CUTTING AND PATCHING

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: Administrative and procedural requirements for cutting and patching.
B. Related Work Specified Elsewhere:
   1. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the work.
   2. Requirements of this Section apply to mechanical and electrical installations. Refer to Division 22 and Division 23 Sections for other requirements and limitations applicable to cutting and patching plumbing, mechanical, and electrical installations.

1.3 SUBMITTALS
A. Before commencing alteration or demolition work, submit for review by the Architect and approval of the District, a Schedule showing the commencement, the order and the completion dates for the various parts of this work. Where approval of procedures for cutting and patching is required before proceeding, submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:
   1. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.
   2. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
   3. List products to be used and firms or entities that will perform Work.
   4. Indicate dates when cutting and patching is to be performed.
B. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted. Before starting work relating to existing utilities (electrical, sewer, water, heat, gas, fire lines, etc.) that will temporarily discontinue or disrupt service to the existing building, notify the Architect and the District 72 hours in advance and obtain the District’s approval in writing before proceeding with this phase of the work.
C. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure. All cutting of structural elements are subject to acceptance of the Structural Engineer and approval of the Division of the State Architect prior to execution.

D. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory, subject to approval of the Division of the State Architect.

1.4 QUALITY ASSURANCE

A. Requirements for Structural Work: Do not cut or notch any structural elements unless specifically detailed on the Drawings.

B. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.

C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work that was cut and patched in a visually unsatisfactory manner.

D. If possible, retain the original installer or fabricator to cut and patch the following categories of exposed Work, or if it is not possible to engage the original installer or fabricator, engage another recognized experienced and specialized firm:

1. Processed concrete finishes
2. Ornamental metal
3. Matched-veneer woodwork
4. Preformed metal panels
5. Window wall system
6. Stucco and ornamental plaster
7. Acoustical ceilings
8. Finished wood flooring
9. Carpeting
10. Aggregate wall coating
11. Wall covering
12. HVAC enclosures, cabinets or covers
13. Polished Concrete

1.5 PROJECT CONDITIONS

A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

B. Protect site from puddling or running water. Implement storm water pollution plan as required to protect site from soils erosion and to protect storm drains from contamination.
C. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

D. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere.

E. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
   1. Minimize amount of bare soil exposed at one time.
   2. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
   3. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
   4. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

F. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.

G. Pest Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work. Prior to the spraying of insecticides or other chemicals, the Contractor shall obtain permission in writing from the District.

H. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

I. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

1.6 COORDINATION

A. Coordinate new work and work of alterations and renovations to expedite completion sequentially and to accommodate occupancy requirements.

B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

C. Notify affected utility companies and comply with their requirements.

D. The Contractor shall be responsible for providing all Work shown in the Contract Documents. The Contractor is responsible for coordinating the work of various sub-contractors with all portions of the Contract Documents, as occasionally work for one trade may be included in a portion of the Contract Documents not traditionally reviewed by a specific sub-contractor.
E. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

F. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

G. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

H. Coordinate completion and clean up of work of separate sections.

I. After District occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of District's activities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use materials that are identical to existing materials. Materials and workmanship employed in the alterations, unless otherwise shown or specified, shall conform to that of the original work, or to new construction as specified elsewhere in these specifications. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

B. It is intended that interior finish materials, or existing surfaces to be removed, be re-used insofar as reasonable in areas necessary to match existing surfaces. Care in removal and stockpiling shall be exercised to ensure re-use.

C. New Materials: As specified in product sections; match existing products and work for patching and extending work unless specifically noted otherwise.

D. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

E. Product Substitution Procedures: For any proposed change in materials, submit request for substitution described in Section 01 25 00.

PART 3 - EXECUTION

3.1 INSPECTION

A. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.
B. Before proceeding, meet at the site with entities involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

C. Locate existing utilities. Provide adequate protection for utilities scheduled to remain.

D. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

E. Verify that demolition is complete and areas are ready for installation of new work.

F. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

G. Examine and verify specific conditions described in individual specification sections.

H. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or incorrect fabrication.

I. Verify that utility services are available, of the correct characteristics, and in the correct locations. Contact a utility location service as needed to verify the exact routing and location of utilities especially before excavation.

J. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Commencement of cutting or patching means acceptance of existing conditions.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Make such explorations and probes as are necessary to ascertain required protective measures before proceeding with demolition and removal. Give particular attention to shoring and bracing requirements so as to prevent damage to existing construction.

C. Provide, erect, and maintain catch platforms, lights barriers, weather protection, warning signs and other items as required for proper protection of the public, occupants of the building, workmen engaged in demolition operations, and adjacent construction.

D. Provide and maintain weather protection at exterior openings so as to fully protect the interior premises against damage from the elements until such openings are closed by new construction.

E. Provide and maintain temporary protection of the existing structure designated to remain where demolition, removal and new work is being done, connections made, materials handled, or equipment moved.
F. Take necessary precautions to prevent dust and dirt from rising by wetting demolished masonry, concrete, plaster and similar debris. Protect unaltered portions of the existing building affected by the operations under this Section by dustproof partitions and other adequate means.

G. Provide adequate fire protection in accordance with local Fire Departments, and with Section 01 50 00.

H. Do not close or obstruct walkways, passageways, or stairways. Do not store or place materials in passageways, stairs, or other means of egress. Conduct operations with minimum traffic interference.

I. Be responsible for damage to the existing structure or contents by reason of the insufficiency of protection provided.

J. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
   1. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
   2. Take precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

K. Cut, move, or remove items as necessary for access or as required to install new work. Replace and restore items to remain upon completion of new work.

L. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished work.

M. Remove debris and abandoned items from area and from concealed spaces.

N. Close openings in exterior surfaces to protect existing work and salvage items from weather and extremes of temperature and humidity. Insulate ducts and piping to prevent condensation in exposed areas.

O. Prepare surfaces and remove surface finishes to provide for proper installation of new work and finishes.

P. Clean substrate surfaces prior to applying next material or substance.

Q. Seal cracks, holes or openings in substrate materials prior to applying next material or substance.

R. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.
3.3 PROTECTION OF EXISTING ITEMS TO REMAIN

A. The Contractor shall be responsible for protecting existing construction, including but not limited to paving, flatwork, utilities, fixtures, devices, equipment, operational systems, finishes, and similar items scheduled to remain. Items damaged or inoperative prior to construction shall be noted in writing by the Contractor to the Architect prior to the start of work. Items damaged or inoperative after construction that have not been previously identified shall be the responsibility of the Contractor to repair and/or replace to the satisfaction of the District.

B. The Contractor shall be responsible for protecting existing construction, including but not limited to paving, flatwork, fixtures, devices, equipment, operational systems, finishes and similar items scheduled to be removed and reinstalled. Items damaged or inoperative prior to construction shall be noted in writing by the Contractor to the Architect prior to the start of work. Items damaged or inoperative after reinstallation that have not been previously identified shall be the responsibility of the Contractor to repair and/or replace to the satisfaction of the District.

3.4 LAYING OUT THE WORK

A. Verify locations of survey control points prior to starting work.

B. Promptly notify Architect of any discrepancies discovered.

C. Contractor shall locate and protect survey control and reference points.

D. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

E. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

F. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.

G. Utilize recognized engineering survey practices.

H. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
   1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
   2. Grid or axis for structures.
   3. Building foundation, column locations, ground floor elevations.

I. Periodically verify layouts by same means.

J. Maintain a complete and accurate log of control and survey work as it progresses.
3.5 GENERAL INSTALLATION REQUIREMENTS

A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.6 PERFORMANCE

A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.

1. In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.

3. Cut through concrete and masonry using a cutting machine such as a carborundum saw or diamond core drill. Provide pilot holes at corners and do not overcut. Provide neat straight square edges.

4. Comply with requirements of applicable Sections of Division 2 where cutting and patching requires excavating and backfilling.

5. By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.

C. Patching: Patch with durable seams that are as invisible as possible. Comply with specific tolerances.
1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.

2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

3. Where removal of walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.
   a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken containing the patch, after the patched area has received primer and second coat.

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

D. Perform demolition, removal and alteration work with due care, including shoring, bracing, etc. Be responsible for damage which may be caused by such work to part or parts of existing structures or items designated for re-use. Perform patching, restoration and new work in accordance with applicable technical sections of the Specifications.

E. Materials and/or items designated to become the property of the District shall be as shown. Remove such items with care, under the supervision of the trade responsible for reinstallation; protect and store until required. Replace material and/or item damaged in its removal with approved similar and equal new material.

F. Materials and/or items demolished and not designated to become the property of the District or to be reinstalled shall become the property of the Contractor and on site will not be permitted.

G. Execute the work in a careful and orderly manner, with the least possible disturbance to the public and to the occupants of the building.

H. Where alterations occur, or new and old work join, cut, remove, patch, repair or refinish the adjacent surfaces or so much thereof as is required by the involved conditions, and leave in as a good a condition as existed prior to the commencing of the work. The alteration work shall be performed by the various respective trades which normally perform the particular items of work.

I. Finish new and adjacent existing surfaces as specified for new work. Clean existing surfaces of dirt, grease, loose paint, etc. before refinishing.

J. Where existing equipment and fixtures are indicated to be re-used, repair such equipment and fixtures and refinish to put in perfect working order. Refinish as directed.

K. Cut out embedded anchorage and attachment items as required to properly provide for patching and repair of the respective finishes.
L. Confine cutting of existing roof areas designated to remain to the limits required for the proper installation of the new work. Cut and fold back existing built-up roofing. Cut and remove insulation, etc. Provide temporary weather-tight protection as required until new roofing and flashings are applied.

M. All penetrations through the roof system shall be sealed watertight.

N. Patch or replace surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. Repair substrate prior to patching finish. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.7 CLEANING
A. Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

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

END OF SECTION 01 04 50
PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: General requirements for field engineering necessary to provide horizontal and vertical control, including:

1. Survey work required in execution of the project.

2. Civil Engineering and Land Surveying services specified or required to execute contractors construction methods.

3. Coordination with testing laboratory or agency and Soils Engineer.

4. Contractor furnished assistance.

5. Verification of conditions.

6. Reporting procedures.

B. Requirements not in this section:

1. Specific test procedures performed in accordance with Section 01 41 00 - Testing Laboratory and Inspection Services.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.3 QUALIFICATIONS OF ENGINEER OR SURVEYOR

A. Qualifications: Registered Civil Engineer qualified to perform land surveying or licensed Land Surveyor acceptable to Contractor and District. Contractor shall furnish to the Owner prior to start of work the name and license or registration number issued by the State of California, Board of Registration for Professional Engineers and Land Surveyors. Contractor shall provide notice to the District during the course of construction should the identification of the individual responsible for this work change from time to time, and shall obtain approval of the District for the replacement.

