preliminary draft or proposed formats and outlines of the contents of the Manual within thirty (30) days of Contractor's start of Work.
- B. For equipment, or component parts of equipment put into service during construction and to be operated by District, Contractor shall submit draft content for that portion of the Manual within ten (10) days after acceptance of that equipment or component.

- C. Contractor shall submit two (2) copies of a complete Manual in final form prior to final Application for Payment. Copy will be returned with Architect/Engineer comments. Contractor must revise the content of the Manual as required by District prior to District's approval of Contractor's final Application for Payment.
- D. Contractor must submit two (2) copies of revised Manual in final form within ten (10) days after final inspection.

**PART 2 – PRODUCTS Not Used.**

**PART 3 – EXECUTION Not Used.**

END OF DOCUMENT

**WARRANTIES**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS**

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

- A. General Conditions, including, without limitation, Warranty/Guarantee Information;
- B. Special Conditions.

**1.02 FORMAT**

- A. Binders: Contractor shall use commercial quality, 8-1/2 by 11 inch, three-side rings, with durable plastic covers; two inch maximum ring size.
- B. Cover: Contractor shall identify each binder with typed or printed title "WARRANTIES" and shall list title of Project.
- C. Table of Contents: Contractor shall provide title of Project; name, address, and telephone number of Contractor and equipment supplier; and name of responsible principal. Contractor shall identify each item with the number and title of the specific Specification, document, provision, or section in which the name of the product or work item is specified.
- D. Contractor shall separate each warranty with index tab sheets keyed to the Table of Contents listing, providing full information and using separate typed sheets as necessary. Contractor shall list each applicable and/or responsible Subcontractor(s), supplier(s), and/or manufacturer(s), with name, address, and telephone number of each responsible principal(s).

**1.03 PREPARATION:**

- A. Contractor shall obtain warranties, executed in duplicate by each applicable and/or responsible subcontractor(s), supplier(s), and manufacturer(s), within ten (10) days after completion of the applicable item or work. Except for items put into use with District's permission, Contractor shall leave date of beginning of time of warranty blank until the date of completion is determined.
- B. Contractor shall verify that documents are in proper form, contain full information, and are notarized, when required.
- C. Contractor shall co-execute submittals when required.
- D. Contractor shall retain warranties until time specified for submittal.

#### **1.04 TIME OF SUBMITTALS:**

- A. For equipment or component parts of equipment put into service during construction with District's permission, Contractor shall submit a draft warranty for that equipment or component within ten (10) days after acceptance of that equipment or component.
- B. Contractor shall submit for District approval all warranties and related documents within ten (10) days after date of completion. Contractor must revise the warranties as required by the District prior to District's approval of Contractor's final Application for Payment.
- C. For items of work delayed beyond date of completion, Contractor shall provide an updated submittal within ten (10) days after acceptance, listing the date of acceptance as start of warranty period.

**PART 2 - PRODUCTS Not Used.**

**PART 3 – EXECUTION Not Used.**

END OF DOCUMENT

**RECORD DOCUMENTS**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS AND PROVISIONS:**

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

- A. General Conditions, including, without limitation, Documents on Work;
- B. Special Conditions.

**PART 2 - RECORD DRAWINGS**

**2.01 GENERAL:**

- A. As indicated in the Contract Documents, the District will provide Contractor with one set of reproducible, full size original Contract Drawings (mylars).
- B. Contractor shall maintain at each Project Site one set of marked-up plans and shall transfer all changes and information to those marked-up plans, as often as required in the Contract Documents, but in no case less than once each month. Contractor shall submit to the Project Inspector one set of reproducible vellums of the Project Record Drawings ("As-Built") showing all changes incorporated into the Work since the preceding monthly submittal. The As-Built shall be available at the Project Site. The Contractor shall submit reproducible vellums at the conclusion of the Project following review of the blue line prints.
- C. Label and date each Record Drawing "RECORD DOCUMENT" in legibly printed letters.
- D. All deviations in construction, including but not limited to pipe and conduit locations and deviations caused by without limitation Change Orders, Construction Claim Directives, RFI's, and Addenda, shall be accurately and legibly recorded by Contractor.
- E. Locations and changes shall be done by Contractor in a neat and legible manner and, where applicable, indicated by drawing a "cloud" around the changed or additional information.

**2.02 RECORD DRAWING INFORMATION:**

- A. Contractor shall record the following information:
  - (1) Locations of Work buried under or outside each building, including, without limitation, all utilities, plumbing and electrical lines, and conduits.



- (2) Actual numbering of each electrical circuit to match panel schedule.
- (3) Locations of significant Work concealed inside each building whose general locations are changed from those shown on the Contract Drawings.
- (4) Locations of all items, not necessarily concealed, which vary from the Contract Documents.
- (5) Installed location of all cathodic protection anodes.
- (6) Deviations from the sizes, locations, and other features of installations shown in the Contract Documents.
- (7) Locations of underground work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stubouts, invert elevations, etc.
- (8) Sufficient information to locate Work concealed in each building with reasonable ease and accuracy.

In some instances, this information may be recorded by dimension. In other instances, it may be recorded in relation to the spaces in the building near which it was installed.

- B. Contractor shall provide additional drawings as necessary for clarification.
- C. Contractor shall provide reproducible record drawings, made from final Shop Drawings marked "No Exceptions Taken" or "Approved as Noted."
- D. After review and approval of the marked-up specifications by the Project Inspector, Contractor shall provide electronic copies of the drawings (in PDF format) with one file with all of the sheets and one set of individual sheet files at the conclusion of the Project.

### **PART 3 - RECORD SPECIFICATIONS**

#### **3.01 GENERAL:**

- A. Contractor shall mark each section legibly to record manufacturer, trade name, catalog number, and supplier of each Product and item of equipment actually installed.
- B. After review and approval of the marked-up specifications by the Project Inspector, Contractor shall provide one electronic copy of the specifications (in PDF format) at the conclusion of the Project.

### **PART 4 - MAINTENANCE OF RECORD DOCUMENTS**

#### **4.01 GENERAL**

- A. Contractor shall store Record Documents apart from documents used for construction as follows:

- (1) Provide files and racks for storage of Record Documents.
- (2) Maintain Record Documents in a clean, dry, legible condition and in good order.

B. Contractor shall not use Record Documents for construction purposes.

**PART 5 – PRODUCTS Not Used.**

END OF DOCUMENT

## SECTION 01 91 13

### CALGREEN REQUIREMENTS

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section includes general requirements and procedures for compliance with 2022 California Green Building Standards Code, "CALGreen", California Code of Regulations, Title 24, Part 11 as adopted by Division of the State Architect (DSA).

- 1. Project shall comply with all CALGreen "Nonresidential Mandatory Measures" as adopted by Division of the State Architect (DSA).

- B. Related Sections:

- 1. Divisions 01 through 33 Sections for specific building measures applicable to those Sections.

##### 1.3 DEFINITIONS

- A. "CALGreen": Shall mean "2022 California Green Building Standards Code, CALGreen, California Code of Regulations, Title 24, Part 11" as adopted by Division of the State Architect (DSA).

- 1. Definitions, abbreviations, and acronyms that are a part of "CALGreen" apply to this Section.

##### 1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Meetings: Conduct meeting at Project site. Review CALGreen requirements and action plans for complying with requirements.

##### 1.5 ADMINISTRATIVE REQUIREMENTS

- A. Respond to questions and requests from Architect and submit documentation for CALGreen prerequisites and credits that are the responsibility of the Contractor, that depend on product selection or product qualities, or that depend on Contractor's procedures. Document responses as informational submittals.

##### 1.6 ACTION SUBMITTALS

- A. Submit CALGreen submittals in accordance with requirements of Division 01 through 33 Sections.

- B. CALGreen submittals are in addition to other submittals.

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- C. If submitted item is identical to that submitted to comply with other requirements, include an additional copy with other submittal as a record copy of compliance with indicated CALGreen requirements instead of separate sustainable design submittal. Mark additional copy "CALGreen Submittal."

## 1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For CALGreen coordinator.

## 1.4 QUALITY ASSURANCE

- A. Project Management and Coordination: Contractor to identify one person on Contractor's staff to be responsible for CALGreen compliance and coordination.
  - 1. Experience: Environmental project manager to have experience relating to CALGreen building construction.
  - 2. Responsibilities: Review Contract Documents for CALGreen requirements and coordinate work of trades, subcontractors, and suppliers.
    - a. Assemble and retain approved CALGreen Submittals, tabulation charts and other records to document progress toward meeting CALGreen requirements.
    - b. Provide records in secure jobsite location, available for review by Architect or Owner.
    - c. Provide Action Plans, Progress Reports, and final documentation according to specified requirements and schedule.
    - d. Meetings: Lead Contractor and trade discussion of CALGreen goals and requirements at following meetings:
      - a. Pre-construction meetings, including pre-construction CALGreen trades and training meeting.
      - b. Waste management conference.
      - c. Pre-installation meetings.
      - d. Regularly scheduled job-site meetings.
      - e. Special CALGreen issues meetings.

## PART 2 - PRODUCTS

### 2.1 MATERIALS, GENERAL

- 1. Provide products and procedures necessary to comply with CALGreen building requirements. General CALGreen compliance requirements are specified herein. Specific CALGreen requirements for work of each Section are specified in Divisions 02 through 33. Where required Contractor shall determine additional materials and procedures necessary to comply with all required CALGreen requirements.

### 2.2 ENVIRONMENTAL QUALITY

- A. CALGreen Section 5.504.1, Temporary Ventilation: The permanent HVAC system shall only be used during construction if necessary, to condition the building or areas of addition or alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999 or an average efficiency of 30

percent based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.

- B. CALGreen Section 5.504.3, Covering of Duct Openings and Protection of Mechanical Equipment During Construction: At time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to enforcing agency to reduce the amount of dust, water and debris which may enter the system.
- C. CALGreen Section 5.504.4, Finish Material Pollutant Control: Finish material shall comply with Sections 5.504.4.1 through 5.504.4.6.
- D. CALGreen Section 5.504.4.1, Adhesives, Sealants and Caulks: Adhesives and sealants used on Project shall meet requirements of CALGreen 5.504.4.1 and shall be compliant with VOC and other toxic compound limits in accordance with following CALGreen Table 5.504.4.1 and Table 5.504.4.2.

TABLE 5.504.4.1

**ADHESIVE VOC LIMIT<sup>1,2</sup> Less Water and Less Exempt Compounds in Grams Per Liter**

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesive not specifically listed	50
<b>SPECIALTY APPLICATIONS</b>	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
<b>SUBSTRATE SPECIFIC APPLICATIONS</b>	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together the adhesive with the highest VOC content shall be allowed.

2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 116B, <http://www.arb.ca.gov/DRDB/SC/CURHTML/R116B.PDF>.

TABLE 5.504.4.2

**SEALANT VOC LIMIT Less Water and Less Exempt Compounds in Grams per Liter**

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
<b>SEALANT PRIMERS</b>	
Architectural	
Nonporous	250
Porous	775
Modified bituminous	500
Marine deck	760
Other	750

Note: For additional information regarding methods to measure the VOC content specified in these tables, see South Coast Air Quality Management District Rule 1168.

- E. CALGreen Section 5.504.4.3, Paints and Coatings: Paints, stains and other coatings used on Project shall meet requirements of CALGreen 5.504.4.3 and shall be compliant with VOC and other toxic compound limits in accordance with following CALGreen Table 5.504.4.3.

TABLE 5.504.4.3

**VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS<sup>2, 3</sup> Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds**

COATING CATEGORY	CURRENT LIMIT
Flat coatings	50
Nonflat coatings	100
Nonflat-high gloss coatings	150
<b>SPECIALTY COATINGS</b>	
Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	50
Dry fog coatings	150
Faux finishing coatings	350
Fire resistive coatings	350
Floor coatings	100
Form-release compounds	250
Graphic arts coatings (sign paints)	500



High temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings <sup>1</sup>	120
Magnesite cement coatings	450
Mastic texture coatings	100
Metallic pigmented coatings	500
Multicolor coatings	250
Pretreatment wash primers	420
Primers, sealers and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Shellacs	
Clear	730
Opaque	550
Specialty primers, sealers and undercoaters	100
Stains	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub and tile refinish coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

1. Grams of VOC per liter of coating, including water and including exempt compounds.

2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.

3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

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- F. CALGreen Section 5.504.4.3.1, Aerosol Paints and Coatings: Aerosol paints and other coatings used on Project shall meet the PWMIR Limits for VOC in Section 94522 (a) (3) and other requirements of this Section. See CALGreen for full requirements. Verification of compliance with this section shall be provided at the request of the enforcing agency.
- G. CALGreen Sections 5.504.4.4, Carpet Systems through 5.504.4.4.2, Carpet Adhesives:
1. All carpet installed in the building interior shall meet at least one of the following testing and product requirements:
    - a. Carpet and Rug Institute's Green Label Plus Program.
    - b. Compliant with the VOC-emission and testing requirements specified in the California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers", Version 1.1, February 2010 (also known as CDPH Standard Method V1.1 or Specification 01350);
    - c. NSF/ANSI 140 at the Gold level or higher;
    - d. Scientific Certifications Systems Sustainable Choice; or
    - e. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria as listed in the CHPS High Performance Product Database.
  2. Carpeting Cushions: All carpet cushion installed in the Building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.
  3. Carpet Adhesive: All carpet adhesives shall meet the requirements of following Table 4.504.4.1.

TABLE 5.504.4.1

**ADHESIVE VOC LIMIT<sup>1,2</sup> Less Water and Less Exempt Compounds in Grams Per  
Liter**

<b>ARCHITECTURAL APPLICATIONS</b>	<b>CURRENT VOC LIMIT</b>
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesive not specifically listed	50
<b>SPECIALTY APPLICATIONS</b>	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
<b>SUBSTRATE SPECIFIC APPLICATIONS</b>	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together the adhesive with the highest VOC content shall be allowed.

2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168, <http://www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF>.

- H. CALGreen Section 5.504.4.5, Composite Wood Products: Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control measure (ATCM) for Composite Wood (17 CR 93120 et seq.). Those materials not exempted by the ATCM must meet the specified emission limits as shown in Table 5.504.4.5.
1. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall be in accordance with CALGreen 5.504.4.5.3.
- I. CALGreen Section 5.504.4.6, Resilient Flooring Systems: For 80 percent of floor area receiving resilient flooring, installed resilient flooring shall meet at least one of the following:
1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program;
  2. Compliant with the VOC emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010;
  3. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria as listed in the CHPS High Performance Product Database; or
  4. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children's & Schools Program).
  5. CALGreen Section 5.504.4.6.1, Verification of Compliance: Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.
- J. CALGreen Section 5.504.5.3, Filters: In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.
1. Exceptions:
    - a. Existing mechanical equipment.
  2. CALGreen 5.504.5.3.1, Labeling: Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.
- K. CALGreen Section 5.504.7, Environmental Tobacco Smoke (ETS) Control: Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations, or policies of any Authority Having Jurisdiction. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.
- L. CALGreen Section 5.505.1, Indoor Moisture Control: Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1202 (Ventilation) and Chapter 14 (Exterior Walls) for additional measures not applicable to low-rise residential occupancies, see Section 5.407.2 of this code.
- M. CALGreen Section 5.506.1 Outside Air Delivery: For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 (Requirements for

Ventilation) of the California Energy Code, or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.

- N. CALGreen Section 5.507.4, Acoustical Control: Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E 90 and ASTM E413 or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.
1. Exception: Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.
  2. Exception: [DSA-SS] For public schools and community colleges, the requirement of this section and all subsections apply only to new construction.
  3. CalGreen Section 5.507.4.1, Exteriors Noise Transmission, Prescriptive Method: Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:
    - a. Within the 65 CNEL noise contour of an airport.
      - 1) Exceptions:
        - a)  $L_{dn}$  or CNEL for military airports shall be determined by the facility Air Installation Compatible land Use Zone (AICUZ) plan.
        - b)  $L_{dn}$  or CNEL for other airports shall and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element.
      - 2) Within the 65 CNEL or  $L_{dn}$  noise contour of a freeway or expressway, railroad, industrial source, or fixed-guideway source as determined by the Noise Element of the General Plan.
    - b. CALGreen Section 5.507.4.1.1, Noise Exposure Where Noise Contours are not Readily Available: Buildings exposed to a noise level of 65  $dB_{Leq-1-hr}$  during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).
- O. CALGreen Section 5.507.4.2, Performance Method: For building located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level ( $L_{eq-Hr}$ ) of 50 dBA in occupied areas during any hour of operation.
1. CALGreen 5.507.4.2.1, Site Features: Exterior features such as sound wall or earth berms may be utilized as appropriate to the building, addition, or alteration project to mitigate sound migration to the interior.

- P. CALGreen Section 5.507.4.3, Interior Sound Transmission: Wall and floor-ceiling assemblies separating tenant spaces and public places shall have an STC of at least 40.
1. Note: Examples of assemblies and their various STC rating may be found at the California Office of Noise Control website.
- Q. CALGreen Section 5.508.1 Ozone Depletion and Greenhouse Gas Reductions: Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2.
1. CALGreen Section 5.508.1.1 Chlorofluorocarbons (CFC's): Install HVAC, refrigeration and fire suppression equipment that do not contain CFC's.
  2. CALGreen Section 5.508.1.2 Halons: Install HVAC, refrigeration and fire suppression equipment that do not contain Halons.

### PART 3 - EXECUTION

#### 3.1 VERIFICATION

- A. Verification, certification, and performance testing for compliance with CALGreen requirements shall be provided by the Contractor. Documentation shall be provided by Contractor to verify compliance with CALGreen materials and measures above.

END OF SECTION

## SECTION 02 41 19

### SELECTIVE DEMOLITION

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.
3. Salvage of existing items to be reused or recycled.

- B. Related Sections include the following:

1. Division 02 Section "Site Demolition".
2. Division 02 Section "Building Demolition".

##### 1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

##### 1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
  1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

## 1.5 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site.
  - 1. Inspect and discuss condition of construction to be selectively demolished.
  - 2. Review structural load limitations of existing structure.
  - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
  - 5. Review areas where existing construction is to remain and requires protection.

## 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For refrigerant recovery technician.
- B. Engineering Survey: Submit engineering survey of condition of building.
- C. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- D. Schedule of Selective Demolition Activities: Indicate the following:
  - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
  - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
  - 3. Coordination for shutoff, capping, and continuation of utility services.
  - 4. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- E. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations.
- F. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- G. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

## 1.7 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.



## 1.8 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

## 1.9 FIELD CONDITIONS

- A. Owner may occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
  - 1. Hazardous materials will be removed by Owner before start of the Work.
  - 2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.

## 1.10 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties. Notify warrantor before proceeding.
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

## 1.11 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of Authorities Having Jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
  - 1. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.
- D. Verify that hazardous materials have been remediated before proceeding with building demolition operations.
- E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or video.
  - 1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
  - 2. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

### 3.2 PREPARATION

- A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

### 3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
  2. Arrange to shut off utilities with utility companies.
  3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
  4. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
    - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
    - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
    - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
    - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
    - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

### 3.4 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  4. Cover and protect furniture, furnishings, and equipment that have not been removed.
  5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Controls."
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

### 3.5 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering, and chopping. Temporarily cover openings to remain.
  3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
  5. Maintain fire watch during and for at least 8 hours after flame-cutting operations.
  6. Maintain adequate ventilation when using cutting torches.
  7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  10. Dispose of demolished items and materials promptly. Comply with requirements in Division 01 Section "Construction Waste Management and Disposal."
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Salvaged Items:
1. Clean salvaged items.
  2. Pack or crate items after cleaning. Identify contents of containers.
  3. Store items in a secure area until delivery to Owner.
  4. Transport items to Owner's storage area designated by Owner.
  5. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
  2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  3. Protect items from damage during transport and storage.
  4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

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- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

### 3.6 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, and then remove concrete between saw cuts.
- B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, and then remove masonry between saw cuts.
- C. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, and then break up and remove.
- D. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings."
- E. Roofing: Remove no more existing roofing than what can be covered in one day by new roofing so that building interior remains watertight and weathertight. See Division 07 Section "Roofing Alterations" for new roofing requirements.
  - 1. Remove existing roof membrane, flashings, copings, and roof accessories.
  - 2. Remove existing roofing system down to substrate.

### 3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and recycle or dispose of them according to Division 01 Section "Construction Waste Management and Disposal."
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.

### 3.8 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION

## SECTION 01 91 13

### CALGREEN REQUIREMENTS

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section includes general requirements and procedures for compliance with 2022 California Green Building Standards Code, "CALGreen", California Code of Regulations, Title 24, Part 11 as adopted by Division of the State Architect (DSA).

- 1. Project shall comply with all CALGreen "Nonresidential Mandatory Measures" as adopted by Division of the State Architect (DSA).

- B. Related Sections:

- 1. Divisions 01 through 33 Sections for specific building measures applicable to those Sections.

##### 1.3 DEFINITIONS

- A. "CALGreen": Shall mean "2022 California Green Building Standards Code, CALGreen, California Code of Regulations, Title 24, Part 11" as adopted by Division of the State Architect (DSA).

- 1. Definitions, abbreviations, and acronyms that are a part of "CALGreen" apply to this Section.

##### 1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Meetings: Conduct meeting at Project site. Review CALGreen requirements and action plans for complying with requirements.

##### 1.5 ADMINISTRATIVE REQUIREMENTS

- A. Respond to questions and requests from Architect and submit documentation for CALGreen prerequisites and credits that are the responsibility of the Contractor, that depend on product selection or product qualities, or that depend on Contractor's procedures. Document responses as informational submittals.

##### 1.6 ACTION SUBMITTALS

- A. Submit CALGreen submittals in accordance with requirements of Division 01 through 33 Sections.

- B. CALGreen submittals are in addition to other submittals.

### CALGREEN REQUIREMENTS 01 91 13 - 1

- C. If submitted item is identical to that submitted to comply with other requirements, include an additional copy with other submittal as a record copy of compliance with indicated CALGreen requirements instead of separate sustainable design submittal. Mark additional copy "CALGreen Submittal."

## 1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For CALGreen coordinator.

## 1.4 QUALITY ASSURANCE

- A. Project Management and Coordination: Contractor to identify one person on Contractor's staff to be responsible for CALGreen compliance and coordination.
  - 1. Experience: Environmental project manager to have experience relating to CALGreen building construction.
  - 2. Responsibilities: Review Contract Documents for CALGreen requirements and coordinate work of trades, subcontractors, and suppliers.
    - a. Assemble and retain approved CALGreen Submittals, tabulation charts and other records to document progress toward meeting CALGreen requirements.
    - b. Provide records in secure jobsite location, available for review by Architect or Owner.
    - c. Provide Action Plans, Progress Reports, and final documentation according to specified requirements and schedule.
    - d. Meetings: Lead Contractor and trade discussion of CALGreen goals and requirements at following meetings:
      - a. Pre-construction meetings, including pre-construction CALGreen trades and training meeting.
      - b. Waste management conference.
      - c. Pre-installation meetings.
      - d. Regularly scheduled job-site meetings.
      - e. Special CALGreen issues meetings.

## PART 2 - PRODUCTS

### 2.1 MATERIALS, GENERAL

- 1. Provide products and procedures necessary to comply with CALGreen building requirements. General CALGreen compliance requirements are specified herein. Specific CALGreen requirements for work of each Section are specified in Divisions 02 through 33. Where required Contractor shall determine additional materials and procedures necessary to comply with all required CALGreen requirements.

### 2.2 ENVIRONMENTAL QUALITY

- A. CALGreen Section 5.504.1, Temporary Ventilation: The permanent HVAC system shall only be used during construction if necessary, to condition the building or areas of addition or alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999 or an average efficiency of 30

percent based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.

- B. CALGreen Section 5.504.3, Covering of Duct Openings and Protection of Mechanical Equipment During Construction: At time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to enforcing agency to reduce the amount of dust, water and debris which may enter the system.
- C. CALGreen Section 5.504.4, Finish Material Pollutant Control: Finish material shall comply with Sections 5.504.4.1 through 5.504.4.6.
- D. CALGreen Section 5.504.4.1, Adhesives, Sealants and Caulks: Adhesives and sealants used on Project shall meet requirements of CALGreen 5.504.4.1 and shall be compliant with VOC and other toxic compound limits in accordance with following CALGreen Table 5.504.4.1 and Table 5.504.4.2.



TABLE 5.504.4.1

**ADHESIVE VOC LIMIT<sup>1,2</sup> Less Water and Less Exempt Compounds in Grams Per Liter**

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesive not specifically listed	50
<b>SPECIALTY APPLICATIONS</b>	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
<b>SUBSTRATE SPECIFIC APPLICATIONS</b>	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together the adhesive with the highest VOC content shall be allowed.

2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 116B, <http://www.arb.ca.gov/DRDB/SC/CURHTML/R116B.PDF>.

**CALGREEN REQUIREMENTS 01 91 13 - 4**

TABLE 5.504.4.2

**SEALANT VOC LIMIT Less Water and Less Exempt Compounds in Grams per Liter**

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
<b>SEALANT PRIMERS</b>	
Architectural	
Nonporous	250
Porous	775
Modified bituminous	500
Marine deck	760
Other	750

Note: For additional information regarding methods to measure the VOC content specified in these tables, see South Coast Air Quality Management District Rule 1168.

- E. CALGreen Section 5.504.4.3, Paints and Coatings: Paints, stains and other coatings used on Project shall meet requirements of CALGreen 5.504.4.3 and shall be compliant with VOC and other toxic compound limits in accordance with following CALGreen Table 5.504.4.3.

TABLE 5.504.4.3

**VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS<sup>2, 3</sup> Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds**

COATING CATEGORY	CURRENT LIMIT
Flat coatings	50
Nonflat coatings	100
Nonflat-high gloss coatings	150
<b>SPECIALTY COATINGS</b>	
Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	50
Dry fog coatings	150
Faux finishing coatings	350
Fire resistive coatings	350
Floor coatings	100
Form-release compounds	250
Graphic arts coatings (sign paints)	500

High temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings <sup>1</sup>	120
Magnesite cement coatings	450
Mastic texture coatings	100
Metallic pigmented coatings	500
Multicolor coatings	250
Pretreatment wash primers	420
Primers, sealers and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Shellacs	
Clear	730
Opaque	550
Specialty primers, sealers and undercoaters	100
Stains	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub and tile refinish coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

1. Grams of VOC per liter of coating, including water and including exempt compounds.

2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.

3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

## CALGREEN REQUIREMENTS 01 91 13 - 7

- F. CALGreen Section 5.504.4.3.1, Aerosol Paints and Coatings: Aerosol paints and other coatings used on Project shall meet the PWMIR Limits for VOC in Section 94522 (a) (3) and other requirements of this Section. See CALGreen for full requirements. Verification of compliance with this section shall be provided at the request of the enforcing agency.
- G. CALGreen Sections 5.504.4.4, Carpet Systems through 5.504.4.4.2, Carpet Adhesives:
1. All carpet installed in the building interior shall meet at least one of the following testing and product requirements:
    - a. Carpet and Rug Institute's Green Label Plus Program.
    - b. Compliant with the VOC-emission and testing requirements specified in the California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers", Version 1.1, February 2010 (also known as CDPH Standard Method V1.1 or Specification 01350);
    - c. NSF/ANSI 140 at the Gold level or higher;
    - d. Scientific Certifications Systems Sustainable Choice; or
    - e. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria as listed in the CHPS High Performance Product Database.
  2. Carpeting Cushions: All carpet cushion installed in the Building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.
  3. Carpet Adhesive: All carpet adhesives shall meet the requirements of following Table 4.504.4.1.

TABLE 5.504.4.1

**ADHESIVE VOC LIMIT<sup>1,2</sup> Less Water and Less Exempt Compounds in Grams Per  
Liter**

<b>ARCHITECTURAL APPLICATIONS</b>	<b>CURRENT VOC LIMIT</b>
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesive not specifically listed	50
<b>SPECIALTY APPLICATIONS</b>	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
<b>SUBSTRATE SPECIFIC APPLICATIONS</b>	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together the adhesive with the highest VOC content shall be allowed.

2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168, <http://www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF>.

- H. CALGreen Section 5.504.4.5, Composite Wood Products: Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control measure (ATCM) for Composite Wood (17 CR 93120 et seq.). Those materials not exempted by the ATCM must meet the specified emission limits as shown in Table 5.504.4.5.
1. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall be in accordance with CALGreen 5.504.4.5.3.
- I. CALGreen Section 5.504.4.6, Resilient Flooring Systems: For 80 percent of floor area receiving resilient flooring, installed resilient flooring shall meet at least one of the following:
1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program;
  2. Compliant with the VOC emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010;
  3. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria as listed in the CHPS High Performance Product Database; or
  4. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children's & Schools Program).
  5. CALGreen Section 5.504.4.6.1, Verification of Compliance: Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.
- J. CALGreen Section 5.504.5.3, Filters: In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.
1. Exceptions:
    - a. Existing mechanical equipment.
  2. CALGreen 5.504.5.3.1, Labeling: Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.
- K. CALGreen Section 5.504.7, Environmental Tobacco Smoke (ETS) Control: Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations, or policies of any Authority Having Jurisdiction. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.
- L. CALGreen Section 5.505.1, Indoor Moisture Control: Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1202 (Ventilation) and Chapter 14 (Exterior Walls) for additional measures not applicable to low-rise residential occupancies, see Section 5.407.2 of this code.
- M. CALGreen Section 5.506.1 Outside Air Delivery: For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 (Requirements for

Ventilation) of the California Energy Code, or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.

- N. CALGreen Section 5.507.4, Acoustical Control: Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E 90 and ASTM E413 or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.
1. Exception: Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.
  2. Exception: [DSA-SS] For public schools and community colleges, the requirement of this section and all subsections apply only to new construction.
  3. CalGreen Section 5.507.4.1, Exteriors Noise Transmission, Prescriptive Method: Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:
    - a. Within the 65 CNEL noise contour of an airport.
      - 1) Exceptions:
        - a)  $L_{dn}$  or CNEL for military airports shall be determined by the facility Air Installation Compatible land Use Zone (AICUZ) plan.
        - b)  $L_{dn}$  or CNEL for other airports shall and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element.
      - 2) Within the 65 CNEL or  $L_{dn}$  noise contour of a freeway or expressway, railroad, industrial source, or fixed-guideway source as determined by the Noise Element of the General Plan.
    - b. CALGreen Section 5.507.4.1.1, Noise Exposure Where Noise Contours are not Readily Available: Buildings exposed to a noise level of 65  $dB_{Leq-1-hr}$  during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).
- O. CALGreen Section 5.507.4.2, Performance Method: For building located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level ( $L_{eq-Hr}$ ) of 50 dBA in occupied areas during any hour of operation.
1. CALGreen 5.507.4.2.1, Site Features: Exterior features such as sound wall or earth berms may be utilized as appropriate to the building, addition, or alteration project to mitigate sound migration to the interior.



- P. CALGreen Section 5.507.4.3, Interior Sound Transmission: Wall and floor-ceiling assemblies separating tenant spaces and public places shall have an STC of at least 40.
  - 1. Note: Examples of assemblies and their various STC rating may be found at the California Office of Noise Control website.
- Q. CALGreen Section 5.508.1 Ozone Depletion and Greenhouse Gas Reductions: Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2.
  - 1. CALGreen Section 5.508.1.1 Chlorofluorocarbons (CFC's): Install HVAC, refrigeration and fire suppression equipment that do not contain CFC's.
  - 2. CALGreen Section 5.508.1.2 Halons: Install HVAC, refrigeration and fire suppression equipment that do not contain Halons.

### PART 3 - EXECUTION

#### 3.1 VERIFICATION

- A. Verification, certification, and performance testing for compliance with CALGreen requirements shall be provided by the Contractor. Documentation shall be provided by Contractor to verify compliance with CALGreen materials and measures above.

END OF SECTION

## SECTION 02 41 19

### SELECTIVE DEMOLITION

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section Includes:
  - 1. Demolition and removal of selected portions of building or structure.
  - 2. Demolition and removal of selected site elements.
  - 3. Salvage of existing items to be reused or recycled.
- B. Related Sections include the following:
  - 1. Division 02 Section "Site Demolition".
  - 2. Division 02 Section "Building Demolition".

##### 1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

##### 1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
  - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

## 1.5 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site.
  - 1. Inspect and discuss condition of construction to be selectively demolished.
  - 2. Review structural load limitations of existing structure.
  - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
  - 5. Review areas where existing construction is to remain and requires protection.

## 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For refrigerant recovery technician.
- B. Engineering Survey: Submit engineering survey of condition of building.
- C. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- D. Schedule of Selective Demolition Activities: Indicate the following:
  - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
  - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
  - 3. Coordination for shutoff, capping, and continuation of utility services.
  - 4. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- E. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations.
- F. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- G. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

## 1.7 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.

## 1.8 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

## 1.9 FIELD CONDITIONS

- A. Owner may occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
  - 1. Hazardous materials will be removed by Owner before start of the Work.
  - 2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.

## 1.10 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties. Notify warrantor before proceeding.
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

## 1.11 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of Authorities Having Jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
  - 1. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.
- D. Verify that hazardous materials have been remediated before proceeding with building demolition operations.
- E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or video.
  - 1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
  - 2. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

### 3.2 PREPARATION

- A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

### 3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
  2. Arrange to shut off utilities with utility companies.
  3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
  4. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
    - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
    - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
    - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
    - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
    - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

### 3.4 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  4. Cover and protect furniture, furnishings, and equipment that have not been removed.
  5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Controls."
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

### 3.5 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering, and chopping. Temporarily cover openings to remain.
  3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
  5. Maintain fire watch during and for at least 8 hours after flame-cutting operations.
  6. Maintain adequate ventilation when using cutting torches.
  7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  10. Dispose of demolished items and materials promptly. Comply with requirements in Division 01 Section "Construction Waste Management and Disposal."
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Salvaged Items:
1. Clean salvaged items.
  2. Pack or crate items after cleaning. Identify contents of containers.
  3. Store items in a secure area until delivery to Owner.
  4. Transport items to Owner's storage area designated by Owner.
  5. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
  2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  3. Protect items from damage during transport and storage.
  4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

### SELECTIVE DEMOLITION 02 41 19 - 6

- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

### 3.6 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, and then remove concrete between saw cuts.
- B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, and then remove masonry between saw cuts.
- C. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, and then break up and remove.
- D. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings."
- E. Roofing: Remove no more existing roofing than what can be covered in one day by new roofing so that building interior remains watertight and weathertight. See Division 07 Section "Roofing Alterations" for new roofing requirements.
  - 1. Remove existing roof membrane, flashings, copings, and roof accessories.
  - 2. Remove existing roofing system down to substrate.

### 3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and recycle or dispose of them according to Division 01 Section "Construction Waste Management and Disposal."
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.

### 3.8 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION



## SECTION 03 30 00

### CAST-IN-PLACE CONCRETE

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

##### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Design Mixtures: For each concrete mixture. Submit to Architect for review at least 48 hours before placing concrete.
- C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement.
- D. Steel Reinforcement mill certificates.
- E. Material test reports.

##### 1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94 requirements for production facilities and equipment.
  - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- B. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
- C. Welding Qualifications: Qualify procedures and personnel according to AWS D1.4, "Structural Welding Code - Reinforcing Steel."
- D. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
  - 1. ACI 301, "Specifications for Structural Concrete,"
  - 2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

- E. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.
- F. Cementitious Material: The concrete supplier shall furnish certification that the cement proposed for use on the project has been manufactured and tested in compliance with the requirements of ASTM C150. The concrete producer shall provide copies of the cementitious material suppliers Certificate of Compliance that represents the materials used by date of shipment for concrete. Cementitious materials without Certification of Compliance shall not be used.
- G. Tests of Reinforcing Bars: Samples shall be taken from bundles as delivered from the mill, with the bundles identified as to heat number and the accompanying mill certificate. One tensile test and one bend test shall be made from a sample from each 10 tons or fraction thereof of each size of reinforcing steel.

## PART 2 - PRODUCTS

### 2.1 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
  - 1. Plywood, metal, or other approved panel materials.
  - 2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
    - a. B-B (Concrete Form), Class 1 or better; mill oiled and edge sealed.
- B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
- C. Forms for Cylindrical Columns, Pedestals, and Supports: Metal, glass-fiber-reinforced plastic, paper, or fiber tubes that will produce surfaces with gradual or abrupt irregularities not exceeding specified formwork surface class. Provide units with sufficient wall thickness to resist plastic concrete loads without detrimental deformation.
- D. Void Forms: Biodegradable paper surface, treated for moisture resistance, structurally sufficient to support weight of plastic concrete and other superimposed loads.
- E. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch, minimum.
- F. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
  - 1. Formulate form-release agent with rust inhibitor for steel form-facing materials.
- G. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

1. Furnish units that will leave no corrodible metal closer than 1 inch to the plane of exposed concrete surface.
2. Furnish ties that, when removed, will leave holes no larger than 1 inch in diameter in concrete surface.

## 2.2 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615, Grade 60, deformed.
- B. Low-Alloy-Steel Reinforcing Bars: ASTM A 706, deformed.
- C. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice."
- D. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

## 2.3 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
  1. Portland Cement: ASTM C 150, Type II, gray. Supplement with the following if desired:
    - a. Fly Ash: ASTM C 618, Class F.
    - b. Ground Granulated Blast Furnace Slag (GGBFS): ASTM C 989.
    - c. Maximum total percentage of supplementary cementitious materials by mass is 25%.
    - d. See Structural Drawings for water-cement ratios.
- B. Normal-Weight Aggregates: ASTM C 33, graded.
  1. Maximum Coarse-Aggregate Size: See Structural Drawings for maximum aggregate size.
  2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- C. Water: ASTM C 94, ASTM C 1602 and potable.

## 2.4 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.
- B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride. Use admixtures according to manufacturer's written instructions.
  1. Water-Reducing Admixture: ASTM C 494, Type A.
  2. Retarding Admixture: ASTM C 494, Type B.
  3. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.
  4. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.
  5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494, Type G.
  6. Plasticizing and Retarding Admixture: ASTM C 1017, Type II.

## 2.5 CURING MATERIALS

- A. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating, certified by curing compound manufacturer to not interfere with bonding of floor covering.
- B. Absorptive Cover/ Moisture Retaining Curing Cover: 55-mils thick, spunlace viscous fibers with super absorbent polymer mat with polyethylene sheet backing. 90% reflectance in accordance with ASTM E 1447 and water retention moisture loss of 0.0062 oz/sq in (2.7 g/sq m) in accordance with ASTM C 156 as manufactured by Reliable Concrete Accessories.
- C. Wet Curing: 7-day cure. Do not use sheet membrane (ASTM C171) polyethylene film.

## 2.6 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1752, Type I or ASTM D8139, 3/8-inch thick and full depth of concrete, with a separate or pre-scored, removable top section for creation of a sealant void. Nomaflex by Nomaco, Inc., semi-rigid, closed-cell polypropylene foam, preformed joint filler.
- B. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

## 2.7 CONCRETE MIXTURES

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
  - 1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.
- B. Admixtures: Use admixtures according to manufacturer's written instructions.
  - 1. Use water-reducing in concrete, as required, for placement and workability.
- C. Proportion concrete mixtures as shown on Drawings.

## 2.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94 and furnish batch ticket information.
  - 1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

## PART 3 - EXECUTION

### 3.1 FORMWORK

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- C. Construct forms tight enough to prevent loss of concrete mortar.
- D. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
  - 1. Install keyways, reglets, recesses, and the like, for easy removal.
  - 2. Do not use rust-stained steel form-facing material.
- E. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- F. Where vertical concrete surfaces of footings will be below finished grade, clean cut earth may be used in lieu of form if the character of the soil will permit installation of reinforcing and placement of concrete without sloughing, and, concrete dimension 1-inch at each face poured against earth.
- G. Chamfer exterior corners and edges of permanently exposed concrete, unless otherwise noted.
- H. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
- I. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- J. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- K. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.
- L. Forms shall be kept wet to prevent opening of joints that would permit loss of concrete mortar and fines.
- M. Forms may be re-used provided that they are thoroughly cleaned and reconditioned as necessary to produce results equal to those achieved by the use of new forms.

### 3.2 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

### 3.3 REMOVING FORMS

- A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg for 48 hours after placing concrete. Concrete has to be hard enough to not be damaged by form-removal operations and curing and protection operations need to be maintained.
  - 1. Leave formwork for beam soffits, joists, slabs, and other structural elements that supports weight of concrete in place until concrete has achieved at least 75 percent of its 28-day design compressive strength.
- B. Upon removal of forms, all ties, bolts, wires, clamps, and other metal not necessary to subsequent work shall be removed to a minimum of 1-inch below the surface.
- C. Whenever the formwork is removed during the curing period, the exposed concrete shall be cured as specified hereinafter.

### 3.4 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
  - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
  - 1. Weld reinforcing bars according to AWS D1.4, where indicated.
- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- E. All concrete shall be steel reinforced unless specifically noted to be "not reinforced". If no reinforcement is shown, reinforce in the same manner as that shown in similar places.

### 3.5 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.

- C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows::
1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Saw cut slab as soon as possible after the slab pour and prior to slab cooling (typically 4 hours in hot weather and 12 hours in cold weather). A test cut shall be made to ensure to ensure raveling of the cut edges does not occur.
  2. Sawed Joints made with early entry saw: Form contraction joints with early entry saws equipped with shatterproof abrasive or diamond-rimmed blades. Saw cut slab as soon as the slab can support the equipment and operator without leaving indentations (typically 1 hour in hot weather and 4 hours in cold weather). The saw manufacturer's guidelines and recommendations shall be followed.
  3. Slab Inserts: Form contraction joints with plastic or metal control joint inserts. This method may not be used at slabs exposed to view.
- D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

### 3.6 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
- C. Cold-Weather Placement: Comply with ACI 306.1.
- D. Hot-Weather Placement: Comply with ACI 301.

### 3.7 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Apply to concrete surfaces not exposed to public view, unless otherwise noted.
- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Apply to concrete surfaces exposed to public view and to surfaces to be covered with a coating or covering material applied directly to concrete.

- C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.
- D. Exposed surfaces shall have edges and both sides of joints tooled to ¼-inch radius unless noted otherwise.

### 3.8 FINISHING FLOORS AND SLABS

- A. General: Comply with ACI 302.1R recommendations for screeding, restraighening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes to produce a profile amplitude of 1/4 inch in one direction.
  - 1. Apply scratch finish to surfaces indicated.
- C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraighening until surface is left with a uniform, smooth, granular texture.
  - 1. Apply float finish to surfaces indicated.
- D. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
  - 1. Apply a trowel finish to interior slab surfaces, unless otherwise noted.
- E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces indicated. While concrete is still plastic, slightly scarify surface with a fine broom.
- F. Broom Finish: Apply a broom finish to exterior concrete slabs, steps, ramps, and elsewhere as indicated, unless otherwise noted.
- G. Non-Slip Broom Finish: Apply non-slip broom finish to exterior concrete platforms, steps and ramps, and elsewhere as indicated.
  - 1. Immediately after float finishing, slightly roughen concrete surface by brooming with fiber bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application
- H. Finish for Exposed Concrete Along Accessible Routes of Travel: When measured by the NBS-Brungraber machine using a silastic sensor shoe, slopes less than, or equal to 6 percent slope shall have a Static Coefficient of Friction of 0.6 minimum with “Medium Broom Finish” or equivalent slip resistant finish; and slopes greater than 6 percent slope shall have a Static



Coefficient of Friction of 0.8 minimum with “Heavy Broom Finish” or equivalent slip resistant finish.

- I. Surfaces: Finish and measure surface so gap at any point between concrete surface and an unleveled, freestanding, 10-ft.- long straightedge resting on two high spots and placed anywhere on the surface does not exceed 1/8 inch at interior slab surfaces and ¼ inch at exterior slab surfaces.

### 3.9 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
  1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
    - a. Water.
    - b. Continuous water-fog spray.
    - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
  2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
    - a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
    - b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
    - c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies will not interfere with bonding of floor covering used on Project.
  3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
    - a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound

manufacturer unless manufacturer certifies curing compound will not interfere with bonding of floor covering used on Project.

### 3.10 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

### 3.11 FIELD QUALITY CONTROL

- A. Testing: Owner will engage a qualified testing agency to perform field tests and prepare test reports.

- 1. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:

- a. Testing Frequency: Obtain at least one composite sample for each 50 cu. yd. or fraction thereof or not less than once for each 2000 square feet of surface area for slabs and walls for each concrete mixture placed each day.
- b. Slump: ASTM C 143; one test at point of placement for each composite sample at every fourth truck, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
- c. Compression Test Specimens: ASTM C 31; cast and laboratory cure four standard cylinder specimens for each composite sample.
- d. Compressive-Strength Tests: ASTM C 39; test one laboratory-cured specimen at 7 days, and two specimens (6-inch x 12-inch) or three specimens (4-inch x 8-inch) at 28 days. Hold the remaining specimen for future testing if so directed by Architect.
- e. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
- f. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for 7-day and 28-day tests.
- g. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42 or by other methods as directed by Architect.
- h. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

- B. Concrete Preplacement and Placement Inspections: Owner will engage a qualified inspecting agency to perform field inspections and prepare inspection reports.

- 1. Concrete Preplacement Inspections:

- a. Placement of reinforcing steel before forms are closed.
  - b. Bolts to be installed in concrete prior to placement of concrete.
  - c. Formwork shape, location, and dimensions of concrete member being formed.
  - d. All preparations for the placement have been completed, and the preparations have been checked by the inspector of record.
- 2. Concrete Placement Inspections:
  - a. Concrete placement for proper application techniques.
  - b. Maintenance of specified curing procedure.
  - c. Placing record: A record shall be kept on the site of the time and date of placing the concrete in each portion of the structure. Such record shall be kept until the completion of the structure and shall be open to the inspection of DSA.
- C. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

END OF SECTION

SECTION 26 05 00  
BASIC ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Work included in this Section: All materials, labor, equipment, services, and incidentals necessary to provide and install the Electrical Work as shown on the drawings and as specified hereinafter, including, but not limited to the following:
  - 1. Branch circuit wiring, wiring devices and connections to all equipment requiring electrical service.
  - 2. Site lighting fixture relocations including new pole bases, and removal of existing pole bases.
  - 3. All required incidental work, such as roof flashing, electrical testing, title 24 acceptance testing, and temporary power.
  - 4. Any other electrical work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the the drawings.
  - 5. It is the intent of the drawings and specifications that systems be complete and, except as otherwise noted, be ready for operation.

1.2 RELATED WORK

- A. Division 1 - General Requirements
- B. Division 9 - Finishes
- C. Division 23 - Mechanical
- D. Section 07270 - Firestopping

1.3 INCORPORATED DOCUMENTS

- A. Requirements of the General Conditions, Supplementary Conditions, and Division 1 Sections apply to all work in this Section, unless modified herein.
- B. Published specifications, standard tests or recommended methods of trade, industry or government organizations apply to work of this Section where cited by abbreviations noted below, unless modified herein.
  - 1. 2022 California Code of Regulations.
  - 2. 2022 California Building Standards Administrative Code, Part 1, Title 24, C.C.R.
  - 3. 2022 California Building Code (CBC), Part 2, Title 24, C.C.R. (Based on 2021 International Building Code with 2022 California Amendments).
  - 4. 2022 California Electrical Code (CEC), Part 3, Title 24, C.C.R. (Based on 2017 National Electrical Code with 2022 California Amendments).
  - 5. California Energy Code, Part 6, Title 24, C.C.R.
  - 6. 2022 California Fire Code (CFC), Part 9, Title 24, C.C.R. (Based on 2021 International Fire Code with 2022 California Amendments).

7. 2022 California Green Building Standards (CALGreen) Code, Part 11.
8. American Society of Civil Engineers 7-16 (ASCE/SEI), Minimum Design Loads for Buildings and Other Structures.
9. Underwriters' Laboratories, Inc. (UL).
10. Local Utility Company regulations.

C. All State and Municipal Codes and Ordinances.

1.4 CONDITIONS AT SITE:

- A. Visit to site is required of all bidders prior to submission of bid. All will be held to have familiarized themselves with all discernible conditions and no extra payment will be allowed for work required because of these conditions, whether specifically mentioned or not.
- B. Lines of other services that are damaged as a result of this work shall promptly be repaired at no expense to the Owner to the complete satisfaction of the Owner.

1.5 QUALITY ASSURANCE

- A. Conformance:
  1. All work shall conform to the applicable requirements of Article 1.3 above.
  2. The Contractor shall notify the Architect, prior to submission of bid, about any part of the design, which fails to comply with abovementioned requirements.
  3. If after contract is awarded, minor changes and additions are required by aforementioned authorities, even though such work is not shown on the drawings or covered in the specifications, they shall be included at Contractor's expense.
- B. Coordination:
  1. The Contractor shall become familiar with the conditions at the job site, and with the drawings and specifications and plan the installation of the electrical work to conform with the existing conditions and that shown and specified so as to provide the best possible assembly of the combined work of all trades.
  2. The Contractor shall work out in advance all "tight" conditions, involving all trades and if found necessary, supplementary drawings shall be prepared by this Contractor, for the Architect's approval, before work proceeds in these areas. No additional costs will be considered for work, which must be relocated due to conflicts with the work of other trades.
  3. The Contractor shall coordinate and verify all backbox, device, lighting fixture, or equipment mounting requirements with the devices or equipment to be installed, prior to rough in.