B. All field engineering services furnished during the course of this project shall be under the direct supervision and control of the named individual Civil Engineer or Land Surveyor.
1.4 FIELD ENGINEERING REQUIREMENTS

A. Survey Reference Points:

1. Existing basic horizontal and vertical control points for the project are those designated on the drawings. If there are not 3 specific bench marks (BM) or temporary bench marks (TBM) shown, contractor shall identify a minimum of 3 possible TBM’s and verify horizontal and vertical location of all three hubs. All work on the plans shall be tied together and verified prior to beginning any field work.

2. Locate and protect control points prior to starting site work, and preserve permanent reference points during construction. Identify and protect survey monuments on the site discovered during construction, which are not referenced on the project drawings. Tie out such monuments and notify Architect prior to allowing them to be disturbed.

3. Replace any permanent boundary markers disturbed during construction with new permanent monuments and file the required Record of Survey or Corner Record in accordance with applicable State and County laws, at no additional cost to the District.

1.5 PROJECT SURVEY REQUIREMENTS

A. Establish a minimum of three permanent horizontal and vertical control points on the site, remote from the "Building Pad Area" and referenced to data established by the survey control points. Three points shall be tied together and the survey shall be closed to second order surveying standards.

1. Site Improvements:

   a. Provide stakes for grading, fill and topsoil placement. Replace if lost or moved.

   b. Locate utility lines, including, but not limited to, storm drains, sewers, water mains, gas, electric and telephone lines. Provide adequate horizontal control to locate the lines and provide vertical control in proportion to the slope of the line as required for accurate construction.

2. Provide curb stakes and elevations as required to construct paving and on and off-site concrete work.

   a. Calculate and layout subgrade elevations and intermediate controls as required to provide smooth transitions between the spot elevations indicated on the plans.

   b. From time to time, verify layouts of work by the same methods.
1.6 RECORDS
A. Maintain a complete, accurate log of control and survey work as it progresses.

1.7 SUBMITTALS
A. Submit name and address of Licensed Surveyor or Civil Engineer to Architect, including changes as they may occur from time to time.
B. On request of the Architect, submit documentation to verify accuracy of the field engineering work.
C. Project Record (As-Built) Drawings:
   1. At the project completion, deliver to Architect, final "as-built" Record Drawings of the Work, prepared on reproducible transparencies. Clearly indicate differences between original drawings and completed work within specified tolerances.
   2. Show as-built locations by coordinates of utilities on-site with top of pipe elevations at major grade and alignment changes.
   3. Completed as-built transparencies shall be signed and certified as correct by the licensed Surveyor or Civil Engineer.
   4. Furnish any required Engineering Survey information for all utility easements for any required document recording.
   5. Submit certification of subgrade completion and building location on the building pads showing the actual elevation of the completed constructed subgrade, to the nearest hundredth of a foot 0.01 foot.

PART 2 - PRODUCTS
(Not Applicable)

PART 3 – EXECUTION

3.1 CODES / REGULATIONS
A. Contractor is responsible for meeting all applicable codes, OSHA, safety and shoring requirements.

3.2 SURVEY STAKES
A. Contractor is responsible for any re-surveying required due to loss of survey stakes or for correction of nonconforming work.

END OF SECTION 01 05 00
SECTION 01 10 00

SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Project information.
   2. Work covered by Contract Documents.
   3. Phased construction.
   4. Work by Owner.
   5. Access to site.
   6. Coordination with occupants.
   7. Work restrictions.
   8. Specification and drawing conventions.

B. Related Requirements:

   1. Unless otherwise noted, all provisions of the sections listed below apply to all contracts. Specific items of work listed under individual contract descriptions constitute exceptions.
   2. Section 01 04 50 - Cutting And Patching
   3. Section 01 05 00 - Field Engineering
   4. Section 01 10 00 - Summary
   5. Section 01 21 00 - Allowance
   6. Section 01 23 00 - Alternates
   7. Section 01 25 00 - Substitution Procedures
   8. Section 01 26 00 - Contract Modification Procedures
   9. Section 01 29 00 - Payment Procedures
  10. Section 01 31 00 - Project Management and Coordination
  11. Section 01 31 10 - Progress Schedule
  12. Section 01 33 00 - Submittal Procedures
  13. Section 01 35 20 - Construction Indoor Air Quality Management
  14. Section 01 35 50 - Request for Electronic Files
  15. Section 01 40 00 - Quality Requirements
  16. Section 01 41 00 - Testing Laboratory and Inspection Services
  17. Section 01 42 00 - References
1.3 PROJECT INFORMATION

A. Project Identification: CVUSD Personnel Dept. Tenant Improvement

B. Owner: Cajon Valley Union School District, 750 East Main St., El Cajon, CA 92020

C. Architect: Sprotte+Watson Architecture & Planning, Inc., 450 S. Melrose Dr, Suite 200, Vista, CA 92081

1.4 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. The project consists of, but is not limited to:
   a. The construction of tenant improvements in the Personnel Department at the Cajon Valley District office. The project encompasses roughly 9,000 +/- square feet of office space including utility infrastructure.
   b. Demolition of existing construction in the tenant spaces including but not limited to doors, walls, floor, ceilings, lighting and mechanical fixtures serving the office space.
   c. The construction of a new walls, doors, flooring, windows lighting and mechanical fixtures.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.5 CONSTRUCTION

A. The Work shall be conducted in 1 phase after working hours. Contract period to be determined.

1. The tenant improvements shall be completed between March 15, 2018 to April 29, 2018.
1.6  WORK BY OWNER

A. General: Cooperate fully with Owner so work may be carried out smoothly, without interfering with or delaying work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

1.7  WORK UNDER SEPARATE CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.

B. Preceding Work: Owner will award separate contract(s) for the following construction operations at Project site. Those operations are scheduled to be substantially complete before work under this Contract begins.

1. Not Applicable at this time

1.8  DESCRIPTION OF ALTERATIONS WORK

A. Scope of demolition and removal work is shown on drawings.

B. Plumbing: Alter existing system and add new construction, keeping existing in operation.

C. HVAC: Alter existing system and add new construction, keeping existing in operation.

D. Electrical Power and Lighting: Alter existing system and add new construction, keeping existing in operation.

E. Fire Alarm: Alter existing system and add new construction, keeping existing in operation.

F. Telephone: Alter existing system and add new construction, keeping existing in operation.

G. Amp Certified Data: Alter existing system and add new construction, keeping existing in operation.

H. District will remove the following items before start of work:

1. Televisions
2. Computers and peripherals
3. Telephones
4. Projectors

I. Contractor shall remove and deliver the following to District prior to start of work:

1. Fire extinguishers
1.9 WORK BY OWNER

A. Items noted NIC (Not in Contract) will be supplied and installed by District before substantial completion. Some items include:

1. Furnishings
2. Small equipment

B. District will supply the following for installation by Contractor:

1. Not applicable.

1.10 OWNER OCCUPANCY

A. Cooperate with District to minimize conflict and to facilitate District’s operations.

B. Schedule work to insure the safety of the staff, students and public.

C. Schedule the Work to accommodate District occupancy of adjacent portion of the site during construction.

1.11 ACCESS TO SITE

A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

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

1. Limits: Confine construction operations to areas as indicated.
2. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner’s employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.

a. Schedule deliveries to minimize use of driveways and entrances by construction operations.

C. Condition of Existing Buildings: Maintain portions of existing buildings affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

D. Construction Operations: Limited to areas noted on Drawings or as agreed to at the Preconstruction Conference:

1. Construction access routes to and from the project site shall be approved by the City of El Cajon and the District’s representative prior to the start of construction.
2. Location of contractor’s storage and parking areas shall be approved by the District’s representative prior to the start of construction.
E. Arrange use of site and premises to allow:
   1. District occupancy of existing offices. Use of existing office area by staff, students and public.
   2. Contractor mobilization and staging.
   3. Safe construction entry and egress location.
   4. Isolation of construction site from students, staff and public.
   5. Use of adjacent premises and areas by staff, students, and public.

F. Provide access to and from site as required by law and by District.

G. Emergency Building Exits During Construction: Keep all exits required by code open during construction period: provide temporary exit signs if exit routes are temporarily altered.

H. Existing building spaces may not be used for storage or contractor’s office.

I. Time Restriction:
   1. Limit construction of especially noise exterior work to times permitted by local jurisdictions and so as not to be disruptive to school operations.
   2. Coordinate heavy equipment operations and deliveries to avoid conflicts with school arrival and departure hours.

J. Utility Outages and Shutdown: Schedule utility outages and a minimum of 72 hours in advance with District. The first preference for shutdowns is after school hours (5PM-6AM) and on weekends. Contractor may need to reschedule utility outages if such outage will adversely affect school activities.

1.12 COORDINATION WITH OCCUPANTS

A. Full Owner Occupancy: Owner will occupy site and adjacent building(s) during Phase One period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.
   1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
   2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.

1.13 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.
   1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:

1. Notify District not less than three days in advance of proposed utility interruptions.
2. Obtain Owner's written permission before proceeding with utility interruptions.

C. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.

1. Notify Owner not less than two days in advance of proposed disruptive operations.
2. Obtain Owner's written permission before proceeding with disruptive operations.

D. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.

E. Controlled Substances: Use of tobacco products and other controlled substances on Project site is not permitted.

F. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.

G. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.

1. Maintain list of approved screened personnel with Owner's representative.

1.14 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00
SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.
B. Related Requirements:
   1. Section 01 23 00 "Alternates" for products selected under an alternate.
   2. Section 01 60 00 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
   1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.

1.4 MATERIAL

A. Equipment, materials, and articles incorporated into the work shall be new and suitable for the purposes intended.
B. Reference to equipment, material, article, or patented process by trade name or catalog number shall not be construed as limiting competition.

   1. In cases where the Specifications designate a material, product, thing, or service by specific proprietary brand or trade name, and there is only one brand or trade name listed, the item involved is:
      a. Used as a standard of quality which must be satisfied without compromise, or
      b. The only brand or trade name known to the District and Architect.
2. Wherever in the Contract Documents a material, article, or process is indicated or specified by trade, patent, proprietary name, or name of manufacturer, such indication shall be deemed to be followed by the words, "or equivalent, as accepted in writing by the Architect".

   a. Contractor shall submit a substitution request for Architect’s written acceptance.

3. If the phrase "NO SUBSTITUTIONS" is used, the product is required to be used since it is a unique product application.

C. The naming of more than one manufacturer in a Section does not imply that all products of named manufacturers are acceptable for use on the Project. Where more than one proprietary name is specified, provide materials or equipment of any one of the manufacturers specified, only if full compliance with other portions of the Specifications can be provided.