1.6 SUBMITTALS

- A. Product Data:
  1. Comply with the provisions of Section 01 33 00 - Submittals.
  2. Within 15 days after award of the Contract, submit:
    - a. Complete electrical, lighting, and signal systems material list of all items proposed to be furnished and installed under this Division. Provide manufacturers data sheets for

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- all devices, raceways, fixtures, equipment, and related products to be used for the Division 26, 27, and 28 work.
  - b. Manufacturers' specifications and other data required demonstrating compliance with the specified requirements.
  - c. Manufacturers' recommended installation procedures which, when approved by the Architect, shall become the basis for inspecting and accepting or rejecting actual installation procedures used on the work.
3. Shop Drawings: Furnish shop drawings and/or equipment cuts for the following:
- a. Light fixtures including lamps and ballasts
  - b. Main Switchboard, distribution switchboards, distribution panels, panel boards, and transformers. Panel board submittals shall include diagrams of the circuit breaker arrangements in the panels. Arrange circuit breakers in panels exactly as shown on the panel schedules in the construction documents.
  - c. Scaled drawings of equipment layout in all the electrical and telecom rooms.
  - d. Fire alarm system
  - e. Telecommunications system
  - f. Disconnect switches
  - g. Motor starters
  - h. Low voltage lighting control system
  - i. Central Emergency Lighting Inverter.
  - j. Arc flash, Short Circuit, and Protective Device Coordination Study.
  - k. Power and signal concealed service floor boxes, and furniture panel infeed boxes.
  - l. Mechanical and Plumbing equipment. The Electrical Contractor shall review the Mechanical and Plumbing Submittals, and verify the voltage, wire size and overcurrent protection required. Also provide the Electrical Engineer with a copy of the submittals for their review.
  - m. Transient Voltage Surge Suppression system if specified herein and/or indicated on the drawings.
  - n. Medium voltage switchgear, transformers, and cable if specified herein and indicated on the drawings.
  - o. Photovoltaic system if specified herein and indicated on the drawings.
  - p. Emergency Generator and Automatic Transfer Switches if specified herein and/or indicated on the drawings.
  - q. UPS system if specified herein and/or indicated on the drawings.
  - r. Clock/Speaker system if specified herein and/or indicated on the drawings.
  - s. Classroom Audio-Visual system if specified herein and/or indicated on the drawings.
  - t. Assisted Listening system if specified herein and/or indicated on the drawings.
  - u. Security and audio-visual systems as per security and audio-visual consultants' documents or if specified herein and/or indicated on the drawings.
4. Test Reports:
- a. Factory Tests: As specified for specific equipment.
  - b. Field Tests: Performance tests as specified for specific equipment.
  - c. Megger Tests: As specified under TESTING.
  - d. When series rated circuit breakers are used, provide a letter from the manufacturer of the equipment confirming that U.L. series rating exists for all protective devices. State the available fault current from the Utility Company and indicate that the overcurrent devices exceed the available fault current at the respective point of protection.

- e. Special Seismic Certification documentation as per CBC Section 1616A and ASCE/SEI 7-16 requirements for all equipment defined as 'critical' with an importance factor of 1.5 in Paragraph 1.10.M.3 of this Section.
  - f. Manufacturer's Seismic Certification or Project-Specific Design of Supports and Attachments for all other equipment and fixtures as per CBC Section 1616A and ASCE/SEI 7-16 requirements.
5. Maintenance and Operating Manuals:
- a. Systems Description: Description of operating procedures.
  - b. Controls: Diagrams and description of operation of each system.
  - c. Equipment: Manufacturer's brochures, ratings, certified shop drawings, maintenance data, and parts lists with part numbers. Mark each sheet with equipment identification number and actual installed condition.
  - d. Materials and Accessories: Manufacturer's brochures, parts lists with part numbers, and maintenance data where applicable. Mark each sheet with identification number of system and location of installation.
  - e. The Maintenance and Operation Manual shall be presented in a bookmarked PDF file with tabbed sections as stated below. Provide all information in each section as stated below.
    - 1) 26 2400:
      - (a) Insert the approved submittals for the main switchboard and panelboards, and for medium voltage switchgear and transformers if specified herein and/or indicated on the drawings.
      - (b) Provide the names, addresses and telephone numbers of the manufacturer and the two closest manufacturer's representatives of the equipment.
    - 2) 26 2400:
      - (a) Insert the approved submittals for the transient voltage surge suppression equipment.
      - (b) Insert all operating instructions.
      - (c) Provide the names, address and telephone numbers of the manufacturer and the closest manufacturer's representative of the equipment.
      - (d) Include the manufacturer's recommended maintenance of the equipment.
    - 3) 26 5101:
      - (a) Insert the approved submittals for the light fixtures.
      - (b) Highlight the lamp type that was installed for each light fixture.
      - (c) Provide the names, address and telephone numbers of the manufacturer and the closest manufacturer's representative for each light fixture.
    - 4) 26 5101:
      - (a) Insert the approved submittals for the motion sensing light control equipment.
      - (b) Insert all operating instructions.
      - (c) Provide the names, address and telephone number of the manufacturer and the closest manufacturer's representative of the equipment.
      - (d) Include the manufacturer's recommended maintenance of the equipment.
    - 5) 26 5700:
      - (a) Insert the approved submittals for the low voltage lighting control equipment.
      - (b) Insert all operating instructions.

- (c) Provide the names, address and telephone number of the manufacturer and the closest manufacturer's representative of the equipment.
  - (d) Include the manufacturer's recommended maintenance of the equipment.
- 6) 27 0000:
  - (a) Insert the approved submittals for the telecommunications system.
  - (b) Provide the names, address and telephone number of the manufacturer and the closest manufacturer's representative of the equipment.
  - (c) Include the manufacturer's recommended maintenance of the equipment.
- 7) 28 3100:
  - (a) Complete the "Record Of Completion" entirely.
  - (b) In the "Download File" indicate the exact equipment that the Monitor Modules are monitoring. i.e. fire sprinkler flow switches, tamper switches, etc..
  - (c) Simplify the Download File so that it coincides with the submitted and approved fire alarm single line diagram.
  - (d) Provide the names, address and telephone number of the manufacturer and the closest manufacturer's representative of the equipment.
  - (e) Include the manufacturer's recommended maintenance of the equipment.
  - (f) Insert an abbreviated data sheet that states how to test, reset and silence the fire alarm system.
  - (g) Insert the name and telephone number of the Central Station that receives the alarms, and the proper sequence to follow during an alarm.
- 8) 27 5100:
  - (a) Insert the approved submittals for the IP clock and speaker system and equipment.
  - (b) Insert all operating instructions.
  - (c) Provide the names, address and telephone numbers of the manufacturer, the closest manufacturer's representative of the equipment and the telephone company contact.
  - (d) Include the manufacturer's recommended maintenance of the equipment including the UPS.
- 9) 26 0800:
  - (a) Insert all systems testing results.
- 6. Record Documents: "As-builts": As specified under Paragraph 3.2 of this Section.

## 1.7 DELIVERY, STORAGE AND HANDLING

- A. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all trades.
- B. Delivery and Storage: Deliver all materials to the job site in their original containers with all labels intact and legible at time of use. Store in strict accordance with approved manufacturers' recommendations.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

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- D. This Contractor shall personally, or through an authorized representative, check all materials upon receipt at jobsite for conformance with approved shop drawings and/or plans and specifications.

#### 1.8 SCHEDULING/SEQUENCING

- A. Place orders for all equipment in time to prevent any delay in construction schedule or completion of project. If any materials or equipment are not ordered in time, additional charges made by equipment manufacturers to complete their equipment in time to meet the construction schedule, together with any special handling charges, shall be borne by this Contractor.
- B. The Contractor shall coordinate production and delivery schedule for all Owner-supplied equipment with the equipment suppliers to ensure that all Owner-supplied equipment is delivered to site in coordination with the construction schedule and in such a manner as to cause no delays in completion of the Contract as scheduled.

#### 1.9 REQUIREMENTS

- A. The contract drawings indicate the extent and general arrangements of the conduit wiring systems, etc. If any departures from the contract drawings are deemed necessary by the Contractor, details of such departures and the reasons therefore shall be submitted as soon as practicable, and within thirty-five (35) days after award of the electrical contract.
- B. Unless material list and data is received as a complete and all-inclusive submittal within the stipulated time all items shall be provided as specified, with no deviations permitted.
- C. Any and all additional costs incurred by the substitution of electrical material or equipment, or installation thereof, whether architectural, structural, plumbing, mechanical or electrical, shall be borne by the Contractor under this Section.
- D. Burden of proof of equality of any substitution for a specified product is the responsibility of this Contractor.
- E. Where required by Architect to ascertain equality of substitute product, Contractor may be requested to provide the specified item and the submitted substitution for comparison, at no additional cost to the Owner.

#### 1.10 SEISMIC CERTIFICATION AND INSTALLATION OF EQUIPMENT

- A. See Architectural and Structural Drawings and Specifications for description of Occupancy Group and Seismic Design Category applicable to this project.
- B. Provide Special Seismic Certification per CBC Section 1616A and ASCE/SEI 7-16 for all equipment and components defined as critical with an importance factor 1.5 in Paragraph 1.10.M.3 of this Section.

- C. Special Seismic Certification shall require either certification through approved analytical method or approved shake table testing in accordance with Section 13.2.5 of ASCE/SEI 7-16 or experience data in accordance with Section 13.2.6 of ASCE/SEI 7-16.
- D. Manufacturer's Seismic Certification or Project-Specific Design of Supports and Attachments for all other equipment and fixtures as per CBC Section 1616A and ASCE/SEI 7-16 requirements.
- E. Provide seismic restraints per applicable code and as specified or indicated. Design restraints to prevent permanent displacement in any direction caused by lateral motion, overturning, or uplift.
- F. Rigidly Supported Equipment, Conduits, and Raceways.
- G. Lighting:
  - 1. Fasten lighting fixtures in suspended ceilings to ceiling grid system or otherwise support from the structures as specified herein and as per details indicated on the Drawings. Comply with National Electric Code (NEC) Article 410.
  - 2. Suspension systems for light fixtures shall allow fixtures to swing a minimum of 45 degrees from the vertical in all directions without contacting obstructions.
  - 3. Free-swinging suspension systems shall have a safety wire or cable attached to the fixture and structure at each support. The wire shall be capable of supporting four times the weight of the lights.
  - 4. Point-source fixtures: provide slack wires to structure at two diagonal corners.
  - 5. Troffer fixtures: provide hold-down clip at each fixture corner, and slack wires to structure at two diagonal corners.
  - 6. Supports for pendants: Provide diagonal seismic wire restraints per Code.
- H. Components supported by chains or simply suspended from above are not required to meet lateral seismic force requirements and seismic relative displacement requirements provided that they cannot be damaged or cannot damage any other component when subject to seismic motion. They must have ductile or articulating connections to the structure at the point of attachment.
- I. Electrical Cabinets:
  - 1. Electrical cabinet design shall conform to National Electrical Manufacturers Association (NEMA) 250 and NEMA ICS6 standards. Cutouts in the lower shear panel that do not appear to have been made by the manufacturer and significantly reduce the strength of the cabinet are not permitted unless analysis demonstrates that the remaining strength is sufficient.
  - 2. Single freestanding cabinets shall have a minimum of four anchor bolts designed and specified with one anchor located at each corner.
  - 3. Multiple sections of cabinets or enclosures located adjacent to each other shall be bolted together. Minimum acceptable bolting is three bolts in the front and back along the adjacent vertical faces - 6 bolts total.
  - 4. Multiple cabinets bolted together to form a section or line-up shall have at a minimum two anchors specified for each cabinet, one at the front and one at the rear.

5. Base anchorage shall be installed through anchor points designated by the Manufacturer. The largest bolt diameter for the anchor hole provided in the equipment shall be provided.
  6. A latch or fastener to prevent opening during an earthquake event and damaging the cabinet and internal components shall secure all doors.
  7. Slide-out components in electrical control panels, etc., shall have a latching mechanism to hold contents in place.
  8. Attached cabling shall have adequate slack or flexibility between the cabinets and surrounding structure supporting the conduit to preclude severing of the cabling due to differential seismic displacements.
- J. The design load shall include the effects of loading on the equipment imposed by attached utility or service lines that are also attached to separate structures.
- K. The attachment of additional external items is not permitted unless such items have either been provided by the Manufacturer, or analysis shows that their effects are supported by design.
- L. Conduit and their connections shall be constructed of ductile materials unless otherwise approved by the Architect. Conduits and their connections constructed of non-ductile materials (e.g., cast iron, no-hub pipe and plastic) shall have brace lengths reduced to one-half that allowed for ductile material.
1. All trapeze assemblies supporting conduit shall be braced to resist CBC design forces considering the total weight of the elements on the trapeze.
  2. Seismic restraint spacing shall be in accordance with hanger spacing.
- M. Critical Equipment:
1. Design with importance factor of 1.5.
  2. Provide Special Seismic Certification for all equipment and components and their installation per CBC and ASCE/SEI requirements.
  3. Critical Equipment shall include the following:
    - a. Fire Alarm system equipment.
    - b. Central Emergency Lighting Inverter.
    - c. Telecommunications System Racks and Cabinets
    - d. Emergency Generator and Automatic Transfer Switches if specified herein and/or indicated on the drawings.
    - e. Emergency power systems switchboards, distribution panels, transformers, and panelboards if specified herein and/or indicated on the drawings.
    - f. Low Voltage Relay Panels on Emergency Power
    - g. Security System equipment.
    - h. Other Signal Systems equipment.
- N. Seismic Design Submittals: For all Critical Equipment included in paragraph 26 05 00.1.10.M.3.
1. The Manufacturer of each item of critical equipment shall arrange for the testing or analysis by an approved agency of each component and assembly and its mounting system or anchorage.
  2. The Manufacturer shall submit a Certificate of Compliance for each item for approval by the Architect and by the Authority Having Jurisdiction.

3. Based on Manufacturer's approved submittal, Contractor shall retain the services of a State of California registered Structural Engineer to prepare final installation details and drawings for equipment supports and attachments.
  4. Submit drawings of the equipment showing dimensions, support equipment, connections, and the proper anchorage locations.
  5. Equipment weight and weight distribution (e.g., center of gravity in elevation and plan).
  6. Thickness of sheet metal bases.
  7. Seismic Vibration Isolation Devices: Manufacturer's product information indicating class and type. Indicate load ratings as published manufacturer's data or shop drawings. Indicate proper orientation of devices on plan.
  8. Inertia bases and support frames.
  9. Specific details of restraints including anchor bolts and welds and maximum load at each location.
- O. Independent Supports: An independent means of secure support shall be provided for all wiring methods in non-fire-rated assemblies. Where independent support wires are used, they shall be distinguishable by color, tagging, or other effective means.

#### 1.11 DESCRIPTION OF DEMOLITION AND REPLACEMENT WORK

- A. This project includes the demolition and replacement, modification, or enhancement of existing facilities. As such, the project scope for this contractor shall include all associated electrical, lighting, and signal system upgrades and demolition/removal work at the existing buildings(s) and/or site. The intent is that all systems will be complete and functional at the completion of this contract and that all old systems, equipment, feeders, circuits, wiring, and related devices (no longer used) be completely and neatly removed. Where discrepancies between the drawings and existing conditions are noted, the Architect or Owner shall be notified immediately for resolution.
- B. As with every renovation project, the electrical work will include (and require) exploration and other field work on a daily basis to complete the new designed equipment and connections within the constraints of the existing building and existing site conditions.
- C. The contractor shall include as part of the base bid, sufficient labor hours to provide such exploration and field work throughout the duration of the project. Change orders for miscellaneous coordination of existing conditions will not be approved unless specific and latent conditions are uncovered that warrant such additional compensation or require additional work not shown on the drawings or included in the specifications, or implied by the designed conditions.
- D. New raceways and wiring to new and renovated equipment are to be installed unless otherwise noted. Where raceways are installed in accessible concealed locations (i.e. unfinished spaces or electrical / mechanical / attic spaces), EMT with wire shall be used. Where new wiring is required to be routed through existing walls and ceilings that cannot readily be accessible for new conduit, MC cable or flex conduit and wiring may be installed, fished through and secured in each space as required by Code. Non-metallic sheathed cable shall not be utilized on this project.

- E. All new raceways shall be installed concealed and all new equipment installed flush, unless otherwise noted on the drawings or in these specifications.

#### 1.12 GUARANTEE

- A. This Contractor shall guarantee that all work executed under this Section will be free from defects of materials and workmanship for a period of one (1) year or as per the General Conditions of this project, whichever is longer. Dates shall be from the date of final acceptance of the building. The contractor shall further guarantee that he will, at his own expense, repair and replace all such defective work, and all other work damaged thereby, which becomes defective during the term of the guarantee. Such repair or replacement shall be guaranteed for one (1) year from the date of repair or replacement.

#### 1.13 PERMITS AND INSPECTIONS

- A. This Contractor shall arrange for and obtain all required permits and inspections.
- B. Do not allow or cause any of the work to be covered or enclosed until it has been tested and/or inspected.

#### 1.14 IDENTIFICATION

- A. Switchgear, switchboards, distribution panels, and feeder circuit breakers therein, panels, disconnect switches, motor starters, transformers, motor disconnect switches, cabinets, and other apparatus used for the operation of, or control of circuits, appliances or equipment, shall be properly identified by means of engraved laminated plastic descriptive nameplates mounted on apparatus using stainless steel screws. Nameplates shall have white letters with black background and be submitted to the Architect for approval. Cardholders in any form are not acceptable.
- B. Provide p-touch style labeling of circuit designations for all receptacles on the project.
- C. Each branch circuit of panel boards to have a permanently fixed number with load directory, mounted under celluloid on inside of cabinet door, showing circuit numbers and typewritten description of equipment supplied by breakers. Where changes are made to existing panelboards, newly typewritten circuit directories shall be prepared to replace existing directories.
- D. Provide label on all motors: "Caution. Automatic equipment. May start at any time."
- E. Provide silk-screened or engraved identification labels on all switch box covers identifying specific loads that are not readily apparent to the user, including electroshades, projection screens, exhaust fans, audio-visual controls, etc.. Submit proposed labels to Architect for approval prior to manufacture of labels.
- F. Provide identification of all pull boxes, junction boxes, and conduit stub-ups on the project as outlined below:

1. For Power Feeders:
  - a. Stencil cover with identifying circuit number.
  - b. Lettering 1" high.
  - c. Color of lettering black.
  - d. Place lettering on cover in neat manner; run parallel to long sides of box.
2. For branch circuits, grounding, communication, signal, and control systems boxes and blank conduit stub-outs:
  - a. Paint inside back of each j-box, front of each cover, and ends of each blank conduit stub-out with identifying system color as listed below:
    - 1) 277/480-volt                      Orange
    - 2) 120/208-volt                      Blue
    - 3) Telephone/Data                      Grey
    - 4) Ground system                      Green
    - 5) Fire Alarm                      Red
    - 6) Lighting control                      Orange/White
    - 7) Clock/Speaker                      Brown
    - 8) Audio/Visual                      Yellow
    - 9) Security                      White
    - 10) Emergency Power 277V                      Orange/Red
    - 11) Emergency Power 120V                      Blue/Red

## PART 2 - PRODUCTS

### 2.1 GENERAL

- A. Refer to applicable Division 26, 27, and 28 Sections for complete products specifications.

### 2.2 MATERIALS

- A. Materials of the same type or classification, used for the same purpose, shall be the product of the same manufacturer.

### 2.3 ACCEPTABLE MANUFACTURERS

- A. Materials shall be of make mentioned elsewhere in this specification. All materials shall be the best of their several kinds, perfectly new and approved by the Underwriters' Laboratories.
- B. Where material, equipment, apparatus or other products are specified by manufacturer, brand name, type or catalog number, such designation is to establish standards of desired quality, style and utility and shall be the basis of the bid. Materials so specified shall be furnished under the contract unless changed by written approval of the Architect. Where two or more designations are listed, choice shall be optional with this Contractor, but this Contractor must submit his choice for final approval.

### 2.4 POSTED OPERATING INSTRUCTIONS

- A. Furnish approved operating instructions for systems and equipment where indicated in the technical sections for use by operation and maintenance personnel. The operating instructions

shall include wiring diagrams, control diagrams, and control sequence for each principal system and equipment. Print or engrave operating instructions and frame under glass or in approved laminated plastic. Post instructions as directed. Attach or post operating instructions adjacent to each principal system and equipment including startup, proper adjustment, operating, lubrication, shutdown, safety precautions, procedure in the event of equipment failure, and other items of instruction as recommended by the manufacturer of each system or equipment. Provide weather-resistant materials or weatherproof enclosures for operating instruction exposed to the weather. Operating instruction shall not fade when exposed to sunlight and shall be secured to prevent easy removal or peeling.

## 2.5 CATALOGED PRODUCTS/SERVICE AVAILABILITY

- A. Materials and equipment shall be current products by manufacturers regularly engaged in the production of such products. Products shall have been in satisfactory commercial or industrial use for 2 years prior to bid opening. The 2-year period shall include applications of equipment and materials under similar circumstances and of similar size. The 2-year period shall be satisfactorily completed by a product for sale on the commercial market through advertisements, manufacturers' catalogs, or brochures. Products having less than a 2-year field service record will be acceptable if a certified record of satisfactory field operation for not less than 6,000 hours, exclusive of the manufacturers' factory or laboratory tests, is furnished. The equipment items shall be supported by service organizations which are reasonable convenient to the equipment installation in order to render satisfactory service to the equipment on a regular and emergency basis during the warranty period of the contract.

## PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Examine the areas and conditions under which the work of this Section will be installed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Drawings:
  - 1. The general arrangement and location of wiring and equipment is shown on the electrical drawings and shall be installed in accordance therewith, except for minor changes required by conflict with the work of other trades.
  - 2. The Contractor shall coordinate and verify all backbox, device, lighting fixture, or equipment mounting requirements with the devices or equipment to be installed, prior to rough in.
  - 3. Drawings indicate the circuit and panel which supplies each device or fixture. Provide and install conduit and conductors to make all connections from panel to nearest device and from first device to additional devices on same circuit. Conduit size and fill shall satisfy NEC requirements. Two or three different phases supplied by a 3-phase panel may share a single neutral only if circuit positions are adjacent in the panel. Do not exceed 4 #12 or 3 #10 conductors in a 1/2" conduit, 7 #12 or 5 #10 in a 3/4" conduit, and 11 #12 or 9 #10 in a 1" conduit, unless otherwise noted. Provide common handle-tie on breakers for multi-wire branch circuits (with common neutral), per NEC. If more than

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three current carrying conductors are installed in one conduit, conductor size shall be increased as required per NEC. Do not share neutrals for branch circuit runs to electronic equipment or where noted on the drawings.

4. Drawings indicate the location of all light switches. Where fixtures in a room are controlled by more than one switch, the same lower case letter is drawn adjacent to a switch and each fixture controlled by that switch. Where no lower case letter is adjacent to a switch, all fixtures in the room are controlled by that switch. Provide and install conduit and wire from fixture to switch and between fixtures as required to accomplish switching shown. Do not route branch circuit wiring for light fixtures through switch boxes. Where dimming controls are specified, provide required dimming control wiring in addition to power wiring from control device to all controlled light fixtures. Provide separate conduit for dimming control wiring unless otherwise indicated on the drawings.
  5. Drawings indicate location of all signal outlet boxes. Provide and install conduit system as required and complete system wiring, unless otherwise noted.
  6. Control wiring is generally not shown on the plans. Contractor shall refer to control diagrams and provide and install all wiring and raceways required to make all interconnections.
  7. All branch circuit wiring No. 12 or No. 10 as noted, all control wiring No. 14, except as noted next to "slash marks" on the drawings, or as noted under "Wire," as specified herein.
  8. All dimensions, together with locations of doors, partitions, etc. are to be taken from the Architectural Drawings, verified at site by this Contractor.
  9. Maintain "as-built" records at all times, showing the exact location of concealed conduits and feeders installed under this contract, and actual numbering of each circuit. Upon completion of work and before acceptance can be considered, this Contractor must forward to the Architect, updated CAD plans, corrected to show the electrical work as actually installed.
  10. All standard 20A branch circuit conductors shall be #12 minimum for up to 75 linear circuit feet, #10 minimum for up to 150 linear circuit feet, and #8 for runs longer than 150 feet.
- B. Measurements: Before ordering any material or closing in any work, verify all measurements on the job. Any differences found between dimensions on the drawings and actual measurements shall be brought to the Architect's attention for consideration before proceeding.

### 3.3 FIELD QUALITY CONTROL

- A. All workmanship shall be first class and carried out in a manner satisfactory to and approved by the Architect.
- B. This Contractor shall personally, or through an authorized and competent representative, constantly supervise the work and so far as possible keep the same foreman and workmen on the job throughout.

### 3.4 COORDINATION

- A. In electrical rooms, where electrical equipment is located at walls with brace framing, provide and install steel channel supports for mounting of electrical equipment away from wall to

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avoid conflict with brace framing. Steel channel supports shall be unistrut or equal, and shall include all channels, bases, fittings, etc., as required for a complete installation.

- B. In electrical rooms, Contractor is responsible for installation of electrical equipment within the space provided. Contractor shall provide ¼" scale plans of electrical room layouts, and elevations of steel channel supports (where used or required) of electrical equipment for review and approval prior to any installation or rough-in

### 3.5 INSTALLATION/APPLICATION/ERECTION

- A. All electrical raceways and devices shall be installed concealed (for raceways) and/or flush mounted (for devices), unless otherwise noted. Provide cut-in boxes and "fish" flexible MC or flex conduit and wire through existing walls to remain, unless shown otherwise on plans. Cut and patch to facilitate such installation to match adjacent and original finish.
- B. All cutting, repairing and structural reinforcing for the installation of this work shall be done by the General Contractor in conformance with the Architect's requirements.

### 3.6 EMERGENCY POWER SOURCES

- A. All emergency source circuits shall be installed in separate raceways (from normal power), per 2017 NEC 700.10(B), or the applicable code at the time of permitting.

### 3.7 TEMPORARY LIGHTING AND POWER

- A. Provide and install temporary lighting and power systems for the duration of construction, of adequate size to accommodate the required lighting and power loads. Coordinate with other trades to insure adequate sizing.
- B. Provide distribution equipment as required to support all construction activities.

### 3.8 FIRE STOPPING AND FIRE RATED PENETRATIONS

- A. All electrical equipment mounted in, on, or through fire rated construction shall be installed to maintain the fire rating of the construction.
- B. Provide fire rated pads (or other suitable assembly) around all electrical junction boxes in fire rated walls/ceilings/floors to maintain the fire rating.
- C. Provide fire rated construction around all recessed light fixtures and/or panel board / cabinets mounted flush in fire rated walls to maintain the fire rating. Coordinate depth of construction with other trades to avoid conflicts.
- D. Conduit sleeves shall be provided as a means of routing cables through fire-rated walls or floors. Openings in sleeves and conduits used for system cables and those which remain (empty) spare shall be sealed with an approved fireproof, removable sagging material. Sleeves which pass vertically from floor to floor shall be sealed in a similar manner using an approved re-enterable system. Additional penetrations through rated assemblies necessary for passage of

tel/data wiring shall be made using an approved method and permanently sealed after installation of cables.

### 3.9 ADJUSTING AND CLEANING

- A. All electrical equipment, including existing equipment not "finish painted" under other sections, shall be touched up where finished surface is marred or damaged.
- B. All equipment, lighting fixtures, etc., shall be left in clean condition, with all shipping and otherwise unnecessary labels removed there from.

### 3.10 SCHEDULES

- A. Coordination: Coordinate installation of electrical items with the schedule for other work to prevent unnecessary delays in the total Work.

### 3.11 WARNING SIGN MOUNTING

- A. Provide the number of signs required to be readable from each accessible side, but space the signs a maximum of 30 feet apart.

### 3.12 PAINTING OF EQUIPMENT

- A. Factory Applied: Electrical equipment shall have factory-applied painting systems which shall, as a minimum, meet the requirements of NEMA ICS 6 corrosion-resistance test, except equipment specified to meet requirements of ANSI C37.20 shall have a finish as specified in ANSI C37.20.
- B. Field Applied: Paint electrical equipment as required to match finish or meet safety criteria. Painting shall be as specified in the respective equipment section.

### 3.13 TESTS

- A. Testing and inspection: See Section 26 08 00 - Testing.

END OF SECTION

## SECTION 26 08 00

### TESTING

#### PART 1 - GENERAL

##### 1.1 WORK INCLUDED

- A. Work Included in This Section: All materials, labor, equipment, services, and incidentals necessary to perform the testing and inspection of the electrical work, including but not limited to the general systems noted below:
  - 1. Grounding system.
  - 2. Lighting system.
  - 3. Any other electrical work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the drawings.
  - 4. All work shall comply with Sections 26 05 00 and 26 27 00.
  - 5. In addition to the general system tests and inspections indicated above, the Contractor shall perform the following inspections and tests. The Contractor shall provide all material, equipment, labor, and technical supervision to perform such tests and inspections:
    - a. System Grounding.
  - 6. The purpose of these tests is to assure that all tested electrical equipment is operational and within industry and manufacturer's tolerances and is installed in accordance with design specifications.

##### 1.2 APPLICABLE CODES, STANDARDS, AND REFERENCES

- A. All inspections and tests shall be in accordance with the International Electrical Testing Association - Acceptance Testing Specifications ATS-2021 (referred to herein as NETA ATS-2021).

##### 1.3 QUALIFICATIONS

- A. Qualifications of the Testing Firm shall be as listed in NETA ATS-2021.

#### PART 2 - PRODUCTS

##### 2.1 THIS ARTICLE DOES NOT APPLY TO TESTING.

#### PART 3 - EXECUTION

##### 3.1 GENERAL

- A. Final test and inspection to be conducted in presence of the Authority having Jurisdiction (AHJ) or Inspector of Record (IOR). Test shall be conducted at the expense of, and managed by, the Contractor, at a mutually agreed time. Submit written test report of all tests, with test result values and overall outcome.

- B. All portions of the electrical installation shall be inspected and tested to ensure safety to building occupants, operating personnel, conformity to code authorities and Contract Documents, and for proper system operation.

### 3.2 INSPECTIONS AND TESTS

- A. Tests: Field tests shall be performed and reports submitted, as per Section 26 05 00, Part 1.
  - 1. Final Inspection Certificates: Prior to final payment approval, deliver to the Owner, with a copy to the Architect, signed certificates of final inspection by the appropriate local authority having jurisdiction.
  - 2. Grounding System:
    - a. All ground connections shall be checked and the entire system shall be checked for continuity. The resistance of grounding electrodes in the system shall be measured using a 3 point fall-of-potential method. The maximum ground resistance shall be three ohms. If the measured ground resistance exceeds three ohms, install (1) additional ground rod, bonded and interconnected with the grounding electrode system.
    - b. Ground tests shall meet or exceed the requirements of the National Electric Code.
  - 3. Lighting Systems:
    - a. The interior and exterior lighting systems shall be checked for proper local controls and operation of entire installation, including the operation of the low voltage lighting control system.
  - 4. Power Distribution System:
    - a. Test main switchboard, distribution boards, panel boards, and transformers for grounds and shorts with mains disconnected from feeders, branch circuits connected and circuit breakers closed, all fixtures in place and permanently connected and grounding jumper to neutral lifted and with all wall switches closed.
    - b. Test each individual circuit at each panelboard with equipment connected for proper operation. Inspect the interior of each panel.
    - c. Check verification of color coding, tagging, numbering, and splice make-up.
    - d. Verify that all conductors associated with each circuit are in same conduit.
    - e. Demonstrate that all lights, jacks, switches, outlets, and equipment operate satisfactorily and as called for.
    - f. Perform megger tests of all new distribution system feeders prior to energizing. All Cables failing megger tests or with evidence of damage shall be removed and replaced in their entirety (no splices), at no cost to the Owner. Damaged cables may not be field repaired without specific approval of the Architect.
  - 5. Fire Alarm System: Verify that all equipment, components, and devices function as specified. Refer to Section 28 3101 for additional testing requirements.
  - 6. Clock/Speaker System: Verify that all equipment, components, and devices function as specified. Refer to Section 27 5100 for additional testing requirements.
  - 7. Lighting Control System: Verify that all equipment, components, and devices function as specified. Refer to Section 26 5101 for additional testing requirements.
  - 8. Telecommunications System: Verify that all equipment, components, and devices function as specified. Refer to Section 27 0000 for additional testing requirements.
  - 9. Where the following systems are specified herein and/or indicated on the drawings, verify that all equipment, components, and devices function as specified and meet all additional testing as described in related individual Sections of this specification:

- a. Medium voltage switchgear, transformers, and distribution system.
  - b. Emergency Generator and Automatic Transfer Switches.
  - c. UPS system.
  - d. Photovoltaic system.
  - e. Clock/Speaker system.
  - f. Classroom Audio Visual system.
  - g. Security system.
  - h. Assisted Listening System.
  - i. Two-way Emergency Communications System: Verify and test all equipment, components, and devices for proper operation and function.
  - j. Kitchen Controls: Verify and test all equipment, components, and devices for proper operation and function.
  - k. Data Center Controls: Verify and test all equipment, components, and devices for proper operation and function.
- B. Title 24 Acceptance Testing: Contractor shall complete the requirements for Title 24 Acceptance Testing, as per CA Title 24, Part 6.
- 1. Perform testing requirements as per Title 24 Lighting Acceptance requirements. Testing shall include construction inspection of installed controls, occupancy / motion sensor testing, manual daylighting controls testing, automatic time switch controls testing, and demand response system interface, as applicable.
  - 2. Complete and submit all required forms for complete Acceptance Testing.
  - 3. Acceptance tests must be performed or overseen by certified Acceptance Test Technicians.
  - 4. Obtain required review and approval of Acceptance Forms to allow final certificate of occupancy to be granted.
- C. Close-Out Photography:
- 1. Photographs and/or video documentation shall be taken before, during, and after project construction. Project areas to be documented shall include, but not limited to the following:
    - a. Underground applications to facilitate minimizing damage to underground utilities, etc..
    - b. Behind the wall applications to facilitate minimizing damage to piping, cabling, etc..
    - c. Above ceiling applications, especially where not visible or limited accessibility.
    - d. Other areas for overall assistance with the progress of the various installations that may or may not be recorded or seen before, during, and/or after field-walk.
    - e. Photographic documentation shall assist in case of incomplete, incorrect, and/or missing as-built information.
    - f. Photographic and video documentation shall be provided as part of the closing/ close-out documentation package to the District.

END OF SECTION

SECTION 26 27 00  
BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Work included in this Section: All materials, labor, equipment, services, and incidentals necessary to install the electrical work as shown on the drawings and as specified hereinafter, including but not limited to the work listed below:
  - 1. Raceways, feeders, branch circuit wiring, wiring devices, safety switches and connections to all equipment requiring electric service.
- B. Any other electrical work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the drawings.
- C. All work shall comply with Section 26 05 00.

1.2 RELATED WORK

- A. Division 09 - Finishes
- B. Division 23 - Motors and Mechanical Equipment Installation

1.3 SUBMITTALS

- A. Comply with the provisions of Section 26 05 00.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Refer to Section 26 05 00, Basic Electrical Requirements, Part 2 - Products.
- B. List of Equipment Manufacturers:
- C. Conduit and Conduit Fittings
  - 1. Allied Tube and Conduit, Wester Tube and Conduit, LTV Steel Tubular, National Electric Products, AFC, Republic Steel Corporation, Rome Cable Corporation, United States Steel Corporation, Killark Electric Manufacturing Company, Raco, VAW Aluminum Company, Bridgeport, Steel City, Thomas & Betts, Carlon, O.Z. Gedney, Appleton, Regal.
- D. Wire and Cable (600V)
  - 1. American Wire Company, General Wire and Cable Corporation, Okonite Company, Rome Cable Corporation, Cerrowire, American Insulated Wire, AFC Cable Systems, Essex, Simplex Wire and Cable Company, Southwire.

- E. Solderless Lugs and Grounding Connections
  - 1. Burndy Engineering Company Inc, O.Z. Gedney Company Inc, Penn Union Electric Corporation, Thomas and Betts Company Inc.
- F. Pull Boxes, Gutters, Special Cabinets
  - 1. Schneider-Square D Company, Columbia Electric Manufacturing Company, General Electric Company, Eaton Inc.
- G. Outlet Boxes
  - 1. Appleton Electric Company, Killark Electric Manufacturing Company, Lew Electric Fittings Company, National Electric Products Corporation, Raco, Steel City Electric Company, Carlon, Bowers.
- H. Floor Boxes
  - 1. Steel City Electric Company, Hubbell Inc, RCI, Walker.
- I. Wiring Devices
  - 1. Leviton, Arrow-Hart, Cooper, Hubbell, Lutron, Bryant.
- J. Conduit Racks, Hangers
  - 1. General Electric Company, Killark Electric Manufacturing Company, Caddy, National Electric Products Corporation, Republic Steel Corporation, Rome Cable Corporation, United States Steel Corporation, VAW Aluminum Company, Superstrut, B-Line.
- K. Safety Switches (Disconnect and Fusible)
  - 1. Schneider-Square D Company, Eaton-Cutler Hammer Inc, General Electric Company.
- L. Fuses
  - 1. Bussman Manufacturing Company, Chase-Shawmut Company.
- M. Firestopping
  - 1. 3M, Nelson.

## 2.2 MATERIALS

- A. Raceways: Only the raceways specified below shall be utilized on this project. Substitutions shall be pre-approved in writing. All bare conduit ends (stub-ups or stub-outs) shall be provided with bushed ends or manufactured insulated throat connectors:
  - 1. Rigid Type - hot dip galvanized or sherardized steel, use on all exterior locations, below grade or in concrete slab, and to 18" on either side of structural expansion joints in floor slabs, with completely watertight, threaded fittings throughout. Compression fittings are not acceptable.
    - a. All rigid steel conduit couplings and elbows in soil or concrete or under membrane to be ½ lap wrapped with Scotch #50 tape and threaded ends coated with T&B #S.C.40 rust inhibitor prior to installation of couplings.
    - b. ½ lap wrap all rigid steel conduit stub-ups from slab or grade to 6" above finished grade level with Scotch #50 tape.

## BASIC ELECTRICAL MATERIALS AND METHODS 26 27 00 - 2

2. In lieu of rigid steel conduit for power and control raceways and branch circuit conduits in soil or concrete slabs, "Schedule 40" PVC with Schedule 80 PVC conduit elbows and stub-ups may be used with code size (minimum No. 12) ground wire. A "stub-up" is considered to terminate 6" above the finished surface.
  - a. Schedule 80 PVC conduit shall be used in all concrete footings or foundations and to 18" of either side of footings or foundation walls.
  - b. Schedule 80 PVC conduit shall be used in all concrete masonry unit (CMU) walls or columns.
  - c. All conduit runs in concrete floor slabs (where allowed) shall be installed to comply with all applicable CBC and structural codes to maintain the structural integrity of the floor slab. Where conflicts occur, alternate routing shall be provided at no additional cost to the Owner.
  - d. Where schedule 80 PVC is coupled to schedule 40 or other raceways with differing interior dimensions, each end shall be reamed with a reaming tool to reduce the edge profile for protection of the passing conductors during the pull.
3. Intermediate metal conduit may be used in all exposed interior locations, except that electrical metallic tubing may be used in some locations as noted below. Utilize steel compression type fittings for all exposed conduit runs, unless otherwise noted. Die-cast zinc fittings are unacceptable.
4. Electrical metallic tubing shall be used exposed in interior electrical and mechanical rooms, in interior unfinished spaces, and in interior concealed and furred spaces, made up with steel watertight or steel set screw type fittings and couplings. EMT shall not be used in under-building crawl spaces or other areas subject to moisture. Set screws shall have hardened points. Die-cast zinc fittings are unacceptable.
5. Surface mounted rectangular steel raceways and boxes: use for all surface mounted installations, unless otherwise noted (all catalog numbers listed are Wiremold - equals allowed) - color Ivory, unless otherwise noted;
  - a. #V500 for branch power runs on ceilings and walls (used with V500 series straps, elbows, connectors and V5000 series low profile boxes and covers).
  - b. #2000 or 2400 low profile for larger power run requirements on ceiling or walls (used with V2000 series straps, elbows, connectors and low profile boxes and covers).
  - c. #2400D for dual service power and tel/data run requirements (used with divided V2400 boxes and covers).
6. Surface mounted rectangular non-metallic dual service raceways; Wiremold #5400 (Ivory) or equal with all required compatible activation covers, bezels, inserts, and blank plates for a complete installation. Refer to drawings for outlet quantities in raceway and feed points. All raceway fed flush from rear with horizontal j-boxes, unless otherwise noted.
7. Use flexible conduit for all motor, transformer and recessed fixture connections, minimum ½"; "Seal tite" type used outdoors and in all wet locations, provide with code size (minimum No. 12) bare ground wire in all flexible conduit.
8. All conduit cuts (factory or field cut) shall be perfectly square to the length of the conduit and cut ends shall be reamed with a reaming tool to provide a smooth edge to the passing conductors and to remove all burs and scrapes. Use of a hand file is not acceptable.
9. All electrical raceways shall be installed concealed, unless otherwise noted. Cut and patch to facilitate such installation to match adjacent and original finish. All exposed conduits, where required, shall be installed parallel to building members.

## BASIC ELECTRICAL MATERIALS AND METHODS 26 27 00 - 3



10. All emergency source circuits shall be installed in separate raceways (from normal power), per 2017 NEC 700.10(B), or the applicable code at the time of permitting.
11. Where existing conditions preclude the installation of EMT in existing walls to remain, provide and install cut-in type boxes and "fish" flexible MC or flex conduit and wire through existing walls to remain, unless shown otherwise on plans.
12. Fasten conduits securely to boxes with locknuts and bushings to provide good electrical continuity.
13. Provide chrome escutcheon plates at all exposed wall, ceiling and floor conduit penetrations.
14. Support individual suspended conduits with heavy malleable strap or rod hangers; supports for ½ inch or ¾ inch conduit placed on maximum 7-foot centers; maximum 10-foot centers on conduits 1 inch or larger.
15. Support multiple conduit runs from Kindorf B907 channels with C-105 and C-106 straps.
16. Conduit bends - long radius.
17. Flash conduits through roof, using approved roof jack; coordinate with General Contractor.
18. To facilitate pulling of feeder conductors, install junction boxes as shown or required.
19. All empty conduits on the project shall be provided with a nylon pull rope to allow pulling of future conductors intended for the specific raceway. Provide plastic wire-tie style nameplate tags on each end of pull rope with printed identification of conduit use and the location of the opposite end of the rope. Pull ropes for telecommunications service conduits shall meet the utility company requirements.
20. Where conduits pass through structural expansion joints in floor slab, rigid galvanized conduit shall be used 18" on either side of joint, complete with Appleton expansion couplings and bonding jumpers, or equal. All above grade expansion joint crossings shall also utilize expansion joint couplings or flex conduit transitions as required for each particular installation. Installed condition shall allow for a minimum deflection of raceway and wire (in any direction) equal to the structural expansion joint dimension (building to building). No solid conduits shall be allowed to cross expansion joints without proper provisions for building and seismic movement.
21. Minimum cover of conduits in ground outside of building - 36 inches, unless otherwise noted.
22. Provide and install exterior wall conduit seals and cable seals in the locations listed below. Coordinate installation and scheduling with other trades:
  - a. Conduit seals through exterior wall or slab (below grade): O.Z. Gedney series "FSK" in new cast in concrete locations, series "CSM" in cored locations.
  - b. Conduit seals through exterior wall or slab (above grade): O.Z. Gedney series "CSMI."
  - c. Cable seals at first interior conduit termination after entry through exterior wall or slab: O.Z. Gedney series "CSBI." Coordinate quantity of conductors at each location.

- B. Outlet Boxes and Junction Boxes. Verify all backbox requirements with devices to be installed prior to rough-in.
1. One piece steel knockout type drawn boxes, unless otherwise noted, sized as required for conditions at each outlet or as noted.
  2. Flush-mounted boxes equipped with galvanized steel raised covers for device mounting flush with finished surface. Provide extension rings as required on all acoustical or

additional wall treatment areas to bring top of cover flush with finished surface (coordinate with architectural drawings). Devices shall be capable of being tightly mounted to boxes without distorting or bending device or mounting hardware.

3. Boxes for fixture outlets: 4-inch octagon or larger as required, or as noted.
4. Switch and receptacle outlets - not smaller than 4-inch-square in furred walls, with raised cover for single device; ganged where required.
5. Outlet and switch boxes for wet locations, cast aluminum FS or FD type with cast aluminum gasketed spring lid cover. Weatherproof "Bell" type boxes are not acceptable.
6. All connectors from conduit to junction or outlet boxes shall have insulated throats. Connectors shall be manufactured with insulated throats as integral part. Insertable insulated throats are unacceptable.
7. Outlet boxes for telecommunications, 4" square or larger as required or noted, multi-ganged for voice, data, and other services where indicated on the drawings.
8. Conduit Bodies: Malleable iron type, with lubricated spring steel clips over edge of conduit body, O-Z/Gedney type EW, or equal.
9. Pull boxes: All site pull boxes shall be flush in-ground concrete, with engraved covers identifying service use (i.e. electrical, communications, etc.). Boxes shall be Nema 250, Type 6, outside flanged, with recessed cover for flush mounting, by Christy or equal, with required depth to provide box and conduit depths shown or required.
  - a. Provide concrete covers for all boxes in planted or paved areas (up to available concrete cover size).
  - b. Provide galvanized steel covers for all larger boxes (when concrete is not available), or in traffic areas. No cast iron covers.
  - c. Provide bolted covers and slab bottoms (with grouted perimeter) or vault type boxes for all electrical distribution and signal system pull boxes used for site distribution, to prevent rodent entry. No collar type boxes with dirt or gravel bottoms
  - d. Provide drain hole at bottom of all vault type boxes, with loose aggregate base below, for proper drainage.
  - e. All covers to be completely flush with finished adjacent surfaces.
  - f. Provide galvanized steel H20 rated covers and installation of box rated for H20 in all traffic areas.
  - g. Provide pullboxes per utility company specifications for all electrical primary and secondary services and for telecommunications service runs. Verify exact size and type prior to order with each utility company.

C. Wire and Cable (line voltage and signal systems):

1. 600-volt class where used for or run with line voltage power wiring, insulation color coded, minimum No. 12 AWG for power branch circuits, No. 14 for power control circuits, and wiring size and type as directed by signal system manufacturer for each signal system.
2. All conductors shall be copper.
3. Size and insulation type:
  - a. Standard locations: #12 to #1 AWG: THWN for wet locations and THHN for dry locations. #1/0 through #4/0 AWG: XHHW (55 Mils). 250MCM and larger: XHHW (65 Mils). All wire sizes used shall be based on a 75 degree insulation rating, unless specifically used with 90 degree rated breakers and devices.
  - b. All wiring (power and signal) installed underground between buildings, or in wet or damp locations, shall be outside listed and rated for wet locations.

- c. High temperature and non-standard locations: Provide wire type and insulation category suitable for area of use as defined in NEC table 310-13.
4. Conductors No. 8 and larger and as otherwise noted on drawings shall be stranded. Power conductors No. 12 and No. 10 shall be solid or stranded. Power conductors No. 14 or smaller shall be solid.
5. Provide signal system wiring for each system to meet the system manufacturers requirements and recommendations for each device or equipment type. Signal wiring systems shall be provided with shielding and/or insulation type and cable quantities as directed by the manufacturer, and meet all NEC requirements for locations used.
6. Install all wiring branch circuits and feeders (low voltage and line voltage) in conduit unless noted otherwise on the drawings. Contractor shall mandrel all feeders and pass a "sock" (or utilize other suitable means) through each raceway prior to pull to remove all water and construction debris. All raceways shall be completely clear of any obstructions or debris and all cut ends shall be reamed, prior to pull. Utilize pulling compound on all runs to insure minimum friction and pulling tension.
7. Megger test all feeders prior to energizing. See section 26 08 00 for additional information.
8. Approximately balance branch circuits about the neutral conductors in panels.
9. Connections to devices from "thru-feed" branch circuit conductors to be made with pigtails, with no interruption of the branch circuit conductors.
10. Neutral conductor identified by white outer braid, with different tracers of "EZ" numbering tags used where more than one neutral conductor is contained in a single raceway.
11. Neatly arrange and "marlin" wires in panels and distribution panelboards with "T and B Ty-rap" or approved equal plastic type strapping.
12. All wire and cable shall bear the Underwriters' Label, brought to the job in unbroken packages; wire color-coded as follows:
 

a.	Voltage	Phasing	A	B	C	N
b.	120/208	3PH4W	Black	Red	Blue	White
c.	2083PH	3W	Black	Red	Blue	--
d.	277/480	3PH4W	Brown	Orange	Yellow	White
e.	4803PH	3W	Brown	Orange	Yellow	--
f.	120/240	3PH4W	Black	Red	Blue	White
g.	2403PH	3W	Black	Red	Blue	--
13. The equipment grounding conductor shall be insulated copper; where it is insulated, the insulation shall be colored green.
14. Label each wire of each electrical system in each pull box, junction box, outlet box, terminal cabinet, and panelboard in which it appears with "EZ" numbering tags indicating the connected circuit numbers.
15. Properly identify the "high leg" of 4-wire delta connected systems (in each accessible location) as required by NEC 110.15 and 230-56.
16. Provide permanently affixed adhesive labels with machine printed lettering (min. 1/8" high) at junction boxes serving fixtures that are supplied by (2) electrical sources (i.e. normal and emergency lighting). Label to read "CAUTION - This light fixture is powered by (2) separate sources. The normal power source breaker and the emergency power source breaker must be turned off before servicing this light fixture."
17. Install feeder cables in one continuous section unless splices are approved by Architect. Exercise care in pulling to avoid damage or disarrangement of conductors, using approved grips. No cable shall be bent to smaller radius than the spool on which it was

## BASIC ELECTRICAL MATERIALS AND METHODS 26 27 00 - 6

delivered from the manufacturer. Color code feeder cables at terminals. Provide identifying linen tags in each pullbox.