D. Construction shall be in compliance with the cited standards for the materials specified.

1.5 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

A. Should the Contractor wish to substitute an item purported to be equal to the one specified, then the Contractor shall, no later than fifteen (15) days after Award of Contract, furnish to the Architect a full product comparison in table format containing the name of the manufacturer, model number, material composition, thickness, performance, approvals, color options and other pertinent data and information respecting the "or equivalent" item which has been proposed in the bid and which the Contractor contemplates incorporating in the work. If the "or equivalent" item is not found by the Architect to be, in fact, equivalent or better, then the item specified in the Contract Documents shall be furnished. When colors have been indicated prior to Bid, Contractor shall be required to provide a custom color to match. See Section 01300, Submittals.
B. When required by the Contract Documents, or when directed by the District, furnish full information concerning the material or article proposed for incorporation into the work. Testing of a proposed substitute material to assure compliance with the Specifications may be required by the District at the Contractor's expense. When so directed, submit samples for acceptance. Equipment, material, and articles installed or used without required acceptance shall be at the risk of subsequent rejection, and replacement at Contractor's cost.

C. Substitutions shall comply with, or exceed, requirements of dimension, function, structure, durability, and appearance without exception. Use of accepted substitutions shall in no way relieve the Contractor from responsibility for compliance with the Contract Documents after installation. It shall be incumbent upon the Contractor using accepted substitutions to assume extra costs caused by the use of such substitutions where they affect other work.

D. Do not substitute materials, equipment, or methods unless such substitution has been reviewed and approved by the Architect. **Substitutions shall be submitted to the Division of the State Architect for approval prior to acceptance by Architect.**

E. "Or Equivalent":

   1. Where the phrase "or equivalent", "or approved equivalent", or "or equivalent as approved by the Architect" occurs in the Contract Documents, do not assume that materials, equipment, or methods will be accepted as equal unless the item has been specifically accepted, in writing, for the Work by the Architect and by the Division of the State Architect, Office of Regulation Services for items which "affect health, safety or welfare."

F. Failure to place orders for specified equipment or material sufficiently in advance of the scheduled installation date will not be considered a valid reason upon which the Contractor may base his request for substitutions or for deviations from the Drawings and Specifications.

G. In the event the Contractor requests changes or revisions requiring drawings or services of the Architect or his consultants, to facilitate installation or erection of any portion of the work, the Contractor shall accept the responsibility to hire and pay for the Architect's or Consultant's services. A standard hourly rate, as agreed upon, shall be paid by the Contractor whether the change is accepted or rejected. In the event the change is approved, this fee shall be deducted, and paid, from the Contract Sum.

H. Redesigning by the Contractor: Redesigning shall be by an Engineer licensed, in the State of California, to perform such work. In the event approval is required from authorities having jurisdiction, such approval shall be obtained by the Contractor at his expense before submitting the revised design or substitution to the Architect.

I. Revision After Approval: When a submittal has been reviewed by the Architect, re-submittal for substitution of materials or equipment will not be considered unless accompanied by an explanation acceptable to the Architect as to the reason substitution is considered necessary. Changes in Plans and Specifications, which effect safety, health or welfare, shall be made by Addenda or Change Orders approved by the Division of the State Architect.
2.2 SUBSTITUTION REQUEST FORM:

A. Submittal of the requested information shall be accompanied by the attached Substitution Request Form. Provide attachments to form providing complete comparisons between proposed and specified product. Submit six copies of each request to the Architect. Architect will distribute as appropriate.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 00
SUBSTITUTION REQUEST FORM
Re: CVUSD Personnel Dept. Tenant Improvement

Project Name

<table>
<thead>
<tr>
<th>Substitution Request Sequence Number</th>
<th>Date Submitted</th>
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<tbody>
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</table>

Project Manual Section Number

<table>
<thead>
<tr>
<th>Item</th>
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</table>

To: SPROTTE + WATSON ARCHITECTURE & PLANNING, INC.
Architect

From: ______________________________________________________
Contractor

Reviewed for timeliness and completeness by General Contractor:
We hereby submit for your consideration the following product comparisons of the specified item and the proposed substitution:

A. Comparison | Specified Item | Substitution |
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1. Product Name/Model</td>
<td>_________</td>
<td>____________</td>
</tr>
<tr>
<td>2. Manufacturer</td>
<td>___________</td>
<td>____________</td>
</tr>
<tr>
<td>Address</td>
<td>___________</td>
<td>____________</td>
</tr>
<tr>
<td>Address</td>
<td>___________</td>
<td>____________</td>
</tr>
<tr>
<td>Phone Number</td>
<td>___________</td>
<td>____________</td>
</tr>
<tr>
<td>3. Product Cost</td>
<td>___________</td>
<td>____________</td>
</tr>
<tr>
<td>Installation/Labor Cost</td>
<td>___________</td>
<td>____________</td>
</tr>
<tr>
<td>4. Delivery Time</td>
<td>___________</td>
<td>____________</td>
</tr>
<tr>
<td>5. Installation Time</td>
<td>___________</td>
<td>____________</td>
</tr>
<tr>
<td>6. Product Characteristics</td>
<td>___________</td>
<td>____________</td>
</tr>
<tr>
<td>7. Dimensions</td>
<td>___________</td>
<td>____________</td>
</tr>
<tr>
<td>Effects</td>
<td>___________</td>
<td>____________</td>
</tr>
<tr>
<td>8. Guarantee/Warranty</td>
<td>___________</td>
<td>____________</td>
</tr>
</tbody>
</table>
9. ICC No. 

10. UL Rating 

11. Samples Submitted 

B. Substantiating Data:

Attach manufacturer's literature for both specified item and substitution.

C. Samples: Provide samples for both specified item and substitution, if applicable.

D. Similar Projects for Reference:

1. 

Name 

Date 

Address 

Address 

Contact 

Telephone 

2. 

Name 

Date 

Address 

Address 

Contact 

Telephone 

E. Maintenance Service/Parts/Supplier:

Name 

Date 

Address
F. What effect does this substitution have on applicable code requirements?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

G. Change Data:

Attach complete information for changes to be made to Drawings and Project Manual.

- Certification of equal performance and assumption of liability for equal performance.
- The Contractor shall agree to pay for costs involved in changing the building design; including engineering, drafting, and detail cost caused by the proposed substitution.

Submitted by:

_____________________________   __________________________
Signature         Name

__________________________    __________________________
Title         Date

__________________________    __________________________
Firm Name         Address

__________________________    __________________________
Address          Address

__________________________    __________________________
City    State  Zip     Telephone

Remarks:  __________________________________________________________
Signature must be by persons having authority to legally bind his firm to the above terms. Failure to provide legally binding signature will result in retraction of approval.

Product substitution of __________________________________________________________

For __________________________________________________________

Specification Section __________________________________________________________

(number) (name)

For Use by Owner’s Representative

☐ Accepted  ☐ Not Accepted

Owner’s Consultant:

By: __________________________________________________________

Date: __________________________________________________________

☐ Accepted  ☐ Not Accepted

School District:

By: __________________________________________________________

Date: __________________________________________________________
SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

B. Related Requirements:

1. Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGES IN THE WORK

A. Architect will issue through Manager supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.4 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.

2. Within time specified in Proposal Request or 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

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

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


B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.

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

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

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

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

6. Comply with requirements in Section 01 25 00 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.


1.5 ADMINISTRATIVE CHANGE ORDERS

A. Allowance Adjustment: See Section 01 21 00 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
1.6 CHANGE ORDER PROCEDURES


1.7 CONSTRUCTION CHANGE DIRECTIVE


1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00
THIS PAGE IS LEFT BLANK
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

B. Related Requirements:

1. Section 01 26 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
2. Section 01 78 39 “Project Record Documents” for procedural requirements governing updating of record documents to district’s satisfaction prior to processing of each month’s application for payment.

1.3 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

A. Coordinate preparation of the Schedule of Values with preparation of the Network Analysis Schedule.

B. Submit the Schedule of Values to the Architect at the earliest feasible date, but in no case later than 7 days before the date scheduled for submittal of the initial Application for Payment. Include with initial submission a projected monthly payment request schedule for total cost of project, for Owner's cash flow planning.

C. Acceptance of the Schedule of Values by the Architect and the District is required prior to approval and payment of the first application for payment.

D. Format and Content: The Project Manual Table of Contents may be used as a general guide to format the Schedule of Values; specific item numbers may be sequentially numerical.
1. The Schedule of Values shall be a detailed breakdown of the price to provide and install each item of work and material on the project.

2. Each line item on the Schedule of Values shall be presented to allow the Architect to easily find that item of work within the construction during his review of the construction operations and evaluate whether that line item is 100% complete or not.

3. Each line item of the Schedule of Values shall be given a value by the Contractor that, in the opinion of the Contractor, best represents the value of that work, and if required to present evidence of his opinion, the Contractor will be able to substantiate the value by the use of supplier, subcontractor written quotations, labor wages/rates, hourly estimates and/or by industry recognized cost estimating references.

4. Each line item of the Schedule of Values shall be in such detail and coordinated with other line items of work and with the contractor's Construction Schedule, that when making application for payment each month, each line item depicts a portion of work that can be completed within one month's pay period, reviewed by the Inspector and the Architect; if that line item is 100% complete, recommended to the Owner for payment. If, in the opinion of the Architect, the line item is not 100% complete, the line item will not be recommended for payment.

5. Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed. Each sheet of the Schedule of Values shall be titled and numbered sequentially.

   a. Line Item Number
   b. Description of Item.
   c. Quantity.
   d. Unit of Measure
   e. Unit Price.
   f. Value of Line Item
   g. Line Item Value Request this month.
   h. Line Item of Value Previously completed.
   i. At the bottom of each sheet, the Total Amount of Columns f, g, and shall be tabulated and carried forward on each page and the TOTAL AMOUNT presented at the end.

E. Round amounts off to the nearest whole Dollar; the total shall equal the Contract Sum.

F. Schedule Updating: Update and resubmit the Schedule of Values when Change Orders or Construction Change directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.

   1. The initial Application for Payment, the Application for Payment at the time of Substantial Completion, and the final Application for Payment involve additional requirements.
B. Payment Application Times: The date for each progress payment is the 25th day of each month. The period of construction Work covered by each Application for Payment is the period ending 15 days prior to the date for each progress payment and starting the day following the end of the preceding period.

C. Payment Application Forms: Use AIA Document G702 and the form of Schedule of Values accepted by the Architect and approved by the District.

D. Application Preparation: Complete each entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Owner. Incomplete applications will be returned without action.

1. Entries shall match data on the Network Analysis Schedule. Use updated schedules if revisions have been made.
2. Include amounts of Owner-approved Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.

E. Transmittal: Submit three (3) executed copies of each Application for Payment to the Architect by means of ensuring receipt within 24 hours; one copy shall be complete, including waivers of lien and similar attachments, when required.

1. Transmit each copy with a transmittal form listing attachments, and recording appropriate information related to the application in a manner acceptable to the Architect.

F. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics lien from entity who may lawfully be entitled to file a mechanics lien arising out of the Contract, and related to the Work covered by the payment.

1. Submit each Application for Payment with the Contractor's waiver of mechanics lien for the period covered by the Application.
2. Submit final Application for Payment with or preceded by final waivers from entity involved with performance of Work covered by the application who could lawfully be entitled to a lien.

G. Initial Application for Payment: Administrative actions and submittals that must precede submittal of the first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of Values
3. Contractor’s Construction Schedule
4. Schedule of unit prices, if applicable.
5. Submittal Schedule
6. Copies of permits as may be required to start the Work (encroachment permits, etc, maybe be obtained as necessary for sequence of construction).
7. Copies of authorizations and licenses from governing authorities for performance of the Work.
8. Initial progress report.
10. Certificates of insurance and insurance policies.
11. Performance and payment bonds.

Note: Each preceding item shall be submitted to the Architect, accepted by the Architect and approved by the Owner prior to the certification and approval of the first payment to the Contractor.

H. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment; this application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work. Administrative actions and submittals that shall proceed or coincide with this application include:

1. Occupancy permits and similar approvals.
2. Warranties (guarantees) and maintenance agreements.
3. Test/adjust/balance records.
5. Meter readings.
7. Change-over information related to Owner’s occupancy, use, operation and maintenance.
8. Final cleaning.
10. Advice on shifting insurance coverages.
11. Final progress photographs.
12. List of incomplete Work, recognized as exceptions to Architect’s Certificate of Substantial Completion. Each work item value shall be listed and the total amount deducted from amounts owed over and above the retention.

I. Final Payment Application: After completing Project closeout requirements, submit final Application of Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

1. Completion of Project closeout requirements.
2. Completion of items specified for completion after Substantial Completion.
3. Written assurance that unsettled claims will be settled.
4. Written assurance that Work not complete and accepted will be completed without undue delay.
5. Transmittal of required Project construction records to Owner.
6. Certified property survey.
7. Proof that taxes, fees and similar obligations have been paid.
8. Removal of temporary facilities and services.
10. Change of door locks to Owner’s access.

11. Application and Certification for Payment – Form G702 Available upon request.
PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

**Attachments:**  Application and Certification for Payment – Form G702  
Continuation Sheet – Form G702
## APPLICATION AND CERTIFICATE FOR PAYMENT (G702)

### CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract Continuation Sheet, AIA Document G703, as attached.

1. **ORIGINAL CONTRACT SUM** $______________
2. Net Change by Change Orders & Extras $______________
3. **CONTRACT SUM TO DATE** $______________
   (Line 1 + Line 2)
4. **TOTAL COMPLETED & STORED TO DATE** $______________
   (Column G on G703)
5. **RETAI NAGE:**
   a. _____ % of Completed Work $______________
   b. _____ % of Stored Material $______________
   Total Retainage (Line 5a + 5b) $______________
6. **TOTAL EARNED LESS RETAINAGE** $______________
   (Line 4 less Line 5 Total)
7. **LESS PREVIOUS CERTIFICATES FOR PAYMENT** $______________
   (Line 5 from prior Certificate)
8. **CURRENT PAYMENT DUE** $______________
9. **BALANCE TO FINISH, INCLUDING RETAINAGE** $______________
   (Line 3 less Line 6)

### CHANGE ORDER SUMMARY

Total changes approved in
- Previous months by Owner $______________
- Total approved this month $______________

**NET CHANGES by Change Order** $______________

---

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

**CONTRACTOR:**
- By: __________________ Date: ______________

**INSPECTOR:**
- By: __________________ Date: ______________

**OWNER:**
- By: __________________ Date: ______________

**AMOUNT CERTIFIED** $______________

---

### ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

**ARCHITECT:**
- By: __________________ Date: ______________

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

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Specifications, Bid 1486, Page 48
<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEM NO.</td>
<td>DESCRIPTION OF WORK</td>
<td>SCHEDULED VALUE</td>
<td>WORK COMPLETED FROM PREVIOUS APPLICATIONS (D+E)</td>
<td>THIS PERIOD</td>
<td>MATERIALS PRESENTLY STORED (NOT IN D OR E)</td>
<td>TOTAL COMPLETED AND STORED TO DATE (D+E+F)</td>
<td>% (G+C)</td>
<td>BALANCE TO FINISH (C-G)</td>
</tr>
<tr>
<td>TOTAL PAGE 1</td>
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</tbody>
</table>

Specifications, Bid 1486, Page 47
SECTION 01 31 00
PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General coordination procedures.
2. Coordination drawings.
3. Requests for Information (RFIs).
4. Project Web site.
5. Project meetings.
6. Contractor Manpower Requirements.

B. Related Work Described Elsewhere:

1. Additional requirements for coordination are included on Contract Drawings and other Sections of the Specifications. It is intended that all work provided under this Contract shall be complete except where otherwise specified or shown. Any drawing, document, or section, by itself, is not a complete description of the work. Cross-references to related work, where given, are provided as a convenience and shall not limit the applicability of other requirements specified or shown unless specifically stated.

C. Related Requirements:

1. Section 01 32 00 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
2. Section 01 73 00 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
3. Section 01 77 00 "Closeout Procedures" for coordinating closeout of the Contract.

1.3 PROJECT PERSONNEL

A. The project shall be adequately staffed with the following minimum full-time, on-site personnel:
1. Site Superintendent
2. Project Engineer
3. Clerical staff person

1.4 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

1. Name, address, and telephone number of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.5 QUALITY ASSURANCE

A. Familiarity with Contract Documents:

1. Contractor and all Subcontractors shall conduct a study necessary to become completely familiar with all requirements. Applicable requirements indicated or described in the Contract Documents, and the publications referred to, are a part of the Work required as though repeated in each such Section.
2. In the event discrepancies or conflicts are encountered, notify the Architect immediately. Where there is discrepancy between different parts of the contract documents, including referenced codes and standards, the documents requiring the higher quality, the greater quantity, or the more difficult work shall govern, unless determined otherwise by the Architect.
3. Promptly distribute required information to entities concerned and ensure the needed actions are taken.

B. Reporting: Unless otherwise noted by the Contractor in his transmittals, all of the Contractor's data transmittals to the Architect for the Architect's review will be construed as stipulating that the Contractor has thoroughly and completely reviewed and coordinated the data prior to transmittal.
C. Interfacing: It shall be solely the responsibility of the Contractor to make sure that each Subcontractor completes in a timely manner the assigned work and that all interfaces are prepared, connected, and function as required.

D. Verify all existing dimensions in the field prior to commencing with Construction.

E. All drawings though noted to scale are for illustration only. Do not scale the drawings.

F. The Construction Documents shall be Bid and Constructed in its entirety. Construction Documents shall be coordinated between trades in their entirety. In the event there is a discrepancy between the Construction Documents, it shall be assumed that the more stringent or more costly methodology for Construction shall be utilized for construction, with the Architect making the final determination.

G. Changes to the Division of the State Architect Approved Drawings and Specifications shall be made by means of Addendum or Construction Change Documents as described in DSA IR A-6 AND Title 24, Part 1, CCR, Section 4-338.

1.6 GENERAL COORDINATION PROCEDURES

A. Cooperate with the District's representative for allocation of mobilization areas of site; for field offices and sheds, for access, traffic, and parking facilities.

B. During construction, coordinate use of site and facilities through the District's representative.

C. Comply with procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.

D. Comply with instructions for use of temporary utilities and construction facilities.

E. Coordinate field engineering and layout work.

F. Coordinate Storm Water Pollution Prevention Plan.

G. Make the following types of submittals to Architect:

1. Requests for Interpretation (RFI's).
2. Requests for Substitution.
3. Shop drawings, product data, and samples.
4. Test and inspection reports.
5. Manufacturer's instructions and field reports.
6. Applications for payment and change order requests.
7. Progress schedules.
8. Coordination drawings.

H. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other
contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.

I. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

1.7 COORDINATION DRAWINGS

A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

1. Provide information required for preparation of coordination drawings.
2. Review coordination drawings prior to submission to Architect.
3. Prepare coordination drawings prior to commencing work. If Work is begun without preparing necessary coordination drawings, it shall be understood that the Contractor has coordinated all work without the need for drawings.

1.8 REQUESTS FOR INFORMATION (RFIs)

A. Definition: Requests for Information (RFI's) can be submitted by the Contractor, the sub-Contractors or the inspector and should be directed to the Architect through the Contractor on the appropriate form.

B. The General Contractor shall plan, schedule, coordinate and sequence Work so Requests for Information (RFI), when necessary, may be submitted to the Architect in a timely manner so as not to delay progress of Work. The Architect shall make every effort to respond to the RFI's within ten working days. There are times; however, when specific RFI's must be reviewed by not only the Architect, but various consultants and/or the District. The Contractor should allow sufficient time so that work will not be delayed as a result of the time required to adequately review and process RFI's. No extension of contract time will be authorized because of failure of the Contractor to
transmit RFI's to the Architect sufficiently in advance of the work to allow for processing.

C. Submission of and responses to RFI(s) with copies to District, may be transmitted electronically if agreed to by all parties. Each party shall assign a contact person who shall be responsible to send and receive RFI's. RFI's mistakenly sent to undesignated parties may be cause for Architect's delayed response.

D. Telephone conversations requesting information shall be confirmed promptly via RFI by Contractor to Architect requesting confirmation. Verbal information alone shall not be binding/adequate.

E. Unnecessary Requests for Information (RFI's): The Contractor shall reimburse the Architect when the Contractor submits unnecessary RFI's for the Architect's review. Unnecessary RFI's include the following:

1. When the response to the RFI is requesting information that is already contained within the Contract Documents.
2. Redundant RFI's requesting the same information more than once (perhaps from different members of the Contractor’s team)
3. When the response to the RFI are based on referenced standards, or is based on established and common construction practices.
4. When the RFI system is used for inappropriate questions, such as scope changes, substitution requests or unwarranted “helpful suggestions”.
5. The Architect shall be entitled to bill Contractor at the Architect's hourly rate for the additional unnecessary work generated due to the Contractor's inefficiency.

   a. Contractor shall reimburse the Architect at the following hourly rates.

<table>
<thead>
<tr>
<th>Position</th>
<th>Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>$200.00/hour</td>
</tr>
<tr>
<td>Associate Architect / Project Manager</td>
<td>$150.00/hour</td>
</tr>
<tr>
<td>Project Architect</td>
<td>$95.00/hour</td>
</tr>
<tr>
<td>Job Captain</td>
<td>$85.00/hour</td>
</tr>
<tr>
<td>CAD Specialist</td>
<td>$75.00/hour</td>
</tr>
<tr>
<td>Support Staff</td>
<td>$65.00/hour</td>
</tr>
</tbody>
</table>

   b. If RFI requires Architect's Consultant(s) acknowledgment, Contractor shall reimburse consultant(s), at the same hourly rates for consultant's staff. Contractor shall also pay to the Architect, a percentage for overhead and profit to the consultant's fee, equal to the markup the General Contractor adds to "Change Orders" from his "Subcontractors".