- D. Switches: Model numbers are Hubbell, color to be selected by architect, unless otherwise noted. All switches to utilize screw terminals for wire connections - no plug-in terminations:
1. Single Pole - No. HBL1221
  2. Two Pole - No. HBL1222
  3. Three Way - No. HBL1223
  4. Momentary contact - No. HBL1557
  5. Momentary contact Keyed - No. HBL1556L
  6. Keyed, - No. HBL1221L
  7. Pilot Light (on with load on) - Hubbell No. 1221-PLC
  8. Motor Rated Double Pole (30A) - Hubbell No. 7832
  9. Motor Rated Three Pole (30A) - Hubbell No. 7810.
  10. Low voltage Data line switches - Refer to lighting control system (for compatibility)
- E. Receptacles: Mounting straps and contacts shall be one piece design, constructed of minimum .050" solid brass. Base shall be high strength, heat resistant, glass reinforced nylon. Device shall accept up to #10 wire, side or back wired with screw terminals - no plug-in terminations. Hubbell, Leviton, Pass & Seymore, or equal. Color to be selected by architect, unless otherwise noted. Numbers listed below are Hubbell:
1. 15A 3PG 125 volt duplex - No. HBL5262
  2. 20A 3PG 125 volt duplex - No. HBL5362
  3. 20A 3PG 125 volt ground fault interrupter receptacle; GFI receptacles shall conform to the 2006 UL requirements to a) interrupt power to the unit in the event of internal failure, or b) provide an audible or visual indication of internal failure of the GFI; No. GF20 or equal. Through wiring to down stream GFI designated receptacles is not acceptable.
  4. 15A 3PG 125 volt half controlled duplex receptacle - No. BR15C1(color), with permanent "controlled" marking, factory applied.
  5. 20A 3PG 125 volt half controlled duplex receptacle - No. BR20C1(color), with permanent "controlled" marking, factory applied.
  6. 15A 3PG 125 volt full controlled duplex receptacle - No. BR15C2(color), with permanent "controlled" marking, factory applied.
  7. 20A 3PG 125 volt full controlled duplex receptacle - No. BR20C2(color), with permanent "controlled" marking, factory applied.
  8. GFI Module (blank face), no indicator light, 20A - No. GFBF20 or equal.
  9. All receptacles located in exterior or wet locations shall be corrosion resistant with UV stabilized body.
  10. All receptacles in locations identified in NEC 406.12 (i.e. dwelling units, hotel/motel guest rooms, child care, preschool, K-12 schools, business office common areas, clinics, medical, and outpatient facilities, assembly area common areas, dormitory units, and assisted living units) shall be tamper resistant.
- F. Plates: Leviton, or equal, except as noted:
1. The color of all faceplates shall match the color of the devices installed under/in the faceplate, except as specifically noted otherwise.
  2. For flush outlet boxes, for switches, and receptacles: nylon, color to be selected by architect, unless otherwise noted.

3. Plates for surface-mounted outlets: galvanized steel unless otherwise noted.
  4. Weatherproof duplex receptacle plates for exterior locations with ground fault interrupter receptacles in type FS or FD boxes - Hubbell #WPFS26 or compatible equal. Verify cover compatibility with box type and device installed.
  5. Weatherproof "in-use" cover, vertical or horizontal mount, for exterior with GFCI receptacles. Die-cast metal alloy, TayMac MX series or equal with openings to match installed devices.
  6. Locking plates for duplex receptacles where noted; Pass & Seymour #WP26-L (non-weather proof).
  7. Locking plates for duplex exterior GFCI receptacles (or in wet or damp locations); Heavy duty cast aluminum flush cover with locking latch and key, Pass & Seymour #4600 with appropriate mounting plate for type of device installed. Coordinate backbox requirements and finished wall trim-out with wall installer prior to rough-in to insure an adequate and neat trim appearance upon completion.
  8. Plates for flush tele/data boxes: white nylon or as otherwise directed - provide and install at each tele/data outlet plate to match duplex power outlet plate, for jack installation under Section 27 00 00. Where the power and tele/data outlet boxes are shared the plate shall be continuous in multi-gang locations. See drawings.
- G. Time Clocks: Electronic type with 365 day schedule, holidays, astro-dial, and non-volatile memory back-up.
1. 2-Channel momentary or maintained contact output - Tork #DZM200A or equal. Maintained contact output - Intermatic #ET2825C or equal.
  2. 4-Channel (maintained contact output) - Tork #DZS-400A, Intermatic #ET2845C or equal.
- H. Equipment Disconnects: All disconnects shall be located to allow proper code required clearance in each area. Locations shown on drawings are diagrammatic only. The contractor shall coordinate exact locations in the field (with other trades) prior to rough-in to insure proper clearances.
1. Motor Disconnect Switches and Safety Switches: General Electric Company Heavy Duty Type "THD", cover interlocked with operating handle so that cover cannot be opened with switch in closed position and switch cannot be closed with cover in open position. 240V or 480V rating, single or multi-pole as required or as noted on drawings, in Nema 1 enclosure indoors or Nema 3R enclosure outdoors unless otherwise noted. Provide dual element motor circuit fuses sized as recommended by equipment manufacturer (for final equipment actually installed).
  2. Code required disconnects: Provide a local disconnect in addition to the branch circuit protection device for all equipment as required by code (whether shown or not). Disconnects shall consist of a motor rated switch (or disconnect) for all motor loads less than 3/4HP or other suitable disconnect sized to match branch circuit conductors and load current of equipment, with number of poles as required.
- I. Lugs and Connectors: Thomas and Betts "lock-tite", for No. 4 and larger wire; 3M "Scotchlock" fixed spring screw-on type wire connectors with insulator for No. 6 and smaller wire.
1. All splices shall be made up with screw-on type connectors - no plug-in or push-in style connectors acceptable. Wires shall be solidly twisted together with electricians pliers

before screw-on connector is installed to ensure a proper connection in the event of wire nut failure. No exceptions.

2. Connectors listed or labeled for “no wire twisting required” are not an acceptable substitute for actual wire twisting.
  3. Utilize porcelain type connectors in all high temperature environments (above 105 degrees Celsius).
- J. Splice Insulation: "Scotch" electrical tape with vinyl plastic backing or rubber tape with protective friction tape for interior work.
1. Splices in electrical cables of 600 volt insulation class in underground system duct shall be made only in accessible locations such as pullboxes, light pole handholes, etc., using a compression connector on the conductor and by insulating and waterproofing (for exterior and underground locations) by one of the following methods:
    - a. Cast type splice insulation shall be provided by means of a molded casting process employing a thermosetting epoxy resin insulating material which shall be applied by a gravity poured method or by a pressure injected method. The component materials of the resin insulation shall be in a packaged form ready for convenient mixing after removing from the package. Do not allow the cables to be removed until after the splicing material has completely set.
    - b. Gravity poured method shall employ materials and equipment contained in an approved commercial splicing kit which includes a mold suitable for the cables to be applied. When the mold is in place around the joined conductors, the resin mix shall be prepared and poured into the mold. Do not allow cables to be moved until after the splicing materials have completely set.
- K. Identification: Refer to Section 26 0500.
- L. Firestopping: as manufactured by 3M Fire Protection Products or equal.
1. Fire-rated and smoke barrier construction: Maintain barrier and structural floor fire and smoke resistance ratings including resistance to cold smoke at all penetrations, connections with other surfaces or types of construction, at separations required to permit building movement and sound vibration absorption, and at other construction gaps.
  2. Systems or devices listed in the UL Fire Resistance Directory under categories XHCR and XHEZ may be used, providing that it conforms to the construction type, penetration type, annular space requirements and fire rating involved in each separate instance, and that the system be symmetrical for wall penetrations. Systems or devices must be asbestos free.

### PART 3 - EXECUTION

3.1 REFER TO BASIC ELECTRICAL REQUIREMENTS - SECTION 26 05 00 FOR WORK UNDER THIS SECTION.

### 3.2 TESTS

- A. Testing and Inspection: See Section 26 08 00 - Testing.

END OF SECTION

### BASIC ELECTRICAL MATERIALS AND METHODS 26 27 00 - 9

## BASIC ELECTRICAL MATERIALS AND METHODS 26 27 00 - 10

SECTION 26 56 01  
SITE LIGHTING

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Luminaires
- B. Pole bases
- C. Controls and wiring

1.2 SYSTEM DESCRIPTION

- A. Furnish all labor, materials, apparatus, tools, equipment transportation, temporary construction and special or occasional services as indicated on the Drawings or described in these Specifications and as required to make a complete working site lighting system.
- B. Illumination levels shall be in accordance with recommendations by the Illuminating Engineering Society (IES).

1.3 INCORPORATED DOCUMENTS

- A. Section 26 05 00 and Section 26 51 01 apply to all work in this Section.

1.4 SUBMITTALS

- A. Shop Drawings.
- B. Manufacturer's Recommendations: Provide two copies before material is used.
  - 1. PVC conduit joints and junctions.
  - 2. Solvent welding directions.
  - 3. Pole bases.
- C. Laboratory Test: Determine soil density relationships for compaction of backfill material in accordance with ASTM D1557, Method D.

PART 2 - PRODUCTS

2.1 MATERIAL AND EQUIPMENT

- A. Provide new materials and equipment unless otherwise specifically indicated or specified. Materials shall be listed by Underwriter's laboratories, Inc. (U.L.) and bear evidence of such approval where applicable.



- B. Poles, Brackets, Pole Bases and Attachments: Shall be rated for service with wind velocities of 100 mph considering the force exerted by the wind on the maximum exposure of the fixture luminaire selected.
- C. Poles shall be anchor base type round, height and style as indicated, finished to match luminaire, complete with handhole and gasketed cover, anchor bolts with leveling and locking screws, grounding connection, and matching base cover.
- D. Concrete pole bases shall be cast-in-place reinforced concrete as indicated with anchor bolts and conduit entries as per manufacturer. Concrete shall be rated 3,000 PSI at 28 day test.
- E. Concrete:
  - 1. Concrete for electrical requirements shall be at least 3,000 psi concrete with 1-inch maximum aggregate conforming to the requirements of Division 3 for Cast-In-Place concrete.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION:

- A. Refer to Section 26 27 00, Part 2.2, for wiring and splicing requirements.
- B. Underground cable installation shall conform to National Electrical Code except as otherwise specified or indicated.
- C. Contractor Damage: The Contractor shall promptly cause repairs to be made to any indicated utility lines or systems damaged by his operation.
- D. Under roads and paved areas, ducts shall be EPC-80-PVC polyvinyl chloride conduit.
- E. Cables shall be in one piece without splices between connections except where the distance exceeds the lengths in which the cable is furnished.
- F. Bends in cables shall have an inner radius of not less than 12 times the cable diameter.
- G. Horizontal slack of approximately 3 feet shall be left in the ground on each end of cable runs, on each side of connection and at all points where connections are to be made above ground level.
- H. Earthwork: Earthwork for electrical requirements shall conform to the requirements of Division 31.
- I. Coordinate work with other trades. Pre-ship anchor bolts and templates for use in preparing bases for installation. After leveling luminaires, pack grout between mounting plate and concrete footing. Provide weep holes to prevent accumulation of moisture inside pole base.

### 3.2 TESTS

- A. Test under provisions of Division 1, Section 26 08 00, and Section 26 51 01.
- B. The Owner shall be notified at least three working days in advance of the Contractor's proposed date of the tests to permit scheduling, and to permit witnessing of the tests. The Contractor shall furnish the Owner with three copies of the results of the tests.
- C. Circuits: The Contractor shall test each circuit, all controllers, and components of the system for proper operation. The Contractor shall furnish the Owner with three copies of the test results.
- D. Compaction Tests: Backfill shall be tested for compaction in accordance with ASTM D1556.
- E. Operating Test: Contractor shall operate the system in the presence of the Owner proving the proper operation.

END OF SECTION

## SECTION 31 01 30

### GROUT

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment, and labor necessary to furnish and place grout and shall form, mix, place, cure, repair, finish, and do all other work as necessary to produce finished grout as shown on the Drawings and as specified herein.
- B. The following types of grout shall be covered in this Section:
  - 1. Non-Shrink Grout: Non-Shrink grout is to be used unless another type is specifically referenced or as shown on the Drawings.
  - 2. Epoxy Grout

##### 1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 32 16 00                      Site Concrete
- B. Section 33 05 16                    Precast Concrete Utility Boxes, Inlets and Wheel Stops
- C. Division 1                          General Requirements.

##### 1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Commercial Standards:

ASTM C 109	Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-In. or 50-mm Cube Specimens).
ASTM C 531	Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing.
ASTM C 579	Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing.
ASTM C 827	Test Method for Change in Height of Early Ages of Cylindrical Specimens from Cementitious Mixtures.

#### GROUT 31 01 30- 1

ASTM D 696

Test Method for Coefficient of Linear Thermal Expansion of Plastics.

CRD-C 621

Corps of Engineers Specification for Non-shrink Grout.

## 1.5 CONTRACTOR SUBMITTALS

- A. Certificates of Compliance: Certificates of Compliance shall be provided for all products and materials proposed to be used under this Section.

## PART 2 - PRODUCTS

### 2.1 PREPACKAGED GROUTS

#### A. Non-Shrink Grout:

1. Non-shrink grout shall be a prepackaged, inorganic, non-gas-liberating, non-metallic, cement-based grout requiring only the addition of water. Manufacturer's instructions shall be printed on each bag or other container in which the materials are packaged. The specific formulation for each class of non-shrink grout specified herein shall be that recommended by the manufacturer for the particular application.
2. Class A non-shrink grouts shall have a minimum 28-day compressive strength of 5000 psi; shall have no shrinkage (zero percent) and a maximum 4.0 percent expansion in the plastic state when tested in accordance with ASTM C 827; and shall have no shrinkage (zero percent) and a maximum of 0.2-percent expansion in the hardened state when tested in accordance with CRD C 621.
3. Class B non-shrink grouts shall have a minimum 28-day compressive strength of 5000 psi and shall meet the requirements of CRD C 621.
4. Application:
  - a. Class A non-shrink grout shall be used for the repair of all holes and defects in concrete members which are water bearing or in contact with soil or other fill material, grouting under all equipment base plates, and at all locations where grout is specified; except, for those applications for Class B non-shrink grout and epoxy grout specified herein. Class A non-shrink grout may be used in place of Class B non-shrink grout for all applications.
  - b. Class B non-shrink grout shall be used for the repair of all holes and defects in concrete members which are not water-bearing and not in contact with soil or other fill material.

#### B. Epoxy Grout:

1. Epoxy grout shall be a pourable, non-shrink, 100-percent solids system. The epoxy grout system shall have 3 components: resin, hardener, and specially blended aggregate, all premeasured and prepackaged. The resin component shall not contain any non-reactive diluents. Resins containing butyl glycidyl ether (BGE) or other highly volatile and hazardous reactive diluents are not acceptable. Variation of component ratios is not permitted unless specifically recommended by the manufacturer. Manufacturer's instructions shall be printed on each container in which the materials are packaged.

2. The chemical formulation of the epoxy grout shall be that recommended by the manufacturer for the particular application.
3. The mixed epoxy grout system shall have a minimum working life of 45 minutes at 75° F.
4. The epoxy grout shall develop a compressive strength of 5000 psi in 24 hours and 10,000 psi in 7 days when tested in accordance with ASTM C 579, Method B. There shall be no shrinkage (zero percent) and a maximum 4.0 percent expansion when tested in accordance with ASTM C 827.
5. Application: Epoxy grout shall be used to embed all anchor bolts and reinforcing steel required to be set in grout, and for all other specified applications.

## 2.2 CEMENT GROUT

- A. Cement Grout: Cement grout shall be composed of one part cement, 3 parts sand, and the minimum amount of water necessary to obtain the desired consistency. Where needed to match the color of adjacent concrete, white Portland cement shall be blended with regular cement as needed. The minimum compressive strength at 28 days shall be 4000 psi.
- B. Cement shall be as specified in Section 321600, "Site Concrete."

## 2.3 CONSISTENCY

- A. The consistency of grouts shall be that necessary to completely fill the space to be grouted for the particular application. Dry pack consistency is such that the grout is plastic and moldable but will not flow. Where "dry pack" is specified, it shall mean a grout of that consistency; the type of grout to be used shall be as specified herein for the particular application.

## 2.4 MEASUREMENT OF INGREDIENTS

- A. Measurements for cement grout shall be made accurately by volume using appropriate containers. Shovel measurement will not be allowed.
- B. Prepackaged grouts shall have ingredients measured by means recommended by the manufacturer.

# PART 3 - EXECUTION

## 3.1 GENERAL

- A. All surface preparation, curing, and protection of cement grout shall be as specified in Section 321600 "Site Concrete." The finish of the grout surface shall match that of the adjacent concrete.
- B. The manufacturer of Class A non-shrink grout and epoxy grout shall provide on-site technical assistance upon request.
- C. All mixing, surface preparation, handling, placing, consolidation and other means of execution for prepackaged grouts shall be done according to the printed instructions and recommendations of the manufacturer.

## 3.2 CONSOLIDATION

# GROUT 31 01 30- 3

- A. Grout shall be placed in such a manner, for the consistency necessary for each application, so as to assure that the space to be grouted is completely filled.

END OF SECTION

GROUT 31 01 30- 4

## SECTION 31 10 00

### DEMOLITION, CLEARING AND GRUBBING

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specifications Sections, apply to this Section.

##### 1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment and labor necessary to perform and complete all demolition work shown on the Drawings and as specified herein. This includes, but is not necessarily limited to, such items as demolition, removal, recycling and disposal of asphalt concrete, miscellaneous concrete, utilities, vegetation and all other features as shown on the Civil Drawings.
- B. Clearing and grubbing shall be in conformance with Section 16 "Clearing and Grubbing" of the State Standard Specifications.
- C. Manufactured articles, materials, equipment, and accessories shall be demolished in accordance with the manufacturer's printed specifications and recommendations, and industry standards, unless otherwise shown or specified.
- D. Hazardous materials shall be handled, removed and disposed of in accordance with all regulatory agency requirements.
- E. The CONTRACTOR shall coordinate with the DISTRICT for demolition permits required by the DISTRICT and with all other regulatory agencies and utility companies.

##### 1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Division 1                      General Requirement

##### 1.3 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

###### A. Reference Standards:

- 1. Geotechnical Engineering and Geologic Hazards Study for New Transitional Kindergarten Classrooms Coleman Elementary School, 800 Belle Avenue, San Rafael, CA 94901

###### B. State of California (Caltrans) Standards:

- 1. Standard Specifications 2018:
  - Section 15                      Existing Facilities.
  - Section 17-2                  Clearing and Grubbing.
  - Section 19                      Earthwork.

### DEMOLITION, CLEARING AND GRUBBING 31 10 00- 1

C. Commercial Standards:

1. USA Underground Service Alert.

1.4 CONTRACTOR SUBMITTALS

- A. Demolition Schedule: The CONTRACTOR shall submit a complete coordination schedule for demolition work including shut-off and continuation of utility services prior to start of the work. The schedule shall indicate proposed methods and operations of facility demolition, and provide a detailed sequence of demolition and removal work to ensure uninterrupted operation of occupied areas.
- B. The CONTRACTOR shall provide copies of written agreements from private land owners, landfill operators, or other agencies accepting disposal of any demolished material prior to any work.

1.5 JOB CONDITIONS

- A. Condition of Facilities: The DISTRICT assumes no responsibility for actual condition of facilities to be demolished. The CONTRACTOR shall visit the site and inspect the existing facilities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 OCCUPANCY AND POLLUTION CONTROL

- A. Water sprinkling, temporary enclosures, chutes and other suitable methods shall be used to limit dust and dirt rising and scattering in the air. The CONTRACTOR shall comply with all government regulations pertaining to environmental protection. Water shall not be used in a manner that creates hazardous or objectionable conditions such as ice, flooding, or pollution.

3.2 PROTECTION

- A. Safe passage of persons around area of demolition shall be provided in accordance with all safety and regulatory requirements. Operations shall be conducted to prevent damage to adjacent buildings, structures, other facilities, people and property.
- B. Existing landscaping materials, structures, and appurtenances which are not to be demolished shall be protected and maintained as necessary.
- C. The CONTRACTOR shall protect and maintain conduits, drains, sewers, pipes and wires that are not to be demolished.

3.3 AT-GRADE DEMOLITION

- A. All asphalt concrete and all portland cement concrete curbs, walks, and access ramps shall be sawcut at the nearest score line or deep joint and removed entirely to the sawcut limits. Where adjacent pavement or concrete is broken or deteriorated sufficiently to prohibit a sound replacement the entire deteriorated section shall be removed to the limits determined by the DISTRICT.

DEMOLITION, CLEARING AND GRUBBING 31 10 00- 2



### 3.4 SITE CLEARING, GRUBBING AND STRIPPING

- A. Clearing and grubbing shall conform to Section 17-2, "Clearing and Grubbing," of the Caltrans Standard Specifications and this Section.

### 3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. Demolition and removal of debris shall be conducted to ensure minimum interference with roads, streets, walks and other adjacent occupied or used facilities which shall not be closed or obstructed without permission from the DISTRICT. Alternate routes shall be provided around closed or obstructed traffic ways.
- B. Site debris, rubbish and other materials resulting from demolition operations shall become the property of the CONTRACTOR and shall be removed by the CONTRACTOR at the CONTRACTOR's expense to a suitable site. The proper and legal disposal of demolished materials shall be the responsibility of the CONTRACTOR.

### 3.6 PATCHING AND REPAIRING

- A. The CONTRACTOR shall provide patching, replacing, repairing and refinishing of damaged areas or damaged adjacent facilities involved in the demolition. New concrete shall match the existing adjacent surfaces, in kind or of better quality, to the satisfaction of the ENGINEER, at no cost to the DISTRICT or to the owners of the facilities.

### 3.7 CLEANUP

- A. During and upon completion of work the CONTRACTOR shall promptly remove unused tools and equipment, surplus materials, rubbish, debris and dust and shall leave areas affected by work in a clean, approved condition.
- B. The CONTRACTOR shall clean adjacent structures and facilities of dust, dirt and debris caused by demolition, as directed by the ENGINEER or governing authorities, and return adjacent areas to condition existing prior to start of work.
- C. The CONTRACTOR shall clean and sweep daily all street and roads affected by its operation.

END OF SECTION

## SECTION 31 22 00

### EARTHWORK

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment and labor necessary to furnish and construct the roadway Subgrade and all appurtenant work, complete in place, as shown on the Drawings and as specified herein.
- B. Work Covered in this Section:
  - 1. Preparation for Fill Material.
  - 2. Grading and Compaction.

##### 1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 11 00                      Demolition, Clearing, and Grubbing
- B. Section 31 23 33                      Trench Excavation and Backfill
- C. Section 32 12 00                      Asphalt Pavement, Aggregate Base and AC Grind
- D. Division 1                              General Requirements.

##### 1.4 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Reference Standards:
  - 1. Geotechnical Engineering and Geologic Hazards Study for New Transitional Kindergarten Classrooms Coleman Elementary School, 800 Belle Avenue, San Rafael, CA 94901
- B. State of California (Caltrans) Standards:
  - 1. Standard Specifications 2018:
    - Section 15                      Existing Facilities.
    - Section 17-2                      Clearing and Grubbing.
    - Section 19                      Earthwork.
    - Section 24                      Stabilized Soils
- C. California Building Code (Current Edition).
- D. Commercial Standards:

## EARTHWORK 31 22 00- 1

ASTM C 117	Test Method for Materials Finer than 75- $\mu$ m (No. 200) Sieve in Mineral Aggregates by Washing.
ASTM C 136	Method for Sieve Analysis of Fine and Course Aggregates.
ASTM D 1556	Test Method for Density of Soil in Place by the Sand-Cone Method.
ASTM D 1557	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54-kg) Rammer and 18-in. (457-mm) Drop.
ASTM D 2844	Test Method for Resistance <i>R</i> -Value and Expansion Pressure of Compacted Soils.
ASTM D 2922	Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
ASTM D 3017	Test Method for Water Content of Soil and Rock in Place By Nuclear Methods (Shallow Depth).
ASTM D 4318	Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

## 1.5 CONTRACTOR SUBMITTALS

- A. Certificates of Compliance: Certificates of Compliance shall be provided for all products and materials proposed to be used under this Section.

## 1.6 QUALITY ASSURANCE

- A. All soils testing will be done by a testing laboratory of the DISTRICT'S choice and at the CONTRACTOR'S expense, except as otherwise specified in this Section.
- B. Where soil material is required to be compacted to a percentage of relative compaction, the maximum density at optimum moisture content will be determined in conformance with ASTM D 1557. Field density in-place and moisture content tests will be performed in conformance with ASTM D 2922 and ASTM D 3017, respectively, or by such other means acceptable to the DISTRICT.
- C. If the tested materials show non-compliance with the required relative compaction, the CONTRACTOR shall accomplish such remedy as may be required to insure compliance.
- D. The CONTRACTOR shall pay the cost of the first test and any subsequent re-testing after the first test to show compliance shall also be at the CONTRACTOR'S expense.
- E. The CONTRACTOR shall notify the DISTRICT at least 48 hours prior to performing any site clearing, grubbing, or stripping.
- F. Finish Subgrade at any point shall not vary more than 0.05 foot above or below the subgrade elevation shown on the Drawings.

## 1.7 PROJECT CONDITIONS

### EARTHWORK 31 22 00- 2

- A. Material for embankments, where required, shall consist of suitable excavated material if available, or such imported fill material as may be required conforming to the requirements of this Section and the geotechnical engineering study.
- B. The CONTRACTOR shall be solely responsible for the maintenance of the graded surface at all times including implementing all erosion control measures as shown on the drawings during the winter months.
- C. The CONTRACTOR shall be solely responsible for provision of adequate site drainage at all times as shown on the grading and erosion control plans during the course of the WORK.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Structural fill, native or import fill shall meet the requirements specified on the geotechnical engineering study.
- B. All fill material, import or native, shall be “non-expansive” and free of organic materials, trash and debris, or any other deleterious materials, and shall be subject to the approval of the DISTRICT.
- C. The CONTRACTOR shall submit to the DISTRICT at least 10 working days prior to use on the site its proposed source of import fill material along with a soils report and Certification from the designated source that the proposed source materials conform to this Section.
- D. All suitable native fill material containing clods or hard lumps of earth over 6 inches in the greatest dimension shall be broken up before compaction.
- E. Lime treatment, if used, shall be as required by Section 24 “Stabilized Soils” of the State of California 2018, Standard Specifications and the geotechnical engineering study.

## PART 3 - EXECUTION

### 3.1 PREPARATION FOR FILL MATERIAL

- A. Prior to placing import fill material, all areas to receive fill shall be scarified, moisture conditioned and compacted as specified in the geotechnical engineering study.

### 3.2 SITE GRADING AND COMPACTION

- A. Site grading, placing and compacting shall conform to geotechnical engineering study, Section 19-2, "Roadway Excavation", Section 19-5, "Compaction" and Section 19-6, "Embankment Construction," of the Caltrans Standard Specifications and as modified by this Section.
- B. Damage to underlying native soils caused by the CONTRACTOR'S operations shall be repaired and re-compacted under the supervision of and to the satisfaction of the DISTRICT at no additional cost to the DISTRICT.
- C. The CONTRACTOR shall remove and dispose of all excess excavated material to a suitable site. The proper and legal disposal shall be the responsibility of the CONTRACTOR.

## EARTHWORK 31 22 00- 3

- D. Non-expansive material for fill shall be placed in lifts or horizontal layers not exceeding 8 inches in uncompacted thickness as shown on the plans and as specified in the geotechnical engineering study.
- E. Areas to be lime treated should be as specified in the geotechnical engineering study. Scarified areas should extend 5 feet beyond the limits of the structure and 3 feet beyond the edge of the PCC flatwork or AC paving.

### 3.3 UNDERGROUND STRUCTURES

- A. Where abandoned underground structures and pipelines are encountered in the project areas, remove to sufficient depth to allow underground lines to cross, backfill and compact during rough grading. The DISTRICT may require further work to be done if visual inspection indicates during construction.

END OF SECTION

## TRENCH EXCAVATION AND BACKFILL

## 1.1 RELATED DOCUMENTS

- ## 1.2 THE REQUIREMENT

- ### 1.3 RELATED WORK SPECIFIED ELSEWHERE

- ## 1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- TRENCH EXCAVATION AND BACKFILL 31 23 33- 1

Section 19	Earthwork.
Section 25	Aggregate Subbases.
Section 26	Aggregate Bases.

D. Commercial Standards:

ASTM D 422	Test Method for Particle-Size Analysis of Soils.
ASTM D 1556	Test Method for Density of Soil in Place by the Sand-Cone Method.
ASTM D 1557	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54-kg) Rammer and 18-in. (457-mm) Drop.
ASTM D 1633	Test Method for Compressive Strength of Molded Soil-Cement Cylinders.
ASTM D 2419	Method for Sand Equivalent Value of Soils and Fine Aggregate.
ASTM D 2487	Test Method for Classification of Soils for Engineering Purposes.
ASTM D 2922	Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
ASTM D 3017	Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
ASTM D 3776	Test Methods for Mass Per Unit Area (Weight) of Woven Fabric.
ASTM D 3786	Method of Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics: Diaphragm Bursting Strength Tester Method.
ASTM D 4253	Test Methods for Maximum Index Density of Soils Using a Vibratory Table.
ASTM D 4254	Test Methods for Minimum Index Density of Soils and Calculation of Relative Density.
ASTM D 4318	Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
ASTM D 4491	Test Methods for Water Permeability of Geotextiles by Permittivity.
ASTM D 4632	Test Method for Grab Breaking Load and Elongation of Geotextiles.

TRENCH EXCAVATION AND BACKFILL 31 23 33- 2

ASTM D 4751

Test Method for Determining the Apparent Opening Size of a Geotextile.

OSHA

Occupational Safety and Health Administration.

E. San Leandro Standard Details and Specifications

1.5 CONTRACTOR SUBMITTALS

- A. The CONTRACTOR'S attention is directed to the provisions for "Shoring and Bracing Drawings" in Section 6705 of the California Labor Code. The CONTRACTOR, prior to beginning any trench or structure excavation 5 feet deep or over, shall submit to the DISTRICT for review for compliance with Section 6705 the CONTRACTOR'S detailed plan showing design of all shoring, bracing, sloping of the sides of excavation, or other provisions for worker protection against the hazard of caving ground during the excavation of such trenches or structure excavation. If such plan varies from the shoring system standards established in the Construction Safety Orders of the State of California, such alternative system plans shall be prepared, stamped and signed by a civil or structural engineer licensed in the State of California at the CONTRACTOR'S expense.
- B. Certificates of Compliance: Certificates of Compliance shall be provided for all products and materials proposed to be used under this Section.
- C. For all materials that are not pre-approved by the DISTRICT the CONTRACTOR shall designate the source and/or submit samples of all materials in advance of their use for required testing and DISTRICT's approval. All testing costs shall be at the CONTRACTOR'S expense.

1.6 QUALITY ASSURANCE

- A. The CONTRACTOR shall notify the DISTRICT at least 48 hours prior to performing any utility excavation.

PART 2 - PRODUCTS

2.1 SUITABLE BACKFILL MATERIALS

- A. Suitable Backfill shall be in conformance with Section 19-3 "Structure Excavation and Backfill" of the Standard Specifications.

2.2 UNSUITABLE BACKFILL MATERIAL

- A. Unsuitable soils shall be disposed of daily in conformance with Section 19-2.03B "Surplus Material" of the Standard Specifications.

2.3 USE OF SUITABLE BACKFILL MATERIAL TYPES

- A. The CONTRACTOR shall use the types of materials as designated herein for all pipe bedding. Pipe zone bedding material shall be either:
  - 1. Class 2 aggregate base
  - 2. Washed natural river or bank sand, free of all silt, clay, loam, soluble or organic material, and graded in accordance with ASTM C136.

TRENCH EXCAVATION AND BACKFILL 31 23 33- 3



- A. The CONTRACTOR shall use the types of materials as designated herein for all required trench backfill construction.
  - 1. Under structures and paving – Class 2 aggregate base
  - 2. Landscape areas – native material

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Where abandoned underground structures are encountered in the pavement areas, remove the structure, backfill and compact during rough grading. The DISTRICT may require further work to be done if visual inspection indicates during construction.

### 3.2 MINOR STRUCTURE EXCAVATION

- A. General: Except when specifically provided to the contrary, excavation shall include the removal of all materials of whatever nature encountered, including all obstructions of any nature that would interfere with the proper execution and completion of the work. The removal of said materials shall conform to the lines and grades shown on the Drawings or ordered by the DISTRICT. Unless otherwise provided, the entire construction site shall be stripped of all vegetation and debris, and such material shall be removed from the site prior to performing any excavation. The CONTRACTOR shall furnish, place, and maintain all supports and shoring that may be required for the sides of the excavations, and all pumping, ditching, or other measures required for the removal or exclusion of water, including storm water, groundwater, and wastewater reaching the site of the work from any source so as to prevent damage to the work or adjoining property. Excavations shall be sloped or otherwise supported in a safe manner in accordance with applicable State safety requirements and the requirements of OSHA Safety and Health Standards for Construction (29CFR1926). The limits of structure excavation shall be a minimum of 12 inches beyond the outside edge of the structure, and at a minimum no larger than necessary to facilitate backfill, compaction and testing operations. For structures poured against undisturbed soil the width of the structure wall shall be no more than 2 inches greater than specified or shown on the Drawings.
- B. Excavation Beneath Minor Structures: Except where otherwise specified for a particular structure or as directed by the DISTRICT, excavation shall be carried to the grade of the bottom of the structure. When directed by the DISTRICT, areas beneath minor structures shall be over-excavated. When such over-excavation is directed, both over-excavation and subsequent backfill to the required grade shall be performed. After over-excavation is performed and before backfill is placed, the exposed surface shall be scarified to a depth of 8 inches, brought to optimum moisture content, and rolled with heavy compaction equipment to obtain 90 percent of maximum density.

### 3.3 PIPELINE AND UTILITY TRENCH EXCAVATION

- A. Trench installation and backfill shall be constructed per Details 120A, 120B, 122A, 122B, and 122C of the City of San Leandro Standard plans and these special provisions.

- B. Trench Width: Unless otherwise shown or directed, excavation for pipelines and utilities shall be open-cut trenches. Trench widths shall be kept as narrow as is practical for the method of densification selected by the CONTRACTOR, but shall have a minimum width at the bottom of the trench equal to the outside diameter of the pipe plus 24 inches. The maximum width at the top of the pipe shall be equal to the outside diameter of the pipe plus 36 inches for pipe diameters 18 inches and larger, and to the outside diameter of the pipe plus 24 inches for pipe diameters less than 18 inches. For deep trenches, the maximum width requirement may be waived for constructability reasons with the written approval of the DISTRICT. For telecommunications conduits (electrical, telephone, cable TV/communication conduits), street light and traffic signal conduits, the width of the trench shall be as shown on the drawings.
- C. Trench Bottom: The pipe bedding shall be given a final trim establishing grade such that each pipe section when first laid will be continually in contact with the bedding along the extreme bottom of the pipe. Pipe and conduit shall be bedded and surrounded, in the "pipe zone" (a minimum depth of three inches under the pipe and to 12 inches over the top of the pipe), with compacted bedding material. Rounding out the trench bottom or bedding to form a cradle for the pipe will not be allowed. The CONTRACTOR shall excavate for bell holes and fittings.
- D. Open Trench: The maximum amount of open trench permitted in any one location shall be the length necessary to accommodate the amount of pipe installed and backfilled in a single day. All trenches shall be fully backfilled at the end of each day or, in lieu thereof, shall be covered by heavy steel plates adequately braced and capable of supporting vehicular traffic in those locations where it is impractical to backfill at the end of each day. The above requirements for backfilling or use of steel plates may be waived in cases where the trench is located further than 100 feet from any travelled roadway or occupied structure. In such cases, however, barricades and warning lights meeting safety requirements shall be provided and maintained.
- E. Trench Over-Excavation: Where indicated trenches shall be excavated to the depth shown, and then backfilled to the grade of the bottom of the Pipe Zone.
- F. Over-Excavation: When ordered by the DISTRICT, whether or not indicated on the Drawings, trenches shall be over-excavated beyond the depth shown. Such over-excavation shall be to the depth ordered. The trench shall then be backfilled to the grade of the bottom of the Pipe Zone.
- G. Where pipelines are to be installed in embankment or structure fills, the fill shall be constructed to a level a minimum of 2 feet above the top of the pipe, as directed by the DISTRICT, or as recommended by the pipe manufacturer, whichever is greater, before the trench is excavated.

### 3.4 OVER-EXCAVATION NOT ORDERED, SPECIFIED, OR SHOWN

- A. Any over-excavation carried below the grade ordered, specified, or shown, shall be backfilled to the required grade and densified with the specified material and compaction. Such work shall be performed by the CONTRACTOR at its own expense.

### 3.5 EXCAVATION IN VICINITY OF TREES

- A. Except where trees are shown to be removed, trees shall be protected from injury during construction operations. No tree roots over 2 inches in diameter shall be cut without express permission of the DISTRICT. Trees shall be supported during excavation by any means previously reviewed by the DISTRICT.

## TRENCH EXCAVATION AND BACKFILL 31 23 33- 5

- B. If existing roots over one inch in diameter are cut during the course of the work, the cut faces shall be thoroughly coated with emulsified asphalt made especially for use on cut or damaged plant tissues. Exposed roots shall be covered with wet burlap to prevent them from drying out.

### 3.6 DISPOSAL OF EXCESS EXCAVATED MATERIAL

- A. The CONTRACTOR shall remove and dispose of all excess excavated material to a suitable site. The proper and legal disposal shall be the responsibility of the CONTRACTOR.

### 3.7 BACKFILL - GENERAL

- A. Backfill shall not be dropped directly upon any structure or pipe. Backfill shall not be placed around or upon any structure for a minimum of 72 hours or until the concrete has attained sufficient design strength to withstand the loads imposed, whichever is greater.

### 3.8 PLACING AND SPREADING OF BACKFILL MATERIALS

- A. Backfill materials shall be placed and spread evenly in horizontal layers. The backfill layers shall be evenly spread so that when compacted, each layer shall not exceed 8 inches in thickness.
- B. During spreading each layer shall be thoroughly mixed as necessary to promote uniformity of material in each layer and uniformity of moisture throughout backfill materials. Pipe Zone backfill materials shall be manually spread around the pipe so that when compacted, the Pipe Zone backfill will provide uniform bearing and side support.
- C. Where the backfill material moisture content is below the optimum moisture content water shall be added before or during spreading until the proper moisture content is achieved.
- D. Where the backfill material moisture content is too high to permit the specified degree of compaction, the material shall be dried or replaced until the moisture content is satisfactory.
- E. Backfill shall be mechanically compacted by means of tamping rollers, sheepfoot rollers, pneumatic tire roller, vibrating rollers, or other mechanical tampers. All such equipment shall be of a size and type subject to review by the DISTRICT. Impact-type pavement breakers (stompers) will not be permitted. Permission to use specific compaction equipment shall not be construed as guaranteeing or implying that the use of such equipment will not result in damage to adjacent ground, existing improvements, or new improvements. The CONTRACTOR shall make its own determination in this regard.
- F. Material for mechanically compacted backfill may be placed in loose lifts which, prior to compaction, shall not exceed the thickness specified below for various types of equipment:
  - 1. Vibratory equipment, including vibratory plates, vibratory smooth-wheel rollers, and vibratory pneumatic-tired rollers - maximum lift thickness of 8-inches.
  - 2. Rolling equipment, including sheepfoot (both vibratory and non-vibratory), grid, smooth-wheel (non-vibratory), pneumatic-tired (non-vibratory), and segmented wheels - maximum lift thickness of 1 foot.
  - 3. Hand-directed mechanical tampers-maximum lift thickness of 4 inches.

## TRENCH EXCAVATION AND BACKFILL 31 23 33- 6

### 3.9 COMPACTION OF BACKFILL MATERIALS

- A. Compaction of backfill material shall be in conformance with Section 19-5 of the Standard Specifications.

### 3.10 STEEL PLATE

- A. General: When backfilling operations of an excavation in the traveled way, whether transverse or longitudinal, cannot be properly completed within a work day, steel plate bridging with a non-skid surface and shoring may be required to preserve unobstructed traffic flow.
- B. When steel plate bridging is required, the following conditions shall apply:
  - 1. Steel plates used for bridging must extend a minimum of 12 inches beyond the edges of the trench.
  - 2. The trench shall be adequately shored to support the bridging and traffic loads and shall be installed to operate with minimum noise.
  - 3. Temporary paving with cold asphalt concrete shall be used to feather the edges of the plates.
  - 4. Bridging shall be secured against displacement by using adjustable cleats, shims or other devices.
- C. Steel plate bridging should not exceed 4 consecutive working days in any given week.

END OF SECTION

## SECTION 31 63 29

### DRILLED CONCRETE PIERS AND SHAFTS

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section includes dry-installed drilled piers.
- B. See Division 03 Section 033000 "Cast-In-Place Concrete" for additional Quality Assurance and Field Quality Control provisions and requirements.

##### 1.3 UNIT PRICES

- A. Unit prices are included in Division 1 Section "Unit Prices."
- B. Drilled Piers: Actual net volume of drilled piers in place and approved. Actual length, shaft diameter, and bell diameter if applicable, may vary, to coincide with elevations where satisfactory bearing strata are encountered. These dimensions may also vary with actual bearing value of bearing strata determined by an independent testing and inspecting agency. Adjustments will be made on net variation of total quantities, based on design dimensions for shafts and bells.
  - 1. Base bids on indicated number of drilled piers and, for each pier, the design length from top elevation to bottom of shaft, extended through the bell, if applicable, and the diameter of shaft and bell.
  - 2. Unit prices include labor, materials, tools, equipment, and incidentals required for excavation, trimming, shoring, casings, dewatering, reinforcement, concrete fill, testing and inspecting, and other items for complete drilled-pier installation.
- C. Rock Measurement: Volume of rock actually removed, measured in original position, but not to exceed outside dimensions of drilled piers cast against rock. Unit prices for rock excavation include replacement with approved materials.

##### 1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Design Mixtures: For each concrete mixture. Submit to Architect for review at least 7 days before placing concrete.
- C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Submit to Architect for review at least 7 days before fabrication.
- D. Steel Reinforcement mill certificates.

### DRILLED CONCRETE PIERS AND SHAFTS 31 63 29 - 1

E. Welding certificates.

F. Material test reports.

## 1.5 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1, "Structural Welding Code - Steel."
2. AWS D1.4, "Structural Welding Code - Reinforcing Steel."

B. Drilled-Pier Standard: Comply with ACI 336.1 unless modified in this Section.

C. Preinstallation Conference: Conduct conference at Project site.

## 1.6 PROJECT CONDITIONS

A. Project-Site Information: A geotechnical report is not required and has not been prepared for this Project.

B. Survey Work: Engage a qualified land surveyor or professional engineer to perform surveys, layouts, and measurements for drilled piers. Before excavating, lay out each drilled pier to lines and levels required. Record actual measurements of each drilled pier's location, shaft diameter, bottom and top elevations, deviations from specified tolerances, and other specified data.

1. Record and maintain information pertinent to each drilled pier and cooperate with the Owner's testing and inspecting agency and the Geotechnical Engineer to provide data for required reports.

## PART 2 - PRODUCTS

### 2.1 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615, Grade 60, deformed.

B. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

### 2.2 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C 150, Type II, gray. Supplement with the following if desired:
  - a. Fly Ash: ASTM C 618, Class F.
  - b. Ground Granulated Blast Furnace Slag (GGBFS): ASTM C 989.
  - c. Maximum total percentage of supplementary cementitious materials by mass is 25%.
  - d. See Structural Drawings for water-cement ratios.

B. Normal-Weight Aggregates: ASTM C 33, graded.

## DRILLED CONCRETE PIERS AND SHAFTS 31 63 29 - 2

1. Maximum Coarse-Aggregate Size: See Structural Drawings for maximum aggregate size.
2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 94 and potable.

## 2.3 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.

B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride. Use admixtures according to manufacturer's written instructions.

1. Water-Reducing Admixture: ASTM C 494, Type A.
2. Retarding Admixture: ASTM C 494, Type B.
3. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.
4. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.
5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494, Type G.
6. Plasticizing and Retarding Admixture: ASTM C 1017, Type II.

## 2.4 STEEL CASINGS

A. Steel Pipe Casings: ASTM A 283, Grade C, or ASTM A 36, carbon-steel plate, with joints full-penetration welded according to AWS D1.1.

## 2.5 CONCRETE MIXTURES AND MIXING

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.

B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than Portland cement according to ACI 301 limits as if concrete were exposed to deicing chemicals.

C. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

D. Proportion concrete mixtures as shown on the Structural Drawings.

E. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94 and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

## PART 3 - EXECUTION

### 3.1 EXCAVATION

A. Unclassified Excavation: Excavate to bearing elevations regardless of character of surface and subsurface conditions encountered.

## DRILLED CONCRETE PIERS AND SHAFTS 31 63 29 - 3

- B. **Classified Excavation:** Excavation is classified as standard excavation, special excavation, and obstruction removal and includes excavation to bearing elevations as follows:
1. Standard excavation includes excavation accomplished with conventional augers fitted with soil or rock teeth, drilling buckets, or underreaming tools attached to drilling equipment of size, power, torque, and downthrust necessary for the Work.
  2. Special excavation includes excavation that requires special equipment or procedures above or below indicated depth of drilled piers where drilled-pier excavation equipment used in standard excavation, operating at maximum power, torque, and downthrust, cannot advance the shaft.
  3. Obstructions: Payment for removing unanticipated boulders, concrete, masonry, or other subsurface obstructions that cannot be removed by conventional augers fitted with soil or rock teeth, drilling buckets, or underreaming tools attached to drilling equipment of size, power, torque, and downthrust necessary for the Work will be according to Contract provisions for changes in the Work.
- C. Excavate shafts for drilled piers to indicated elevations. Remove loose material from bottom of excavation.
- D. Notify and allow the Owner's testing and inspecting agency and the Geotechnical Engineer to test and inspect bottom of excavation. If unsuitable bearing stratum is encountered, make adjustments to drilled piers as determined by the Geotechnical Engineer.
1. Do not excavate shafts deeper than elevations indicated unless approved by the Geotechnical Engineer and the Structural Engineer.
  2. Payment for additional authorized excavation will be according to Contract provisions for changes in the Work.
- E. **End-Bearing Drilled Piers:** Probe with auger to a depth below bearing elevation, equal to diameter of the bearing area of drilled pier. Determine whether voids, clay seams, or solution channels exist.
- F. **Temporary Casings:** Install watertight steel casings of sufficient length and thickness to prevent water seepage into shaft; to withstand compressive, displacement, and withdrawal stresses; and to maintain stability of shaft walls.
1. Remove temporary casings, maintained in plumb position, during concrete placement and before initial set of concrete.
- G. **Bells:** Excavate bells for drilled piers to shape, base thickness, and slope angle indicated. Excavate bottom of bells to level plane and remove loose material before placing concrete.
- H. **Tolerances:** Construct drilled piers to remain within ACI 336.1 tolerances.

### 3.2 INSTALLATION

- A. Install steel casings of minimum wall thickness indicated and of diameter not less than diameter of drilled pier.
- B. Comply with recommendations in CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

## DRILLED CONCRETE PIERS AND SHAFTS 31 63 29 - 4



- C. Place concrete in continuous operation and without segregation immediately after inspection and approval of shaft by the Owner's independent testing and inspecting agency.
- D. Place concrete to fall vertically down the center of drilled pier without striking sides of shaft or steel reinforcement. Vibrate top 60 inches of concrete.
- E. Coordinate withdrawal of temporary casings with concrete placement to maintain at least a 60-inch head of concrete above bottom of casing. Vibrate top 60 inches of concrete after withdrawal of temporary casing.

### 3.3 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a qualified inspecting agency to perform field inspections and prepare inspection reports.
  - 1. Drilled piers.
  - 2. Excavation.
  - 3. Concrete.
  - 4. Steel reinforcement welding and placement.
- B. Testing: Owner will engage a qualified testing agency to perform field tests and prepare test reports.
- C. Drilled-Pier Tests and Inspections: For each drilled pier, before concrete placement.
  - 1. Soil Testing: Bottom elevations, bearing capacities, and lengths of drilled piers indicated have been estimated from available soil data. Actual elevations and drilled-pier lengths and bearing capacities will be determined by the Owner's testing and inspecting agency. Final evaluations and approval of data will be determined by the Geotechnical Engineer.
- D. Concrete Tests and Inspections: ACI 301.
- E. Correct deficiencies in the Work that special inspections and test reports indicate do not comply with the Contract Documents.

END OF SECTION

## SECTION 32 12 00

### ASPHALT PAVEMENT, AGGREGATE BASE AND AC GRIND

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment, and labor necessary to furnish and construct the roadway structural section, asphalt overlay, and all appurtenant work, complete in place, as shown on the Drawings and as specified herein.

- B. Work Covered in this Section:

- 1. Preparation of Subgrade.
  - 2. Aggregate Base.
  - 4. Tack Coat.
  - 5. Asphalt Concrete, Utility Cut Pavement Replacement, and Pavement Structural Section.
  - 6. Asphalt Concrete Grinding
  - 7. Pavement Flood Testing.

##### 1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 10 00 Demolition, Clearing, and Grubbing.
- B. Section 31 23 33 Trench Excavation and Backfill
- C. Division 1 General Requirements.