F. Contractor shall be billed at "Request for Payment" meeting, and payment is due on the 10th day of the following month. If payment is not received by Architect by that date,
the District shall deduct the comparable amount of money from payments due the Contractor.

G. No damages for delay due to late RFI response beyond the time allotted for review will be allowed, unless Contractor can verify both of the following:

1. The RFI in question was not foreseeable with proper planning, scheduling, coordination, and sequencing and the Architect's late response delayed timely purchase or delivery of equipment or material, or limited construction personnel from proceeding with their task(s), within previously listed "Construction Schedule" activity period(s).

2. The item/information contained in the RFI was on the Critical Path of the Construction Schedule.

H. If the Contractor considers that, a change in Contract Sum or Contract Time is required before proceeding with the work, obtain authorization from the Owner by notifying the Owner and the Architect within two (2) working days and submit an itemized proposal within fourteen (14) working days.

I. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect.
4. RFI number including RFIs that were returned without action or withdrawn.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.

J. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.9 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.

2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.

B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Conduct the conference to review responsibilities and personnel assignments.

2. Attendees: Authorized representatives of Owner Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

3. Agenda: Discuss items of significance that could affect progress, including the following:

   a. Tentative construction schedule.
   b. Phasing.
   c. Critical work sequencing and long-lead items.
   d. Designation of key personnel and their duties.
   e. Lines of communications.
   f. Procedures for processing field decisions and Change Orders.
   g. Procedures for RFI.
   h. Procedures for testing and inspecting.
   i. Procedures for processing Applications for Payment.
   j. Distribution of the Contract Documents.
   k. Submittal procedures.
   l. Sustainable design requirements.
   m. Preparation of record documents.
   n. Use of the premises and existing building.
   o. Work restrictions.
   p. Working hours.
   q. Owner's occupancy requirements.
   r. Responsibility for temporary facilities and controls.
   s. Procedures for moisture and mold control.
   t. Procedures for disruptions and shutdowns.
   u. Construction waste management and recycling.
   v. Parking availability.
   w. Office, work, and storage areas.
   x. Equipment deliveries and priorities.
   y. First aid.
   z. Security.
   aa. Progress cleaning.

4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect and District’s representative of scheduled meeting dates.

2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
   
   b. Options.
   c. Related RFIs.
   d. Related Change Orders.
   e. Purchases.
   f. Deliveries.
   g. Submittals.
   h. Sustainable design requirements.
   i. Review of mockups.
   j. Possible conflicts.
   k. Compatibility requirements.
   l. Time schedules.
   m. Weather limitations.
   n. Manufacturer’s written instructions.
   o. Warranty requirements.
   q. Acceptability of substrates.
   r. Temporary facilities and controls.
   s. Space and access limitations.
   t. Regulations of authorities having jurisdiction.
   u. Testing and inspecting requirements.
   v. Installation procedures.
   w. Coordination with other work.
   x. Required performance results.
   y. Protection of adjacent work.
   z. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.

4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.

5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.
1. Conduct the conference to review requirements and responsibilities related to Project closeout.

2. Attendees: Authorized representatives of Owner, District, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.

3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
   a. Preparation of record documents.
   b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
   c. Submittal of written warranties.
   d. Requirements for completing sustainable design documentation.
   e. Requirements for preparing operations and maintenance data.
   f. Requirements for delivery of material samples, attic stock, and spare parts.
   g. Requirements for demonstration and training.
   h. Preparation of Contractor's punch list.
   i. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
   j. Submittal procedures.
   k. Coordination of separate contracts.
   l. Owner's partial occupancy requirements.
   m. Installation of Owner's furniture, fixtures, and equipment.
   n. Responsibility for removing temporary facilities and controls.

4. Minutes: Entity conducting meeting will record and distribute meeting minutes.

E. Progress Meetings: Conduct progress meetings at weekly regular intervals.

1. Coordinate dates of meetings with preparation of payment requests.

2. Attendees: In addition to representatives of Owner, Owner's Authority and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.

3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
   a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule
revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1) Review schedule for next period.

b. Review present and future needs of each entity present, including the following:

1) Interface requirements.
2) Sequence of operations.
3) Resolution of BIM component conflicts.
4) Status of submittals.
5) Status of sustainable design documentation.
6) Deliveries.
7) Off-site fabrication.
8) Access.
9) Site utilization.
10) Temporary facilities and controls.
11) Progress cleaning.
12) Quality and work standards.
13) Status of correction of deficient items.
14) Field observations.
15) Status of RFI{s}.
16) Status of proposal requests.
17) Pending changes.
18) Status of Change Orders.
19) Pending claims and disputes.
20) Documentation of information for payment requests.

4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

F. Coordination Meetings: Conduct Project coordination meetings at regular intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.

1. Attendees: In addition to representatives of Owner, Owner's Authority and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meetings shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.

c. Review present and future needs of each contractor present, including the following:

1) Interface requirements.
2) Sequence of operations.
3) Resolution of BIM component conflicts.
4) Status of submittals.
5) Deliveries.
6) Off-site fabrication.
7) Access.
8) Site utilization.
9) Temporary facilities and controls.
10) Work hours.
11) Hazards and risks.
12) Progress cleaning.
13) Quality and work standards.
14) Change Orders.

3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PROPOSAL REQUESTS

A. Definition: Proposal Requests are issued if additional services, materials, or equipment is required of the Contractor beyond the basic scope of Work and service delineated in the Contractor Documents. The Architect issues the Proposal Request outlining the additional scope of work requested or required. The Contractor responds to Proposal Request with forms provided by the Architect. The Contractor’s response includes an itemized cost breakdown for all materials and labor required to accomplish the
additional scope of work outlined in the Proposal Request (extras and / or credits) and indicates if the scope of work outlined will necessitate an extension of the Contract time. The Contractor will submit responses to Proposal Requests with seven days of receipt of the Proposal Request. Responses shall be reviewed by the Architect and the District’s representative. The Contractor shall not proceed with the Proposal Request modifications without written authorization from either the Architect or the District’s representative.

B. Proposal Request Negotiations: Should the dollar amount for additional costs or credits attributable to a response to the Proposal Request be a point of contention, The Contractor and the Architect shall each make a responsible effort to arrive at a mutually agreed upon dollar amount for the disputed item. If a compromise cannot be achieved within a reasonable time from, dollar amounts will be based on the current edition of the Means Building Construction Cost Data – western Edition prepared by R.S. Means Company, Inc.

3.2 CHANGES TO DIVISION OF THE STATE ARCHITECT APPROVED PLANS AND OR SPECIFICATIONS

A. Changes to the Division of the State Architect Approved Plans or Specifications shall be made by means of Construction Change Documents as defined in DS IR. A-6.

1. The Architect and DSA shall determine if the change affects the Structural, Access or Fire & Life Safety Portions of the Project and determine the category of the change.

2. Changes determined to affect the Structural, Access or Fire & Life Safety Portions of the Project shall be approved by the Division of the State Architect prior to commencement of the affected Work.

B. A Change in the Work or adjustment in the Contract Sum or Contract Time shall be formally authorized by a Change Order. Change Orders will be written up and issued by the Architect based on approved Proposal Request responses. Each Change Order must be signed by the Architect, the Contractor, and the District Representative and approved by the School Board. If determined that the Change Order contains changes affecting the Structural, Access or Fire & Life Safety Portions of the Project then the Change must be approved by the Division of the State Architect prior to commencement of the affected Work.

3.3 PLANNING THE WORK

A. By thorough advance planning of activities, coordinate the following in addition to other coordination activities required:

1. Materials, services, and equipment purchasing.
2. Shipping.
3. Receipt and storage at the site.
4. Installation, including interface with related items.
5. Inspection and testing, to the extent required under the Contract.
6. Assistance in initial start-up and operational tests.
7. Completion of the Work, including removal and disposal of Contractor's surplus material and equipment, and final cleaning of structures and sites.

3.4 COORDINATION
A. Coordinate construction activities included under various Sections of these Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.
B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work.

3.5 GENERAL INSTALLATION PROVISIONS
A. Coordination methods used by the Contractor are at the Contractor's option, except that the Architect may disapprove Work completed by the Contractor or data submitted by the Contractor when, in the Architect's judgment, coordination has been inadequate to ensure the specified quality.
B. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated or as required by Code. Refer questionable mounting height decisions to the Architect for final decision.

3.6 IDENTIFICATION OF REQUESTS FOR INFORMATION
A. General: Consecutively number Requests for Information within the respective specification section and drawing number. Fill out each Request for Information completely, number sequentially, include specification section, name of supplier or installer, and contact person and telephone number.
B. Internal Identification: On the first page of each copy of each Request for Information, and elsewhere as required for positive identification, indicate the Request for Information number, 01 (RFI #1) also indicate the applicable specification section, for example 05500 (e.g., RFI-01_05500).
C. Re-Submittals: When Requests for Information are resubmitted, transmit under a new letter of transmittal and with same number plus an "alphabetic" suffix indicating that it is a re-submittal, e.g. 01 (RFI #1), 01B (RFI #1 second submittal).
D. Maintain RFI log for the duration of the Contract. Show status, with columns showing date submitted, date of response, issue, DSA itemization, access, fire, structure, related FDC, related CO, and date of closure, etc, to match Architect's categories. Make the
log available for the Architect's review upon request. Log shall be available and will be reviewed at each project meeting.

E. File name of electronic submittal shall be:

“RFI no_re-submittal_spec no_ S+W job no submittal date day-mo-year”

“RFI-01B_05500_09-0608_03-15-12”.

Date of electronic RFIs shall be a business day, not a holiday or weekend. If submitted on a non-business day the Date Issued on the RFI shall be the next business day.

END OF SECTION 01 31 00

Attachment: RFI form
REQUEST FOR INFORMATION

R.F.I. # ____________________________
Date Issued: ______________________
Via: ______________________________
Total Pages: ________________________
Contractor: ________________________
Contractor’s Job #: __________________

Architect’s Job #: 15-0900
DSA Approval #: 04-________________
Owner: Cajon Valley Union School District
Campus: District Office
Project Name: Tenant Improvements CVUSD Personnel Department
To: Project Architect, Sprotte+Watson Architecture and Planning

PLEASE PROVIDE DIRECTION OR CLARIFICATION FOR THE FOLLOWING:

DETAIL/DRAWING #: _______________ SPECIFICATION SECTION: ______________________

DESCRIPTION:

Signed: ____________________________ Date:

RESPONSE/DIRECTION:

RFI responses do not authorize changes to the Contract Sum or Contract Time. RFI responses only provide clarifications. The work shall be carried out in accordance with the following supplemental instructions issued in accordance with the contract documents without change to Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates the Contractor’s acknowledgement that there will be no change in the Contract Sum or Contract Time. If the Contractor considers that, a change in Contract Sum or Contract Time is required before proceeding with the work, obtain authorization from the Owner by notifying the Owner and the Architect within two (2) working days and submit an itemized proposal within fourteen (14) working days.