##### 1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Reference Standards:

- 1. Geotechnical Engineering and Geologic Hazards Study for New Transitional Kindergarten Classrooms Coleman Elementary School, 800 Belle Avenue, San Rafael, CA 94901

- B. State of California (Caltrans) Standards:

- 1. Standard Specifications 2018:
    - Section 15 Existing Highway Facilities.
    - Section 17-2 Clearing and Grubbing.
    - Section 19 Earthwork.
    - Section 26 Aggregate Bases
    - Section 37 Bituminous Seals
    - Section 39 Asphalt Concrete
    - Section 39-3.04 Cold Planing Asphalt Concrete Pavement

#### ASPHALT PAVEMENT, AGGREGATE BASE AND AC GRIND 32 12 00- 1

Section 92  
Section 94

Asphalt Binders  
Asphaltic Emulsions.

C. Commercial Standards:

ASTM D 36	Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus.)
ASTM D 1557	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54-kg) Rammer and 18-in. (457-mm) Drop.
ASTM D 3407	Methods of Testing Joint Sealants, Hot-Poured, for Concrete and Asphalt Pavements.

1.5 CONTRACTOR SUBMITTALS

- A. Certificates of Compliance: Certificates of Compliance shall be provided for all products and materials proposed to be used under this Section.
- B. Delivery Tickets: The CONTRACTOR shall provide delivery tickets to the DISTRICT at the time of delivery of each load of product, including aggregate subbase, aggregate base, asphalt concrete, and liquid asphalt. Each delivery ticket shall include or be accompanied by appropriate batch information produced by the batching plant or factory of origin and information stating the mix or model number, total yield in tons, gallons, or cubic yards, and time, date, and location of delivery.

1.6 QUALITY ASSURANCE

- A. The CONTRACTOR will employ a testing laboratory to perform all quality assurance testing and inspection testing as may be required by this Section.
- B. At the discretion of the DISTRICT the CONTRACTOR shall flood test all asphalt pavement for proper drainage by flooding with water in ample quantity to demonstrate the correct shaping of the pavement.

PART 2 - PRODUCTS

2.1 AGGREGATE BASE

- A. Aggregate base material shall be Class 2 aggregate base in conformance with Section 26, "Aggregate Bases," of the Caltrans Standard Specifications. All aggregate base used on the work shall conform to the 3/4 inch maximum size gradations.

2.2 TACK COAT OR PAINT BINDER

- A. A tack coat or paint binder shall be SS-1 asphalt emulsion in conformance with Section 92, "Asphalt Binders," of Caltrans Standard Specifications.

2.3 ASPHALT CONCRETE, UTILITY CUT PAVEMENT REPLACEMENT, AND PAVEMENT STRUCTURAL SECTION

- A. Asphalt concrete shall be Type A on all pavement sections.

ASPHALT PAVEMENT, AGGREGATE BASE AND AC GRIND 32 12 00- 2

- B. The asphalt binder shall be paving asphalt grade PG 64-10 in conformance with Section 92, "Asphalts," of the Caltrans Standard Specifications.
- C. The aggregate shall be 1/2 inch Type A for the asphalt concrete pavement structural sections in conformance with Section 39, "Hot Mix Asphalt," of the Caltrans Standard Specifications. The minimum asphalt concrete thickness for the top lift shall be 1.5 inches.

#### 2.4 FINE ASPHALT CONCRETE PAVING

- A. Fine asphalt concrete for patch paving shall be Type A, 3/8 inch maximum size. The asphalt binder shall be paving asphalt grade PG 64-10 in conformance with Section 39, "Asphalt Concrete," of the Caltrans Standard Specifications.

### PART 3 - EXECUTION

#### 3.1 GENERAL

- A. All work adjacent to existing pavement structural section shall butt up to the full existing structural section. Where the full pavement structural section is not encountered, continue removal of additional pavement structural section until a full pavement structural section is found.

#### 3.2 ORDER OF WORK

- A. All underground utilities shall be installed, inspected and approved, and all backfill and compaction operations shall be completed prior to commencement of pavement structural section construction.
- B. All asphalt concrete patch and pavement repair work shall be installed flush and level with adjacent (existing) pavement.
- C. Cutting or patching of finished pavement will not be allowed.

#### 3.3 PREPARATION OF SUBGRADE

- A. The subgrade shall be prepared in conformance with Section 19, "Earthwork," of the Caltrans Standard Specifications, and the geotechnical engineering study.
- B. The surface of the subgrade after compaction shall be hard, unyielding, uniform, smooth, self-draining, and true to grade and cross-section.
- C. All soft material which will not compact readily and all unstable material shall be removed in conformance with the geotechnical engineer. All materials for subgrade replacement shall be in conformance with the written recommendations of the geotechnical engineer.
- D. Subgrade preparation and compaction and determination of subgrade stability shall be performed under the observation of the DISTRICT.
- E. Finish subgrade shall be within the tolerances established in Section 19-1.03C, "Grade Tolerance," of the Caltrans Standard Specifications.

### ASPHALT PAVEMENT, AGGREGATE BASE AND AC GRIND 32 12 00- 3

### 3.4 AGGREGATE BASE

- A. Aggregate base shall be spread and compacted in conformance with Section 26, "Aggregate Bases," of the Caltrans Standard Specifications for Class 2 Aggregate Base. Finished aggregate base shall not vary more than 0.05 foot above or below the established grade. The aggregate base shall be compacted to 95 percent relative compaction in conformance with ASTM D 1557. The surface of the aggregate base after compaction shall be hard, unyielding, uniform, smooth, self-draining, and true to grade and cross-section.

### 3.6 PAVEMENT GRINDING

- A. Grinding necessary to perform edge and transverse pavement conforms shall be performed on all areas to be overlaid and shall be completed in conformance with Section 39-3.04 "Cold Planing Asphalt Concrete Pavement," of the Caltrans Standard Specifications and this Section.
- B. All materials removed shall become the property of the CONTRACTOR and shall be disposed of in a legal manner. Residue from the grinding operations may be removed from the asphalt surface by a vacuum sweeper after the grinding operations. The CONTRACTOR shall be responsible for maintaining a clean condition during the course of the grinding operations. All loose materials shall be removed prior to the application of the tack coat.
- C. Areas that cannot be reached with the grinding machine shall be jack-hammered or otherwise removed by hand.

### 3.7 TACK COAT

- A. The CONTRACTOR shall be responsible for the proper use of tack coats and shall be in conformance with applicable regulatory requirements.
- B. Tack Coat or Paint Binder - Prior to placement of asphalt concrete a tack coat or paint binder shall be applied to existing paved and vertical surfaces where new asphalt concrete is to be placed on or against existing pavement at an approximate total rate from 0.02 gallon to 0.10 gallon per square yard to all areas receiving asphalt concrete. Care shall be taken to prevent over application of tack coat material onto finish surfaces that will not be in contact with the new asphalt concrete pavement.

### 3.8 ASPHALT CONCRETE PAVEMENT OR PATCH PAVING

- A. Surface preparation for asphalt concrete overlay on existing asphalt concrete surfaces shall include all grinding, patching, and sweeping.
- B. Application of a prime coat and/or tack coat shall not occur until all surface preparation has been performed.
- C. Asphalt concrete shall be spread and compacted on the existing asphalt concrete in conformance with the lines, grades and dimensions shown on the Drawings and in conformance with Section 39, "Asphalt Concrete," of the Caltrans Standard Specifications.
- D. Spreading and compaction equipment and methods shall be in conformance with Section 39, "Asphalt Concrete," of the Caltrans Standard Specifications and this Section. The DISTRICT may, at its option, call for continuous and/or random testing of asphalt concrete compaction. Asphalt concrete shall not be placed or stockpiled in windrows when the underlying layer or surface is frozen, or when, in the

#### ASPHALT PAVEMENT, AGGREGATE BASE AND AC GRIND 32 12 00- 4

opinion of the DISTRICT, weather conditions will prevent the proper handling, finishing, or compaction of the asphalt concrete.

- E. The finished grade shall be flush with the adjacent existing pavement. The CONTRACTOR shall be responsible for all damage to fresh surfacing until it is ready for use. Damaged areas shall be repaired to the satisfaction of the DISTRICT.
- F. The depositing, distribution, and spreading of each lift of the asphalt concrete shall be accomplished in a single, continuous operation.

### 3.9 PAVEMENT FLOOD TESTING

- A. Flood testing of asphalt pavement must be made prior to the placement of striping and legends. The DISTRICT must be present to witness the flood tests. The CONTRACTOR shall notify the DISTRICT a minimum of 3 working days prior to the flood test.
- B. The CONTRACTOR shall repair any areas which are damaged or in which excessive ponding occurs. Excessive ponding is defined as areas in which water stands more than 3/16-inch in depth. Any areas requiring remedial overlay shall be prepared by grinding the pertinent area as defined by the DISTRICT and placing fine asphalt concrete patch mix over a tack coat. The corrective work shall be done prior to the placement of striping and legends.

END OF SECTION

## SITE CONCRETE

## 1.1 RELATED DOCUMENTS

- ## 1.2 THE REQUIREMENT

- ## 1.2 RELATED WORK SPECIFIED ELSEWHERE

- ### 1.3 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- ### B. Federal Specifications and Standards:

C. State of California (Caltrans) Standards:

- D. Americans with Disabilities Act and ADA Accessibilities Guidelines (ADAAG)

### E. Commercial Standards:

October 01, 2024

ACI 301	Specifications for Structural Concrete for Buildings.
ACI 315	Details and Detailing of Concrete Reinforcement.
ACI 318	Building Code Requirements for Structural Concrete and Commentary.
ACI 347	Recommended Practice for Concrete Formwork.
ASTM A 185	Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement.
ASTM A 615	Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
ASTM C 31	Practice for Making and Curing Concrete Test Specimens in the Field.
ASTM C 33	Specification for Concrete Aggregates.
ASTM C 39	Test Method for Compressive Strength of Cylindrical Concrete Specimens.
ASTM C 94	Specification for Ready-Mixed Concrete.
ASTM C 143	Test Method for Slump of Hydraulic Cement Concrete.
ASTM C 150	Specification for Portland Cement.
ASTM C 309	Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
ASTM C 494	Specification for Chemical Admixtures for Concrete.
ASTM C 1077	Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.
ASTM D 1751	Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).
AWS D1.4	Structural Welding Code - Reinforcing Steel.
CRSI MSP-1	Concrete Reinforcing Steel Institute Manual of Standard Practice.
CBC	California Building Code.

#### 1.4 CONTRACTOR SUBMITTALS

- A. Certificate of Compliance: Certificates of Compliance shall be provided for all products and materials proposed to be used under this Section.
- B. Mix Designs: The CONTRACTOR shall submit to the DISTRICT, for review, preliminary concrete mix designs which shall show the proportions and gradations of all materials proposed for each class and type of concrete specified herein. Each mix design shall be accompanied by a Certificate of Compliance to these specifications.

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- C. Delivery Tickets: The CONTRACTOR shall provide delivery tickets at the time of delivery of each load of concrete. Each delivery ticket shall be accompanied by batch tickets automatically produced by the batching equipment, indicating quantities of each ingredient. Each delivery ticket shall, in addition, state the mix number, total yield in cubic yards, date and the time of day, to the nearest minute, corresponding to when the batch was loaded, when it was dispatched, when it arrived at the job, and the time that unloading began and slump.
- D. Reinforcement Shop Drawings: Indicate bar sizes, spacing, locations and quantities of reinforcing steel and wire fabric, bending and cutting schedules and supporting and spacing devices.
- E. Sealants: Submit samples and test data demonstrating that the proposed sealants will adhere to the surfaces to which they will be applied.

#### 1.5 CONSTRUCTION TOLERANCES

- A. The CONTRACTOR shall set and maintain concrete forms and perform finishing operations so as to ensure that the completed WORK is within the tolerances shown on the Drawing and as specified herein. Surface defects and irregularities are defined as finishes and are to be distinguished from tolerances. Permissible deviations for cast-in-place concrete structures shall not exceed  $\pm 1/4$ -inch.

#### 1.6 QUALITY ASSURANCE

- A. Sample Panels: When required by the DISTRICT, before installing concrete work, provide sample panels, of all specified finishes, minimum 3 feet x 3 feet, using specified materials. Show color, texture, pattern, edging, and joint treatments. Correct and rebuild sample panels until Architect's acceptance of the work. Retain panels during construction as a standard for completed concrete paving work.
- B. Do not change source or brands of cement and aggregate materials during the course of the work.
- C. Concrete finisher shall have a minimum 3 years' experience finishing high-volume fly ash concrete.
- D. Slip Resistance: Concrete walk surfaces shall have a minimum wet and dry coefficient of friction of 0.60 when tested in accordance with ASTM C1028.

#### 1.7 PROJECT CONDITIONS

- A. Work notification: Notify DISTRICT at least 24 hours prior to installation of concrete.
- B. Establish and maintain required lines and grade elevations. Refer to notes on the grading plans and Section covering site grading and/or earth moving

#### 1.8 DISTRICT ENGINEER

- A. The Engineer will inspect subgrade and aggregate base prior to installation of concrete work.

## PART 2 - PRODUCTS

### 2.1 FORM AND FALSEWORK MATERIALS

- A. Except as otherwise expressly accepted by the DISTRICT, all lumber brought on the job site for use as forms, shoring, or bracing shall be new material.
- B. Materials for concrete forms, formwork and falsework shall conform to the following requirements:
  - 1. Lumber shall be Douglas Fir or Southern Pine, construction grade or better, in conformance with U.S. Product Standard PS 20.
  - 2. Plywood for concrete formwork shall be new, waterproof, synthetic resin bonded, exterior type Douglas Fir or Southern Pine plywood manufactured especially for concrete formwork and shall conform to the requirements of PS 1 for Concrete Forms, Class I, and shall be edge sealed.
  - 3. Form materials shall be metal, wood, plywood, or other approved material that will not adversely affect the concrete and will facilitate placement of concrete to the shape, form, line and grade shown. Metal forms shall be an approved type that will accomplish such results.
- C. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

### 2.2 FORM TIES

- A. Form ties shall be provided with a plastic cone or other suitable means for forming a conical hole to insure that the form tie may be broken off back of the face of the concrete. The maximum diameter of removable cones for rod ties, or of other removable form-tie fasteners having a circular cross-section, shall not exceed 1-1/2 inches; and all such fasteners shall be such as to leave holes of regular shape for reaming. Form Ties shall be Burke Penta-Tie System, Richmond Snap-Tys, or equal.

### 2.3 REINFORCEMENT STEEL

- A. General: All reinforcement steel for all cast-in-place reinforced concrete construction shall conform to the following requirements:
  - 1. Bar reinforcement shall conform to ASTM A 615 for Grade 60 Billet Steel Reinforcement with supplementary requirement S-1, or as otherwise shown.
  - 2. Welded wire fabric reinforcement shall conform to ASTM A 185 and the details shown.
- B. Accessories:
  - 1. Accessories shall include all necessary chairs, slab bolsters, concrete blocks, tie wires, dips, supports, spacers and other devices to position reinforcement during concrete placement. Wire bar supports shall be CRSI Class 1 for maximum protection with a 1/8 inch minimum thickness of plastic coating which extends at least 1/2 inch from the concrete surface. Plastic shall be gray in color.

2. Concrete blocks (dobies), used to support and position reinforcement steel, shall have the same or higher compressive strength as specified for the concrete in which it is located. Wire ties shall be embedded in concrete block bar supports.

## 2.4 CONCRETE MATERIALS

- A. Ready-mix concrete shall conform to the requirements of ASTM C 94. Unless otherwise noted on the Plans, all concrete for site work shall be Class A.
- B. Admixtures: Admixtures shall be used in accordance with manufacturer's printed recommendations.
  1. Calcium Chloride: Calcium chloride will not be permitted to be used in concrete, unless specifically approved by the DISTRICT.
  2. Integral concrete colorant: one pound (pint) of liquid lamp black per cubic yard of concrete shall be added during mixing.

## 2.5 CURING MATERIALS

- A. All concrete shall be cured by the curing compound method. The curing compound shall be the clear or translucent type containing a fugitive dye conforming to the requirements of ASTM Designation: C 309, Type 1-D, Class A. The loss of water when tested in accordance with California Test 534, shall not be more than 0.15 kg/m<sup>2</sup> in 24 hours nor more than 0.45 kg/m<sup>2</sup> in 72 hours. The curing compound shall be applied at the approximate rate of one gallon per 150 square feet of area. The curing compound shall be applied in a manner that will provide a complete coating of all exposed faces of the concrete surface.

## 2.5 RELATED MATERIALS

- A. Joint-Filler ASTM D1752 Type I, premolded non extruding neoprene sponge rubber, thickness indicated; with removable polystyrene or PVC strip mechanically attached to the top edge.
- B. Epoxy Joint Filler: Two component polysulfide or polyurethane elastomeric type complying with FS TT S 00227, self-leveling, designed for foot traffic.
- C. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- D. Epoxy-Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class and grade to suit requirements, and as follows:
  1. Type II, non-load bearing, for bonding freshly mixed concrete to hardened concrete.

## 2.6 DESIGN

### A. Concrete Design Requirements:

1. General: All mix design must be approved by the DISTRICT. Concrete shall be composed of cement, admixtures, aggregates and water. These materials shall be of the qualities specified. In general, the mix shall be designed to produce a concrete capable of being deposited so as to obtain maximum density and minimum shrinkage and, where deposited in forms, to have good consolidation properties and maximum smoothness of surface. The proportions shall be changed whenever

necessary or desirable to meet the required results at no additional cost to the DISTRICT. All changes shall be subject to review by the DISTRICT.

2. Concrete shall be not less than 2,900 psi 28-day compressive strength for sidewalks and for curbs and gutters, using Type II or Type V cement, with a minimum of five sacks of cement per cubic yard. Concrete mix design shall be required for all such site concrete. Aggregate gradation shall be 1 inch x No. 4.

The CONTRACTOR is cautioned that the limiting parameters specified above are NOT a mix design. Additional cement or water reducing agent may be required to achieve workability demanded by the CONTRACTOR'S construction methods and aggregates. The CONTRACTOR is responsible for any costs associated with furnishing concrete with the required workability.

3. Cement: Type II or Type V cement shall be used for all cast-in-place concrete.

## 2.7 CONSISTENCY

- A. The consistency of the concrete in successive batches shall be determined by slump tests in accordance with ASTM C 143. Unless otherwise specified the slump for all concrete shall be maximum of 4 inches.
- B. Retempering of concrete will not be permitted.

## 2.8 MIXING AND TRANSPORTING

- A. All concrete shall be mixed in mechanically operated mixers.
- B. Ready-mixed concrete shall meet the requirements as to materials, batching, mixing, transporting and placing as specified herein and in accordance with ASTM C 94, including the supplementary requirements specified herein.
- C. Ready-mixed concrete shall be delivered to the site of the work, and discharge shall be completed within one and one-half hours after the addition of the cement to the aggregates or before the drum has been revolved 250 revolutions, whichever is first.
- D. Truck mixers shall be equipped with electrically-actuated counters by which the number of revolutions of the drum or blades may be readily verified. The counter shall be of the resettable, recording type, and shall be mounted in the driver's cab. The counters shall be actuated at the time of starting mixers at mixing speeds.
- E. Each batch of concrete shall be mixed in a truck mixer for not less than 70 revolutions of the drum or blades at the rate of rotation designated by the manufacturer of equipment. Additional mixing, if any, shall be at the speed designated by the manufacturer of the equipment as agitating speed. All materials including mixing water shall be in the mixer drum before actuating the revolution counter for determining the number of revolution of mixing.
- F. Each batch of ready-mixed concrete delivered at the job site shall be accompanied by a delivery ticket furnished to the DISTRICT.
- G. The use of non-agitating equipment for transporting ready-mixed concrete will be allowed only with written approval of the DISTRICT.

## 2.9 AGGREGATE BASE

- A. Aggregate base material shall be Class 2 aggregate base in conformance with Section 26, "Aggregate Bases," of the Caltrans Standard Specifications. All aggregate base used on the work shall conform to the 3/4 inch maximum size gradations.

## 2.10 TRUNCATED DOMES

- A. The dome size in a truncated domes in a detectable warning surface shall have a base diameter of 0.9 inch (22.9 mm) minimum and 0.92 inch (23.4 mm) maximum, a top diameter of 0.45 inch (11.4 mm) minimum and 0.47 inch (11.9 mm) maximum, and a height of 0.2 inch (5.1mm).
- B. The dome spacing for the truncated domes in a detectable warning surface shall have a center-to-center spacing of 2.3 inches (58 mm) minimum and 2.4 inches (61 mm) maximum, and a base-to-base spacing of 0.65 inch (16.5 mm) minimum, measured between the most adjacent domes on a square grid.
- C. All detectable warning surfaces shall be a resilient, yellow-colored surface per Federal Standard color FS 33538 of SAE AMS-STD-595A. Domes are to be 'in-line' parallel to curbing or concrete edge.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. All curb ramps shall be constructed in conformance to the CBC requirements.
- B. Truncated domes shall be a minimum depth of 3 feet, installed in locations as shown on plans.
- C. All curb and gutter shall be in constructed in conformance with the detail on the Plans.

### 3.2 GENERAL FORMWORK REQUIREMENTS

- A. Forms to confine the concrete and shape it to the required lines shall be used wherever necessary. The CONTRACTOR shall assume full responsibility for the adequate design of all forms, and any forms which are unsafe or inadequate in any respect shall promptly be removed from the WORK and replaced at the CONTRACTOR'S expense. All design, construction, maintenance, preparation and removal of forms shall be in conformance with Section 51-1.05, "Forms," of the Caltrans Standard Specifications; ACI 347; and the requirements specified herein.
- B. All forms shall be true in every respect to the required shape and size, shall conform to the established alignment and grade, and shall be of sufficient strength and rigidity to maintain their position and shape under the loads and operations incident to placing and vibrating the concrete.

### 3.3 REINFORCEMENT

- A. General: All reinforcement steel, welded wire fabric and other appurtenances shall be fabricated and placed in accordance with the requirements of the Uniform Building Code, the Drawings and the supplementary requirements specified herein.

B. Fabrication:

1. General: Reinforcement steel shall be accurately formed to the dimensions and shapes shown, and the fabricating details shall be prepared in accordance with ACI 315 and ACI 318, except as modified by the Drawings.
2. Bending or Straightening: Reinforcement shall not be straightened or rebent in a manner which will injure the material.

C. Placing:

1. Reinforcement steel shall be accurately positioned as shown, and shall be supported and wired together to prevent displacement, using annealed iron wire ties or suitable clips at intersections.
2. Tie wires shall be bent away from the forms in order to provide the specified concrete coverage.
3. Unless otherwise specified, reinforcement placing tolerances shall be within the limits specified in Section 7.5 of ACI 318 except where in conflict with the requirements of the Uniform Building Code.
4. The minimum spacing requirements of ACI 318 shall be followed for all reinforcing steel.
5. Welded wire fabric placed over the ground shall be supported on wired concrete blocks (dobies) spaced not more than 3 feet on centers in any direction. The construction practice of placing welded wire fabric on the ground and hooking into place in the freshly placed concrete will not be allowed.

D. Splicing:

1. General: Reinforcement bar splices shall be of the character acceptable to the DISTRICT.
2. Splices of Reinforcement:
  - a. The length of lap for reinforcement bars, unless otherwise shown, shall be in accordance with ACI 318.
  - b. Laps of welded wire fabric shall be in accordance with the ACI 318. Adjoining sheets shall be securely tied together with No. 14 tie wire, one tie for each 2 running feet. Wires shall be staggered and tied in such a manner that they cannot slip.

E. Cleaning and Protection:

1. The surfaces of all reinforcement steel and other metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar and other foreign substances immediately before the concrete is placed. Where there is delay in depositing concrete, reinforcing shall be reinspected and, if necessary, recleaned.

### 3.4 PREPARATION OF SURFACES FOR PLACING CONCRETE

- A. General: Subgrade surfaces shall be thoroughly wetted by sprinkling, prior to the placing of any concrete, and these surfaces shall be kept moist by frequent sprinkling up to the time of placing

concrete thereon. The surface shall be free from standing water, mud and debris at the time of placing concrete.

- B. Joints in Concrete: Hardened concrete surfaces upon or against which concrete is to be placed, are defined as construction joints. The surfaces of horizontal joints shall be given a compacted, roughened surface to a minimum of 1/4-inch amplitude for good bond. Before new concrete is placed, the joint surfaces shall be cleaned of all laitance, loose or defective concrete and foreign material. Any water shall be removed from the surface of construction joints before the new concrete is placed.
- C. Placing Interruptions: Interruptions in placing concrete will not be allowed without the written approval of the DISTRICT. The CONTRACTOR shall submit its purposed method of joint construction to the DISTRICT for review. When interruption of concrete placement operations has been approved the working face shall be given a shape by the use of forms or other means, that will secure proper union with subsequent work.
- D. Embedded Items: All reinforcement, anchor bolts, sleeves, inserts and similar items shall be set and secured in the forms where shown on the Drawings or by shop drawings and shall be acceptable to the DISTRICT before any concrete is placed. Accuracy of placement is the responsibility of the CONTRACTOR.
- E. No concrete shall be placed in any structure until all water entering the space to be filled with concrete has been properly cut off or has been diverted by pipes, or other means, and carried out of the forms, clear of the work. No concrete shall be deposited underwater nor shall the CONTRACTOR allow still water to rise on any concrete until the concrete has attained its initial set. Water shall not be permitted to flow over the surface of any concrete in such manner and at such velocity as will injure the surface finish of the concrete. Pumping or other necessary dewatering operations for removing ground water, shall be the responsibility of CONTRACTOR.