☐ See Attachments: ________________________________

Answered By: ____________________________ Title: ________________________________
Signed: ____________________________ Date: ________________________________

Sprotte Watson
ARCHITECTURE PLANNING

450 S. Melrose Drive, Suite 200 :: Vista, CA 92081 :: (760) 639-4120
SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Section Includes:

1. Wherever possible throughout the Contract Documents, the minimum acceptable quality of workmanship and materials has been defined by manufacturer's name and catalog number, reference to recognized industry and government standards, or description of required attributes and performance.

2. To help ensure that the specified products are furnished and installed in accordance with design intent, submit design product and data in advance for review by the Architect. Review by the Architect and the design consultants in no way relieve the contractor or subcontractor or supplier from providing the products or construction as described in the Contract Documents.

3. Make submittals required by the Contract Documents. Revise and resubmit when requested to establish compliance with the specified requirements.

C. Related Requirements:

1. Section 01 29 00 "Payment Procedures" for submitting Applications for Payment and the schedule of values.

2. Section 01 78 23 "Operation and Maintenance Data" for submitting operation and maintenance manuals.

3. Section 01 78 39 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.3 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's and Construction Manager's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
B. **Informational Submittals**: Written and graphic information and physical samples that do not require Architect's and Construction Manager's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

C. **File Transfer Protocol (FTP)**: Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

D. **Portable Document Format (PDF)**: An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

### 1.4 QUALITY ASSURANCE

A. **Coordination of Submittals**: Prior to each submittal, review and coordinate each item being submitted and verify that each item and the submittal conform with the requirements of the Contract Documents. By affixing the Contractor's signature to each submittal, certify that this coordination has been performed.

B. **Substitutions affecting Division of the State Architect Accessibility, Fire Life Safety, and Structure that would otherwise be reviewable during routine plan check** is a Construction Change Document and shall be approved by DSA prior to fabrication and installation.

C. **Certificates of Compliance**:
   1. Certify that materials used in the Work comply with specified provisions thereof. Certification shall not be construed as relieving the Contractor from furnishing satisfactory materials if, after tests are performed on selected samples, the material is found not to meet specified requirements.
   2. Show on each certification the name and location of the Work, name and address of Contractor, quantity and date or dates of shipment or delivery to which the certificate applies, and name of the manufacturing or fabricating company. Certification shall be in the form of letter or company-standard forms containing required data. Certificates shall be signed by an officer of the manufacturing or fabricating company.
   3. In addition to the above information, laboratory test reports submitted shall show the date or dates of testing, the specified requirements of which testing was performed, and results of the test or tests.

### 1.5 ACTION SUBMITTALS

A. Revise "Submittal Schedule" Paragraph below to suit Project. If there is an office submittal review sequence policy, insert specific requirements. See Evaluations for discussion on submittal review sequence policies.
B. Prior to submittal of the Contractor's first application for payment, submit Submittal Schedule per Section 01310, Progress Schedules, indicating timing of all submittals required by the Contract Documents. Failure to submit such a schedule will be considered sufficient grounds to delay Architect's certification of Contractor's Application for Payment.

C. Submittals shall be submitted per the following time schedule for the following specific items. Failure to submit by these dates will be considered sufficient grounds to delay Architect's certification of Contractor's Application for Payment until these items are received in proper order.

1. Within 15 calendar days after Award of Contract:
   a. **All Requests for Substitutions:** After this date, no further requests for substitution will be considered, and Contractor shall be obligated to provide the specified products - **NO EXCEPTIONS.**

2. Within 20 calendar days after Notice to Proceed:
   a. Concrete mix design, steel connectors to be embedded in concrete foundations and slabs, materials for underground site plumbing, sewer, storm drainage, and underground site electrical.

3. Within 30 calendar days after Notice to Proceed:
   a. Hollow metal, door hardware, fire alarm system, fire sprinkler system, glulam beams and other structural lumber, structural steel, miscellaneous structural connectors, mechanical, plumbing and electrical materials, and equipment and fixtures.
   b. All materials requiring a color selection by the District and Architect.
   c. All casework.

4. Within 45 calendar days prior to installation:
   a. other items not specifically mentioned in 1, 2 and 3 above.

D. Provide required submittals for the following products to interface with other portions of the Work. Submit data to verify compliance only.

1. For products specified only by reference standard, select product meeting that standard, by manufacturer.
2. For products specified by naming several products or manufacturers, select one of the products or manufacturers named.
3. For products specified by naming one or more products or manufacturers and stating "or other approved", or "or approved equivalent", or other such wording on drawings or within specifications sections, submit a request for substitutions for product or manufacturer which is not specifically named, **but only after submitting bid on specified products and systems.**

1.6 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Refer to Section 01 35 50 “Request for Electronic File”.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

   a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

PART 2 - PRODUCTS

2.1 SHOP DRAWINGS AND COORDINATION DRAWINGS

A. Scale and Measurements: Make shop drawings to a scale sufficiently large to show pertinent aspects of the item and its method of connection to the Work.

B. Type of Prints Required: Submit shop drawings in the form of clean, clear blackline documents on bond paper of each sheet. Provide a minimum of six (6) copies. Electronic submittals may be submitted as arranged in advance with the Architect; however, Deferred approval items shall always be submitted with hard copies.

C. Review comments by the Architect and/or the Architect’s consultants will be shown on one set of blackline documents and returned to the Contractor. Reviewed comments set may be returned Electronically as noted above.

D. Reproduction of Reviewed Shop Drawings: The Contractor shall make and distribute copies of the shop drawings as required for his purposes. Printing and distribution of reviewed shop drawings for the Contractor’s use and for DSA use will be by the Contractor.

2.2 MANUFACTURER’S LITERATURE

A. General: Where submitted literature from manufacturers includes data not pertinent to the submittal, indicate which portion of the contents is being submitted for review. Submittals not clearly marked will be returned without review.

B. Number of Copies Required: Nine (9) total, three (3) for Contractor plus six (6) copies to be retained by the Architect. The Architect will distribute stamped copies to the Consultant, D.S.A., the Inspector, and two (2) to the Owner. Electronic submittals may
be submitted as arranged in advance with the Architect; however, Deferred approval items shall always be submitted with hard copies.

C. The Contractor shall make and distribute copies required for his purposes.

2.3 SAMPLES

A. Accuracy of Samples: Precise article proposed to be furnished shall be labeled with a submittal number, and project name.

B. Number of Samples Required: Submit quantity required to be returned plus one each retained by the Architect, the Inspector, D.S.A., and the Owner, unless otherwise noted.

C. Reuse of Samples: In situations accepted by the Architect, the Architect's retained sample may be used in the construction as one of the installed items.

D. Size of Samples: Samples shall be 6" x 6", or manufactured width by 12 inches, unless otherwise required by the pertinent Specification section.

2.4 COLORS AND PATTERNS

A. When the precise color and pattern is not specifically described in the Contract Documents, and whenever a choice of color or pattern is available in a specified product, submit accurate color and pattern charts to the Architect for review and selection. Submit data to verify compliance only. If the color is specifically described in the Contract, submit only that color for verification and approval.

2.5 CONTRACTOR’S STATEMENT OF RESPONSIBILITY

A. When the Contractor is responsible for the construction of main wind or seismic force resisting system, designated seismic system or wind-or seismic resisting components listed in the statement of special inspections of this project shall submit a statement of responsibility to the building official of the jurisdiction having authority over this permit and to the District and Architect. This form is located after Section 01410.

2.6 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and three paper copies of certificate, signed and sealed by the responsible design professional, for
each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 IDENTIFICATION OF SUBMITTALS

A. General: Consecutively number submittals within the respective specification section. Accompany each submittal with transmittal cover letters attached to the end of this Section. Fill out each transmittal cover letter completely, number sequentially, include specification section, name of supplier or installer, and contact person and telephone number.

B. Internal Identification: On the first page of each copy of each submittal, and elsewhere as required for positive identification, indicate the submittal number, 01 (submittal #1) also indicate the applicable specification section for example 05500.

C. Re-Submittals: When material is resubmitted, transmit under a new letter of transmittal and with same submittal number plus an "alphabetic" suffix indicating that it is a re-submittal, e.g. 01 (submittal #1), 01B (submittal #1 second submittal).

D. Submittal Log: Maintain submittal log for the duration of the Contract. Show current status of submittals, with columns showing submittal number, specification section, date submitted to the architect, date architect returned, date of resubmitted, status such as "in review", "resubmitted", "approved", "approved as corrected", "rejected", etc, to match Architect's categories. Make the submittal log available for the Architect's review upon request. Log shall be available and will be reviewed at each project meeting.

E. File name of electronic submittal shall be:
   “submittal no_re-submittal__spec no_ S+W job no_submittal date day-mo-year”
   “01B_05500_09-0608_03-15-12”.

Date of electronic submittal shall be a business day, not a holiday or weekend. If submitted on a non-business day the date shall be the next business day

3.2 COORDINATION OF SUBMITTALS

A. The Contractor's Project Engineer shall be responsible to coordinate and review all submittals prior to forwarding to Architect. All submittals shall be stamped with Contractor's stamp, signed and dated, stating:
1. Contractor has reviewed submittal for compliance with requirements of the Contract Documents.
2. Contractor has reviewed submittal for proper interfacing with other trades.

B. General: Prior to making submittals, coordinate materials including, but not necessarily limited to:
   1. Determine and verify interface conditions, catalog numbers, and similar data.
   2. Coordinate with other trades as required
   3. Clearly indicate deviations from requirements of the Contract Documents. Deviations which are not clearly called out as a deviation and which subsequently becomes a part of an approved submittal can under no circumstances be considered legitimate grounds for an additive change order.

C. Grouping of Submittals: Make submittals in groups containing associated items to ensure that information is available for checking each item when it is received. Partial submittals may be rejected as not complying and the Contractor shall be strictly liable for occasioned delays.

D. Color selections for materials in the same space or same elevation shall be submitted at one time. "Piece meal" submission of the color samples or charts is unacceptable and will be returned awaiting a "complete" submission.

3.3 TIMING OF SUBMITTALS

A. General: Make submittals far enough in advance of dates scheduled for installation to provide time required for reviews; for possible revisions and resubmittals; and for placing orders and securing delivery, and as otherwise required by Part 1.04 of this Section.

B. Architect's Review Time: In scheduling, allow at least 20 calendar days for review by the Architect following his receipt of the submittal or as otherwise may be required under each Specification section. Allow an additional 10 days for reviews involving Architect's consultants or as otherwise may be required under each Specification section.