### 3.5 PLACING

- A. General: Placing of concrete shall conform to the applicable requirements of Section 51-1.09, "Placing Concrete," of the Caltrans Standard Specifications and the requirements of this Section.
- B. Non-Conforming Work or Materials: All concrete which does not conform to the requirements of this Section shall be removed from the work.
- C. Placement in Wall Forms:
  - 1. Concrete shall not be dropped through reinforcement steel into any deep form. In such cases, hoppers and, if necessary, vertical ducts of canvas, rubber or metal shall be used for placing concrete. In no case shall the free fall of concrete exceed 4 feet below the ends of ducts, chutes or buggies. Concrete in forms shall be deposited in uniform horizontal layers not deeper than 2 feet and care shall be taken to avoid inclined layers. Each layer shall be placed while the previous layer is still soft.
  - 2. The surface of the concrete shall be level whenever a run of concrete is stopped.
- D. Temperature of Concrete: Under conditions contributing to quick stiffening of the concrete, or when the temperature of the concrete is 85° F., or above, a time less than 1-1/2 hours may be required.

### 3.6 PUMPING OF CONCRETE

#### SITE CONCRETE 32 16 00- 9

- A. General: If the pumped concrete does not produce satisfactory end results as determined by the DISTRICT, the CONTRACTOR shall discontinue the pumping operation and proceed with the placing of concrete using conventional methods.

### 3.7 CONSOLIDATION

- A. As concrete is placed in the forms or in excavations, it shall be thoroughly settled and compacted in general conformance with Section 51-1.09, "Placing Concrete," of the Caltrans Standard Specifications.

### 3.8 FINISHING CONCRETE SURFACES

- A. General: Exposed surfaces shall be free from fins, bulges, ridges, offsets, honeycombing, or roughness of any kind, and shall present a finished, smooth, continuous hard surface.
- B. Formed Surfaces: No treatment is required after form removal except for curing, repair of defective concrete and treatment of surface defects.
- C. Unformed Surfaces: After proper and adequate vibration and tamping, all exposed un-formed surfaces of pads, slabs and floors, shall be brought to a uniform surface with suitable tools. The finish for all unformed concrete surfaces shall be a soft broom finish.
- D. Paving to Receive Slip-Resistant Broom Finish:
  - 1. Screed and float paving to a smooth, even grade in accordance with the Drawings using overhead screeds where necessary to establish flow lines or grade breaks.
  - 2. Steel trowel to a smooth, hard finish.
  - 3. Using a stiff broom, strike clean, crisp broom marks across paving at right angles to the length of the ramp.
  - 4. Finish shall be uniform throughout in color and texture.
- E. Curbing, Headers, Bands and Dividers:
  - 1. Neatly tool edges.
  - 2. Bring exposed surfaces to a hard, smooth steel trowel finish and then finish with a fine hair broom to produce a uniform crisp, light broom finish parallel to the length of headers and dividers.
  - 3. Finish of curb faces shall match finish of tops.
- F. Stairs, Walls, Seat walls and Curb walls:
  - 1. Neatly tool edges.
  - 2. Bring exposed surfaces to a hard, smooth steel trowel finish and then finish with a fine hair broom to produce a uniform crisp, light broom finish parallel to the length of headers and dividers.
  - 3. Finish shall be uniform in texture and color.



4. The contrasting stripe shall be a minimum of 2 inches wide and placed parallel to, and not more than 1 inch from the nose of the step. The stripe shall be embedded in the concrete per the manufacturer's recommendations and shall extend the full length of the step.

### 3.9 SEALANTS

- A. Work under this Section includes furnishing and installation of all sealants, backing rods, primers and associated work and materials in expansion joints in concrete work.
- B. Prime joints and install per manufacturers printed instructions.
- C. Hold sealant flush with paving surface.
- D. Sealant shall be smooth with no voids or irregularities.

### 3.10 CURING

- A. General: All exposed concrete top surfaces of pads, shall be cured in conformance with the manufacturer's printed recommendations.

### 3.11 PROTECTION

- A. The CONTRACTOR shall protect all concrete against injury until final acceptance by the DISTRICT.
- B. Holes left by form-tying and other minor imperfections as defined herein shall be repaired in an approved manner with cement grout in conformance with Section 31 01 30 "Grout."

END OF SECTION

## SECTION 33 05 16

### PRECAST CONCRETE UTILITY BOXES, INLETS, AND WHEEL STOPS

#### PART 1 – GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment, and labor necessary to furnish and install all precast items as required, including all appurtenances necessary to make a complete installation as shown on the Drawings and as specified herein.

##### 1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 32 16 00                      Site Concrete
- B. Section 31 01 30                      Grout
- C. Division 1                              General Requirements.

##### 1.4 CONTRACTOR SUBMITTALS

- A. Shop Drawings:
  - 1. The CONTRACTOR shall submit Shop Drawings for all specialty precast concrete items. Submitted drawings shall show design criteria, all dimensions, location and type of lifting inserts, and details of reinforcement and joints.
  - 2. For all precast items which are manufactured, the CONTRACTOR shall also submit a list of the design criteria and product data sheets used by the manufacturer.
- B. Certification of Compliance: Certificates of Compliance shall be provided for all products and materials proposed to be used under this Section.

#### PART 2 – PRODUCTS

##### 2.1 MANUFACTURED ITEMS

- A. Utility Boxes:
  - 1. Utility boxes shall be sized shall meet the minimum clearance requirements as specified or as required for the intended use.
  - 2. Utility boxes shall be constructed using Type II or Type V cement.

### PRECAST CONCRETE UTILITY BOXES, INLETS, AND WHEEL STOPS 33 05 16- 1

3. Utility boxes shall have covers that are designed by the manufacturer for HS-20 traffic loading in streets and driveways subject to vehicular traffic or as otherwise specified. The covers shall be embossed "Water" or "Sanitary Sewer" as appropriate.
4. Utility boxes larger than 22 inches by 36 inches shall have two-piece steel checker plate lids and shall be located as specified or as shown on the Drawings.
5. Utility boxes shall have bolt or screw down lids or covers.

**B. Storm Drain Inlets:**

1. Inlet frames and grates for storm drain inlets shall be bolt-able to frame, ADA and bicycle approved. Frame and grate shall be of the same manufacturer as the pre-cast inlet and shall be hot-dip galvanized after fabrication.
2. Precast storm drain inlets shall be constructed using Type II or Type V cement.
3. Precast storm drain inlets frame and grate shall be in conformance with:
  - A. Frames and grates for storm water inlets shall be heavy duty (HS-20 Traffic Loading) in vehicle traffic areas and light duty for non-traffic areas. Grate shall be boltable to frame, ADA-approved, designed for bicycle use and hot-dip galvanized after fabrication. Frame and grate or cover plate shall be of the same manufacturer as the pre-cast inlet and shall be hot-dip galvanized after fabrication.
  - B. Frames and grates for side opening field storm water inlets shall be light duty grate and shall be bolted to frame, hot dipped galvanized after fabrication.
4. All inlets shall have a "Drains to Creek" metal marker applied to the top of the inlet.

**C. Precast Manhole:**

1. Precast manhole bases, and barrel and cone sections shall be manufactured by a process that will produce dense homogeneous reinforced concrete of high quality in conformance with ASTM C 478. Cement shall be Type V Portland Cement as specified in ASTM C 150.
2. Precast manhole components shall be designed to support vertical AASHTO H20 truck loading, plus the weight of soil above the cone section.
3. Pipe connections at precast bases shall be pipe bells of the size, material and class of inlet and outlet pipes, integrally cast into the base by the manufacturer.
4. Castings for manhole frames and covers shall be non-rocking and shall conform to the requirements of ASTM A 48, Class 30. Cast iron covers and frames shall be heavy traffic type with a minimum weight and diameter as shown in the Drawings. Frame and cover shall be designed for H-20 traffic loading. Each item in a set of frames and covers shall be supplied by the same Manufacturer. The manhole covers shall have open pick holes. Covers for manholes shall be marked "Sanitary Sewer" or "Storm Drain".

**PRECAST CONCRETE UTILITY BOXES, INLETS, AND WHEEL STOPS 33 05 16- 2**

D. Wheel Stop:

1. Wheel stop shall be reinforced precast concrete bumper block Oldcastle (Christy) Precast or approved equal.

2.2 PREFORMED JOINT SEALANT

- A. On vaults the joint sealing compound shall be a preformed, cold-applied, ready to use plastic joint sealing compound.

2.3 NON-SHRINK GROUT

- A. Non-shrink grout shall be as specified in the Section 31 01 30, "Grout."

PART 3 – EXECUTION

3.1 MANUFACTURED ITEMS

- A. Utility Boxes, Manholes and Storm Drain Inlets shall be installed in accordance with the manufacturer's printed recommendations, and as shown on the Drawings.
- B. Connections to Utility boxes and field storm water inlets shall be made by installing pipe sections into the structure wall using non-shrink grout as specified in Section 31 01 30, "Grout." A water stop shall also be installed on all plastic pipes.
- C. Wheel stops shall be installed per the manufacturer's requirements.

END OF SECTION

PRECAST CONCRETE UTILITY BOXES, INLETS, AND WHEEL STOPS 33 05 16- 3

## SECTION 33 11 16

### WATER UTILITY DISTRIBUTION PIPING

#### PART 1 – GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Divisions 01 Specification Sections, apply to this Section.

##### 1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment and labor to perform and complete water service construction and testing as specified herein.
- B. The CONTRACTOR shall be responsible for conveying test water from the source to the point of usage and also for proper disposal, as required, of water used in the testing operations. All costs associated with supply and disposal of test water shall be at the CONTRACTOR'S expense.
- C. The CONTRACTOR shall conform to the requirements of the current edition of the California Plumbing Code

##### 1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 23 33 Trench Excavation and Backfill
- B. Division 1 General Requirements.

##### 1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Reference Standards:
  - 1. Marin Municipal Water District (MMWD) General Specifications for Private Contracts.
  - 2. California Plumbing Code (current edition)
- B. All materials shall be manufactured and approved for potable water systems and comply with NSF 61 potable water regulations.
- C. ANSI/AWWA C901: Polyethylene (PE) Pressure Pipe and Tubing, ½” through 3”, for Water Service
- D. ANSI/AWWA C906: Polyethylene (PE) Pressure Pipe and Tubing, Water Service Mains
- E. California Health and Safety Code Section 116875

##### 1.5 CONTRACTOR SUBMITTALS

- A. Material and equipment to be incorporated into the Work shall be new and unused unless otherwise approved by the District and shall bear the manufacturer's stamp or marking. In case a reference is not clear as to which of several available grades is desired, the highest quality material shall be used.

### WATER UTILITY DISTRIBUTION PIPING 33 11 16- 1

- B. The Contractor shall, at any time when requested, submit to the District, proper authenticated documents or other satisfactory proofs of compliance with the requirements of these specifications. This shall include certified copies of factory or laboratory test reports showing the strength characteristics of any materials used in the Work.

## PART 2 - PRODUCTS

### 2.1 MATERIAL REQUIREMENTS

- A. Water pipe material and services shall comply with Section 02713 "Distribution Piping System" of the MMWD Standard Specifications.
- B. Pipe fittings and joints shall comply with the requirements of Section 02713 "Distribution Piping System" of the MMWD Standard Specifications.
- C. All pipe fittings or fixtures (e.g. corp stops, curb valves, gate valves, backflow prevention devices, water meters, hose bibs, etc.), installed shall be "lead free".
- D. Valves for service lines up to 3" shall be Class 125, bronze body, screw-in bonnet, integral seat, renewable disc, straight body Gate Valves.
- E. Valves 4" and larger shall be Gate valves and shall be ductile iron and conform to AWWA C509, resilient seated-type valves with non-rising stems, and have "O" ring stuffing boxes. Stuffing boxes shall be bolted and constructed so as to aid valve repair. Valves shall be hydrostatically tested and droptight at a pressure of not less than 500 psi and rated for 250 psi working pressure. All valves shall comply with the requirements of the MMWD Standard Specifications.
- F. All fittings shall be epoxy coated (interior and exterior) by the manufacturer and shall comply with AWWA C213.
- G. The internal and external surfaces of the valve body and bonnet shall be coated with a fusion bonded epoxy (FBE) in accordance with the requirements of AWWA Standard C550-13. The minimum dry thickness of the coating shall be 8 mils (including flange faces).
- H. Valve box shall be traffic rated. Lid shall be metal and have "Water" stamped on top.
- I. Tracer wire shall be A.W.G. No. 12 solid copper wire with U.S.E. rated insulation, color Blue.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. All new water service applications and connections (domestic and fire) shall be completed through MMWD.
- B. Trench excavation and backfill shall be per Section 31 23 33 "Trench Excavation and Backfill" of these specifications and shall consist of all excavation involved in the grading and construction of the water service line as shown on the plans. The Contractor shall perform all excavation of every description and of whatever substances encountered. Excess excavated materials shall be removed from the site. The Contractor shall not dump excavated material on any private or public property without the permission of the owner thereof.

## WATER UTILITY DISTRIBUTION PIPING 33 11 16- 2

- C. The trench bottom shall be of even grade such that it will provide uniform bearing and support for each section of pipe and shall be free of clods, rocks, and excess spoil material.
- D. Water service lines shall have 2.5-foot minimum cover to the proposed finish grade. The trench shall be backfilled per Section 31 23 33 “Trench Excavation and Backfill”.
- E. Pipe shall be installed per with Section 02713 “Distribution Piping System” of the MMWD Standard Specifications.
- F. Water service pipes shall be tested, disinfected and flushed shall comply with the requirements of Section 02713 “Distribution Piping System” of the MMWD Standard Specifications.

END OF SECTION

## SECTION 33 41 00

### STORM DRAINAGE

#### PART 1 – GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawing and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment and labor to perform and complete pipe-line flushing and testing, complete, for storm drain system piping, as specified herein.
- B. The CONTRACTOR shall be responsible for conveying test water from the source to the point of usage and also for proper disposal, as required, of water used in the testing operations. All costs associated with supply and disposal of test water shall be at the CONTRACTOR'S expense.
- C. Structural (Deflection) testing requirements for storm drains are as specified in the various appropriate piping sections.

##### 1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 23 33                      Trench Excavation and Backfill
- B. Division 1                              General Requirements.

##### 1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. State of California (Caltrans) Standards:
  - 1. Standard Specifications 2018:  
Section 64                      Plastic Pipe.
- B. Commercial Standards:  
  
ASTM D3034 - Standard Test Method – PVC SDR26 pipe and fittings for sizes 4-inch through 12-inch.

##### 1.5 CONTRACTOR SUBMITTALS

- A. A testing schedule, including proposed plans for conveyance, control and disposal of test water shall be submitted in writing to the DISTRICT for review a minimum of 72 hours before testing is to start.
- B. The CONTRACTOR shall submit laboratory calibration certificates for all gages to the DISTRICT for review along with the testing schedule.



## PART 2 – PRODUCTS

### 2.1 MATERIAL REQUIREMENTS

- A. Solid wall PVC pipe and fittings for sizes 4-inch through 12-inch shall meet the requirements of ASTM D3034, SDR 26, cell classification 12454-B or 12454-C.
- B. Bell and spigot joints shall meet the requirements of ASTM D3212 with integral bell push-on type elastomeric gasket joints.
- C. Perforated PVC subdrain pipe shall be SDR 35.
- D. Inlets shall be per Section 33 05 16 “Precast Concrete Utility Boxes, Inlets and Wheel Stops” of these specifications.
- E. Tracer wire shall be A.W.G. No. 12 solid copper wire with U.S.E. rated insulation, color Green.
- F. Trench Drain shall be manufactured by ACO Drain Model KS100 with a 405Q/406Q mesh galvanized steel grate or approved equal.

## PART 3 – EXECUTION

### 3.1 GENERAL

- A. Trench excavation and backfill shall be per Section 31 23 33 “Trench Excavation and Backfill” of these specifications. Trench excavation shall consist of all excavation involved in the grading and construction of the storm drain line as shown on the plans. The Contractor shall perform all excavation of every description and of whatever substances encountered, to depths indicated on the Improvement Plans or as otherwise specified or required. Excavated materials shall be removed from the site. The Contractor shall not dump excavated material on any private or public property without the permission of the owner thereof.
- B. The trench bottom shall be of even grade such that it will provide uniform bearing and support for each section of pipe and shall be free of clods, rocks, and excess spoil material.
- C. Each length of pipe shall be laid on compacted, approved bedding material as shown on the detail on the plans and shall have full bearing for its entire length between bell holes excavated in said bedding material to allow for unobstructed assembly of all joints. Adjustments of pipe to line and grade shall be made by scraping away or filling in and tamping approved material under the body of the pipe.
- D. Installation of PVC pipe shall meet the requirements of ASTM D2321. All field cut PVC pipe shall be beveled and lubricated before joining. Pipe joints shall be made only with the couplings and rubber rings furnished with the pipe and aligned and constructed in the trench in accordance with the manufacturer’s instruction manual.
- E. Storm drain pipe laying shall proceed upgrade with the spigot ends of bell and spigot pipe pointing in the direction of flow. Tracer wire shall be taped to the top of the pipe prior to backfilling and extended to the surface at all structures.

- F. Storm drain inlets shall be installed to depths as otherwise specified or required. Connections to storm water inlets shall be made by installing pipe sections into the structure wall using non-shrink grout. A water stop shall also be installed on all plastic pipes.
- G. The trench drain shall be installed per the manufacturer's recommendations.

### 3.2 TESTING OF PIPING SYSTEMS

- A. All lines shall be cleaned and flushed prior to testing using a "Wayne Ball," high pressure sewer "jets," or other methods acceptable to the DISTRICT.
- B. CONTRACTOR will be solely responsible for the proper disposal of all water used in the flushing and testing process. Disposal of all water shall be in accordance with appropriate regulatory agency requirements.
- C. All flushing and testing operations shall be performed in the presence of the DISTRICT.
- D. Deflection: All PVC non-pressure pipe shall be tested for deflection obstructions and protruding laterals by passing a "mandrel" from the nearest downstream structure to the nearest upstream structure. The "deflection test" procedure shall be acceptable to the DISTRICT. The 'mandrel' diameter shall be 95 percent of the pipe inside diameter.

### 3.3 VIDEO INSPECTION OF NEW STORM DRAINS

- A. Video Inspection: All storm drain systems 6" and larger shall be video inspected. The CONTRACTOR shall hire an approved video testing company to perform the video inspections. The CONTRACTOR shall repair all problems revealed by the video inspection. The CONTRACTOR shall coordinate with the DISTRICT to arrange for a compatible time to conduct the inspection.
- B. The Contractor shall submit the storm drainage compact disc (CD), or DVD to the DISTRICT for review. Video shall become the property of the DISTRICT.

END OF SECTION

## SECTION 33 47 27

### BIORETENTION

#### PART 1 – GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawing and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment and labor to perform and complete the bioretention material placement, complete, as specified herein.

##### 1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 22 00 Earthwork
- B. Section 33 41 00 Storm Drainage
- C. Section 32 16 00 Site Concrete
- D. Division 1 General Requirements.

##### 1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

###### A. Reference Standards:

- 1. Geotechnical Engineering and Geologic Hazards Study for New Transitional Kindergarten Classrooms Coleman Elementary School, 800 Belle Avenue, San Rafael, CA 94901

State of California (Caltrans) Standards

- 1. Standard Specifications 2018:

Section 20	Landscape
Section 68	Subsurface Drains

###### B. Bay Area Stormwater Management Agencies Association (BASMAA):

- 1. Biotreatment Soil Media and Specification

<https://basmaa.org/wp-content/uploads/2021/02/basmaa-regional-biotreatment-soil-specification-2016.pdf>

##### 1.5 DEFINITIONS

- A. Bioretention Soil Mix (BSM): A soil mix that has been specially blended and tested for use in bioretention facilities with the intent to meet the following objectives:

1. Infiltrate runoff at a minimum rate of 5 inches per hour throughout the life of the facility, and
2. By nature of its components be capable of the removal of certain suspended and dissolved stormwater pollutants, and
3. Have sufficient moisture retention and other agronomic properties to support healthy vegetation.

#### 1.6 CONTRACTOR SUBMITTALS

- A. Pre-Installation Submittals: The Contractor shall submit to the DISTRICT the following prior to the construction of bioretention facilities:
  1. BSM Submittals
    - a. Two one (1) gallon samples of the BSM.
    - b. Source certificates for all BSM materials.
    - c. Sieve analysis of BSM per ASTM D422 performed within two (2) months of product delivery to site
    - d. Certification from the soil supplier or an accredited testing agency that the BSM, including sand and compost components, conforms to BASMAA.
    - e. A description of the equipment and methods used to mix the sand and compost to produce BSM.
    - f. Organic content test results of the BSM, performed in accordance with Testing Methods for the Examination of Compost and Composting (TMECC) 05.07A, "Loss-On-Ignition Organic Matter Method."
    - g. Permeability test results for BSM per ASTM D2434 (Modified). See SFPUC Modified ASTM D2434 Procedures for required modifications to test.

#### 1.7 QUALITY CONTROL AND QUALITY ASSURANCE

- A. Testing Agency Qualification:
  1. General: Agencies that perform testing on bioretention materials, including permeability testing, shall be accredited by STA, ASTM, AASHTO, or other designated recognized standards organization. All certifications shall be current. Testing agency shall be capable of performing all tests to the designated and recognized standards specified and shall provide test results with an accompanying Manufacturer's Certificate of Compliance.
  2. Owner reserves the right to conduct additional testing on all materials submitted, delivered, or in-place to ensure compliance with Specifications.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect the BSM and mulch from contamination and all sources of additional moisture at supplier site, during transport, and at the project site, until incorporated into the Work.
- B. The Contractor is required to coordinate delivery of BSM and aggregates with bioretention facility excavation and soil installation. A written schedule shall be submitted for review as part of the submittal package. BSM should not be stockpiled onsite for any length of time. In no case shall BSM be stockpiled onsite for more than 24 hours without prior written approval by the DISTRICT. If stockpiling onsite for any length of time, BSM stockpiles shall meet the following requirements:

1. Locate stockpiles away from drainage courses, inlets, sewer cleanout vents, and concentrated stormwater flows
2. Place stockpiles on geotextile fabric
3. Cover stockpiles with plastic or comparable material
4. Contain stockpiles (and prevent contamination from adjacent stockpiles) with temporary perimeter barrier (e.g., sand bags, wattles, silt fence)

## PART 2 – PRODUCTS

### 2.1 MATERIAL REQUIREMENTS

- A. Bioretention Soil Mix (BSM) as specified by BASMAA Biotreatment Soil Media and Specification [https://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/stormwater/MRP/C3.shtml](https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/MRP/C3.shtml)
- B. Class 2 permeable material shall conform to the provisions of Section 68-2.02F, "Permeable Material," of the Standard Specifications and these Special Provisions. The permeable material shall conform to the grading requirements for Class 2, permeable material and must consist of washed angular crushed stone.
- C. Moisture Barrier shall be WB-36-30 by Deeproot or approved equal, black high density polyethylene sheet material, 30 mils (0.76 mm) thick.

## PART 3 – EXECUTION

### 3.1 GENERAL

- A. The bioretention area shall be constructed per the details shown on the plans. The Contractor shall perform all excavation of every description and of whatever substances encountered, to depths indicated on the plans or as otherwise specified or required. Excavated materials shall be removed from the site. The Contractor shall not dump excavated material on any private or public property without the permission of the owner thereof.
- B. The bioretention area subgrade shall be of even grade per the grades shown on the plans. The bottom subgrade of the bioretention area shall be scarified to a minimum depth of 3 inches immediately prior to placement of the perforated pipe and Class 2 permeable aggregate material.
- C. The moisture barrier shall be placed along the extended PCC curb and shall extend 6" into the subgrade of the bioretention area.
- D. The Class 2 permeable aggregate material shall be placed as shown on the plans.
- E. The Contractor shall place BSM loosely with a conveyor belt or with an excavator or loader from a height no higher than 6 feet, unless otherwise approved by the DISTRICT (i.e., do not dump material directly from truck into cell). Soil shall be placed in accordance with these Specifications and in conformity with the lines, grades, depth, and typical cross-section shown in the plans.
- F. Compact BSM using non-mechanical compaction methods (e.g., boot packing, hand tamping, or water consolidation) to 83 percent (+/- 2 percent) of the maximum dry density

- G. Grade BSM to a smooth, uniform surface plane with loose, uniformly fine texture. Rake, remove ridges, and fill depressions to meet finish grades.
- H. Final soil depth shall be measured and verified only after the soil has been compacted. If after consolidation, the soil is not within +/- 3/4 inch of the grades and slopes specified on the Plans, add material to bring it up to final grade and rake.

END OF SECTION