C. Delays: Delays caused by tardiness in making submittals or resubmittals will not be an acceptable basis for extension of the Contract completion time.

3.4 ARCHITECT'S REVIEW

A. General: Corrections or comments made on Shop Drawings during his review shall not relieve the Contractor from compliance with requirements of the Drawings and Specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. The Contractor is responsible for confirming and correlating quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of other trades, and performing his work in a safe and satisfactory manner.
1. Authority to Proceed: The notations "Furnish as Submitted" or "Furnish as Corrected" authorize the Contractor to proceed with fabrication, purchase, or both or the items so noted, subject to the revisions, if any, required by the Architect's review comments.

2. Revisions: The notation "Revise and Resubmit" or "Submit Specified Item" means make revisions required by the Architect and resubmit. If the Contractor considers required revision to be a change, he shall so notify the Architect as provided for under "Changes" or "Changes in the Work" in the General Conditions. Show each drawing revision by number, date, and subject in a revision block on the drawing. Make only those revisions directed by or accepted by the Architect.

3. Rejection: The notation "Rejected" means the submission does not meet requirements of project contract documents. Make new submission meeting project contract documents.

END OF SECTION 01 33 00

Attachment: Contractor’s Submittal/Transmittal Form-Cover Sheet referenced herewith.
**SUBMITTAL TRANSMITTAL**

**JOB #:** 16-2200  
**PROJECT NAME:** TENANT IMPROVEMENTS CVUSD PERSONNEL DEPARTMENT  
**OWNER:** Cajon Valley Union School District  
**DSA #:** NA  
**FILE:** 37-9

**DESCRIPTION:**

This transmittal record shall be utilized by all personnel to route Submittals through the process. Personnel may provide an additional transmittal, but this form should also be completed to assist in the tracking of the submittal. Keep this transmittal with the submittal. Provide the initials or name of the person to whom the material is being delivered within appropriate boxes below and the quantities of items being sent.

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**REMARKS:**
SECTION 01 35 20

CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. This section includes requirements for the management of indoor quality ("IAQ") during the construction of the work.

B. The Contractor shall provide all necessary equipment and material resources required to meet the requirements of this section.

C. Related Sections.
   1. Not applicable.

1.2 SUBMITTALS

A. The contractor shall provide the following documentation:

1. The Contractor Indoor Air Quality Management Plan ("IAQM Plan"):  
   a. The plan shall identify the five Sheet Metal and Air Conditioning National Association (SMACNA), IAQ requirements for Occupied Buildings Under Construction, 1995 Chapter 3. Part 3 of this Section, "Indoor Air Quality Plan During Construction", can be used as a basis for development of the plan.
   b. The IAQM Plan shall provide a Draft of the Plan prior to the start of building construction.
   c. The IAQM Plan shall provide a final version of the Construction IAQ Management Plan after completing the requirements of this section. The final Plan must be revised to reflect the actual as-built conditions of this project.

2. Construction Indoor Air Quality Procedures Photographs:
   a. The Contractor shall provide photographs of construction IAQ management measures such as protection of ducts and on-site stored or installed absorptive materials.
   b. Photographs shall be taken on at least three different occasions during the interior finish work:
      1) The first two to four few weeks of the work.
      2) The middle two to four few weeks of the work.
      3) The last two to four few weeks of the work.
c. On each occasion at minimum of six photographs representing at least three different Construction IAQ measures shall be taken. This represents a total of 18 photographs.
d. Photographs shall be color, at least 5”x7” in size and with photographic quality of 300 pixel resolution or better.

3. Filtration Media Product Data:
   a. The Contractor shall provide cut sheets for filtration media installed during construction to protect ductwork if the HVAC system is used to supply conditioned air into the building. The cut sheets shall highlight the MERV values of the media.

4. Building IAQ Testing Procedure / Flush Out Procedure Draft Plan:
   a. The IAQM Plan shall describe the procedures planned for the Project.
   b. The IAQM Plan shall be approved by the Architect prior to initiation of the work.

5. Building IAQ Testing Procedure / Flush Out Procedure Final Plan and Final Report:
   a. The Contractor shall provide a copy of the approved Final Plan.
   b. The Contractor shall provide a copy of a Final Report that includes all IAQ testing results and reports.
   c. The Final IAQM Plan shall include the actual dates on which the work was completed.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 INDOOR AIR QUALITY MANAGEMENT DURING CONSTRUCTION

A. During construction the Contractor shall meet or exceed the minimum requirements of the SMACNA IAQ Guidelines for Occupied Building Under Construction, 1995.

B. HVAC Protection:
   1. Protect all air handling and distribution equipment, and air supply and return ducting during construction.
   2. Adequately cover and protects all exposed air inlets and outlets openings, grilles, ducts, plenums, etc. to prevent water, moisture, dust, and other contaminate intrusion.
   3. Apply protection immediately after installation of equipment and ducting.
   4. Ducting runs that require more than a single day to install shall be protected at the end of each day’s work.
   5. Install air filters with a MERV filtration value of 8 or higher, as determined by ASHRAE 52-2-1999, over all return grilles.

C. Source Control:
1. Protect stored on-site or installed absorptive or porous materials such as batt insulation and drywall from exposure to moisture.
2. Do not use wet damaged porous materials in the building.
3. Provide adequate ventilation of packaged dry products prior to installation. Remove from packaging and ventilate in a secure, dry, well-ventilated space free from strong contaminant sources and residues.
4. Provide a temperature range from 60 degree F minimum to 90 degree F limits of work unless otherwise approved by the Architect.
5. Route material deliveries and construction waste removal around the exterior of the building, not through it.

D. Pathway Interruption:

1. Building Not Occupied During Construction:
   a. If the District does not plan to occupy the building until construction is complete, then Pathway interruption is not required for this project.

2. Building Occupied During Construction:
   a. If occupying any part of the building during construction, the following are typical of the measures which must be implemented to comply with Pathway Interruption.
   b. Depressurize the work area by adjusting the balance of the HVAC and exhaust systems or installing portable exhaust fans. A general rule of thumb is to exhaust the space at a rate of 10% greater than the rate of supply. The exhausted air may or may not need to be filtered, depending on the nature of the materials, location of the exhaust and any applicable regulations.
   c. If areas of the building are occupied during construction, increase supply air and or reducing return/exhaust air in area.
   d. Erect barriers to contain construction area. This can range from dust curtains to a plastic seal around the site. The barrier should be based on the materials involved and the implications of the dust or odor escaping from the site.
   e. Locate pollution sources to favorable locations in regards to air quality.
   f. Depending on the weather conditions, ventilate using 100% outside air to exhaust contaminated air directly to the outside during installation of VOC-emitting materials.

E. Housekeeping:

1. Minimize accumulation of dust, fumes, vapors, or gases in the building.
2. Suppress dust with wetting agents or sweeping compounds.
3. Clean-up dust using a wet rag or damp mop.
4. Increase the cleaning frequency when dust build-up is noted.
5. Remove spills or excess applications of solvent-containing products as soon as possible.
6. Remove accumulated water and keep work areas as dry as possible.
7. Vacuum using HEPA filtered vacuum cleaners.
8. Store volatile liquids, including fuels and solvents, in closed containers and outside of the building when not in use.
9. Keep volatile liquid containers closed when the container is inside of the building and not in use.
F. Scheduling:

1. Schedule for applications of interior finishes including time frames for the application of wet materials onto dry materials, dry materials onto wet materials, and expected curing times for applied wet materials.
2. Wet materials include all paints, adhesives, sealants, coatings, finishes and spray-applied materials, such as structural fireproofing.
3. Insure that all wet applied interior finish materials are properly and fully cured before installing other finish materials over them.
4. Install carpets and furnishings after all other interior finish materials have been applied and fully cured.
5. Provide sufficient ventilation, air circulation and air changes to properly cure materials.
6. Provide sufficient ventilation, air circulation and air changes to dissipate excessive humidity when present.

3.2 INDOOR AIR QUALITY MANAGEMENT PRIOR TO OCCUPANCY: IAQ TESTING OPTION

A. The Contractor has the option of implementing either the Building IAQ Test Procedures or the Building Flushout Procedure as described in this paragraph.

B. Building IAQ Test Procedure:

1. After construction and prior to occupancy the Contractor shall conduct a IAQ testing as follows:
   a. After construction means that the application of all finish materials is complete.

2. Testing Subcontractor: Using a qualified testing subcontractor, such as an Industrial Hygienist, as approved by the District.

3. Completion of Testing and Balance: Prior to testing the Testing and Balancing Agency shall verify the performance of the HVAC air distribution system.

4. Testing Thresholds: Establish a baseline IAQ test measuring the chemical contaminates listed below:
   a. Formaldehyde: 50 parts per billion maximum.
   b. Particulates (PM10): 50 micrograms per cubic meter maximum.
   c. Total Volatile Organic Compounds (TVOC): 500 micrograms per cubic meter maximum.
   d. 4-Phenylecyclohexene (4-PCH): 6.5 micrograms per cubic meter maximum.
   e. Carbon Monoxide (CO): 9 part per million and no greater than 2 parts per million above outdoor levels.

5. Testing Protocol: The testing shall be conducted using testing protocols consistent with the United States Environmental Protection Agency Compendium of Methods for the Determination of Air Pollutants in Indoor Air.

6. Air Sampling:
a. The air sample testing shall be conducted as follows:
b. All measurements shall be conducted prior to occupancy, but during normal occupied hours and with the building ventilation system starting at the normal daily start time and operated at the minimum outside air flow rate for the occupied throughout the duration of the air testing.
c. Air samples shall be collected between 3 feet and 6 feet from the floor to represent the breathing zone of occupants, and over a minimum 4-hour period.

7. Temporary Flushout:

a. For each sampling point where the maximum concentration limits are exceeded conduct additional flush-out with outside air and retest the specific parameter(s) exceeded to indicate the requirements are achieved.
b. Repeat procedure until all requirements have been met.
c. For areas where test results exceed the maximum limits, conduct a building temporary flushout of those areas as recommended by the Testing subcontractor. The building flushout procedure should include:

   1) Number of days of operation.
   2) Number of house and time of day of flushout.
   3) Percent retesting non-complying building areas, take samples from the same locations as in the first test.
   4) When retesting non-complying building areas, take samples from the same locations as in the first test.

3.3 INDOOR AIR QUALITY MANAGEMENT PRIOR TO OCCUPANCY: FLUSHOUT OPTION

A. The contractor has the option of implementing either the Building IAQ Test Procedure or the Building Flushout Procedure as described in this paragraph.

B. Building Flushout Procedure:

1. After construction and prior to occupancy the Contractor shall conduct a building flush out as follows:

   a. After construction means that the application of all finish materials is complete.

2. Option 1 – No Occupancy During Flushout:

   a. After construction ends, prior to occupancy and with all interior finishes installed, perform a building flush-out.
   b. Supply a total air volume of 14,000 cubic foot of outdoor air per square foot of floor area.
   c. Maintaining an internal temperature of at least 60 degrees F and relative humidity no higher than 60% during the flushout.

3. Option 2 – Occupancy Prior to Completion of Flushout:
a. If occupancy is desired prior to completion of the flush-out, the space may be occupied following delivery of a minimum of 3,500 cubic feet of outdoor air per square foot of floor area to the space.

b. Once a space is occupied, it shall be ventilated at a minimum rate based on either option listed below, whichever is greater:

1) .030 cubic feet per minute per square foot (fcm1s.f.) of outside air.
2) The design HVAC system minimum outside air rate determined as determined by the HVAC engineer based ASHRAE 62.1-2004 calculations using the ventilation rate procedure.

c. During each day of the flush-out period, ventilation shall begin a minimum of three hours prior to occupancy and continue during occupancy.

d. These conditions shall be maintained until a total of 14,000 cubic feet per square foot (cu.ft / s.f.) of outside air has been delivered to the space.

4. Filtration Media:

a. During the building flush out install temporary filtration media installed in the HVAC system during with Minimum Efficiency Reporting Values (MERV), as determined by ASHRAE Standard 52.2-1999, equal to the MERV values the HVAC system is designed for.

b. After the building flushout install new filtration media with MERV values the HVAC system is designed for.

END OF SECTION 01 35 20
SECTION 01 35 50
REQUEST FOR ELECTRONIC FILES

PART 1 - GENERAL

1.1 RELATED SECTIONS

A. Section 01 33 00 - Submittals
B. Section 01 77 00 - Contract Closeout

1.2 SUMMARY

A. Section includes requirements to receive electronic Architectural drawing files from the Architect.
B. Hold Harmless Agreement form.

1.3 QUALITY ASSURANCE

A. The electronic drawings are not Construction Documents and shall not be used for Construction.
B. The electronic drawings remain the property of the Architect. The Architect claims full copy write protection of the documents.
C. The Receiver of the electronic drawings shall not publish, present or transfer the electronic files to another without previous written consent of the Architect.
D. The electronic drawings shall be used to create supporting documentation for this project only.
E. The Architect reserves the right to refuse to provide all or any electronic files at the Architect’s discretion.
F. Architect will only release electronic files of plan sheets and building sections - no exceptions. Contractor requests for electronic files of consultant’s documents (other than Sprotte + Watson) must contact that consultant directly and comply with that consultant's electronic file release protocol.
G. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to contract drawings.

1.4 REQUIREMENTS

A. Execute the following Hold Harmless Agreement form including signature by a company officer.
B. Drawings can be made available electronically in AutoCAD 2011, or in PDF format.
C. Costs for processing and handling electronic files, however limited, is one hundred and fifty dollars per sheet transferred.
PART 2 - PRODUCTS
(Not Applicable)

PART 3 - EXECUTION

3.1 ELECTRONIC FILE TRANSFER PROCEDURE

A. Submit the Hold Harmless Agreement along with a list of sheets and requested electronic format to the office of the Architect, Sprotte Watson, 450 South Melrose, Suite 200, Vista CA, 92081.

B. File transfer is done as a courtesy and can be revoked at any time by the Architect.

END OF SECTION 01 35 50

Attachment: Request for Electronic Files Form
DATE:  
PROJECT/JOB: TENANT IMPROVEMENTS CVUSD PERSONNEL DEPARTMENT, 16-2200  
FILES TRANSMITTED TO: ________________

DESCRIPTION OF FILES TRANSMITTED:

COST: $XXX.XX Minimum charge of $150/sheet, payable to Sprotte + Watson prior to release of any electronic files.

DRAWINGS:  
- [ ] AutoCAD files  
- [ ] Architectural

Contractor has requested that Architect furnish AutoCAD files in order for its own personnel, subcontractors and other consultants to expedite their work in the creation of shop drawings and/or to aid in the implementation of the Contract, as required per the Contract. Contractor recognizes that AutoCAD files are not intended to be used for construction, are not Contract Documents under the terms of the Construction Contract, and may be revised by others without the knowledge or consent of the Architect or, when plotted, may result in variances. Further, these drawings are not 100% complete nor approved for construction. There may be some design changes in the final approved drawing documents.

The Architect is nevertheless willing to provide AutoCAD files on the terms and conditions specified herein.

Architect will only release electronic files of plan sheets and building sections - no exceptions. Contractor requests for electronic files of consultants documents (other than Sprotte + Watson) must contact that consultant directly and comply with that consultant's electronic file release protocol.

Contractor acknowledges that the AutoCAD files are the property of the Architect and subject to the copyright of the Architect. The AutoCAD files are being transmitted to the Contractor for the express purpose as defined above for fulfilling the contractor's requirements for this project; no other use of the AutoCAD files is implied or allowed. Electronic media disks may be write-protected by Architect such that no data on such disk can be manipulated. The Contractor shall have all indices of the Architect's ownership, professional name, and/or involvement in the Project removed from all drawings created for the Contractor's use. Any use of any kind and/or changes to the AutoCAD files will be used at the user's sole risk, and without liability, risk or legal exposure to the Architect or the Project Owner. The Contractor and any other person or entity using the AutoCAD files agrees to release and, to the fullest extent permitted by law, defend, indemnify, and hold harmless the Architect and the Project Owner and its consultants and their partners, shareholders, agents and employees from and against any and all claims demands, losses, expenses, damages, penalties and liabilities of any kind, including without limitation, attorneys’ fees arising out of or relating in any way to any such use of or change to the AutoCAD files.

Contractor agrees, as a condition of forwarding the AutoCAD files to its subcontractor or any other consultant, person or entity, that the terms and conditions of this Agreement Concerning Use of Electronic Media shall extend to such third party.

AGREED/CONTRACTOR:  
Signed: ____________________________________________  
Print Name/Title: ____________________________________  
Date: ______________________________________________

Please sign one copy and return. A scanned file of signed copy via email is acceptable.

Xxxxxxxx Xxxxxxxx, AIA  
Project Architect, Sprotte + Watson Architecture and Planning
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SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Quality assurance submittals.

C. Mock-ups.

D. Control of installation.

E. Tolerances

F. Testing and inspection services.

G. Manufacturer’s field services

H. Related Requirements:
   1. Section 01 33 00 – Administrative Requirements: Submittal procedures.
   2. Section 01 42 00 – Reference Standards
   3. Section 01 60 00 – Product Requirements: Requirements for material and product quality.
   4. Section 01 41 00 – Testing and Inspection Requirements.

1.3 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work
and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.

C. Mockups: Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.

E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

F. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.

G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).

J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project, being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

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

1.5 SUBMITTALS

A. Shop Drawings: For mockups, provide plans, sections, and elevations, indicating materials and size of mockup construction.
   1. Indicate manufacturer and model number of individual components.
   2. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

B. Design Data: Submit for Architect's knowledge as contract administrator or for the District, information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

C. Test report submittals are for Architect’s knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for District’s information.

D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
   1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
   2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.

E. Manufacturer’s Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the District’s information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

F. Erection Drawings: Submit drawings for Architect’s benefit as contract administrator or for District:
   1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.6 REFERENCES AND STANDARDS – SEE SECTION 01 42 00

A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with
requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard of date of issue current on date of Agreement, except where A specific date is established by applicable code.

C. Obtain copies of standards where required by product specification sections.

D. Maintain copy at project site during submittals, planning, and progress of the specific work, until from Architect before proceeding.

E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before processing.

F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.7 TESTING AND INSPECTION AGENCIES

A. District will employ and pay for services of an independent testing agency to perform specified testing per Section 01 41 00.

B. Employment of agency in no way relieves Contractor of obligation to perform work in accordance with requirements of Contract Documents. Contractor shall be responsible for cost of testing, verification and/or inspection when such services are required as a result of the construction not meeting dimensional tolerances, specified or documented criteria or for tear-out costs to allow for inspection or testing.

1.8 REPORTS AND DOCUMENTS

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and re-inspecting.
B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of technical representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Statement that products at Project site comply with requirements.
4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
6. Statement whether conditions, products, and installation will affect warranty.
7. Other required items indicated in individual Specification Sections.

C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of factory-authorized service representative making report.
2. Statement that equipment complies with requirements.
3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
4. Statement whether conditions, products, and installation will affect warranty.
5. Other required items indicated in individual Specification Sections.

D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.9 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
3. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
   a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.

4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.

5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.

6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 01 33 00 "Submittal Procedures."

D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.


   1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
   2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
   3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
   4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
   5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
   6. Do not perform any duties of Contractor.
G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses.

1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Have Work performed by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

G. Give noticed and allow time for proper inspection by Inspector of Record (IOR) prior to coverage of work to be inspected.

H. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement. Provide anchorage as required by the Division of the State Architect.

3.2 MOCK-UPS
A. Test will be performed under provisions identified in this section and identified in this respective product specification sections.

B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.

C. Accepted mock-ups shall be a comparison standard for the remaining Work.

D. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, remove mock-up and clear area when directed to do so.

3.3 TOLERANCES
A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

3.4 TESTING AND INSPECTION
A. See individual specification sections for testing required.

B. Testing Agency Duties:
2. Perform specified sampling and testing of products in accordance with specified standards.
3. Ascerten compliance of materials and mixes with requirements of Contract Documents.
4. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or products.
5. Perform additional tests and inspections required by Architect.
6. Submit reports of all tests/inspections specified.

C. Limits on Testing/Inspection Agency Authority:

1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
2. Agency may not approve or accept any portion of the Work.
3. Agency may not assume any duties of Contractor.
4. Agency has no authority to stop the Work.

D. Contractor Responsibilities:

1. Deliver to agency at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs.
2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
3. Provide incidental labor and facilities.
   a. To provide access to Work to be tested/inspected.
   b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
   c. To facilitate tests/inspections.
   d. To provide storage and curing of test samples.
4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
5. Arrange with District's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Architect.

F. Re-testing required because of non-conformance to specified requirements shall be paid for by Contractor.

3.5 MANUFACTURERS’ FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of
equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.

B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.6 DEFECT ASSESSMENT
A. Replace Work or portions of the Work not conforming to specified requirements.

B. If, in the opinion of the District and Architect, it is not practical to remove and replace the Work, Architect will direct an appropriate remedy or adjust payment.

3.7 TESTS AND INSPECTION REQUIREMENTS TITLE 24, PART 2 (2013 CBC) VOLUME 2: See Section 01 41 00 Testing Laboratory and Inspection Services.

END OF SECTION 01 40 00
CONTRACTOR’S STATEMENT OF RESPONSIBILITY

FOR WORK REQUIRING SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS AND CONSTRUCTION MATERIALS TESTING IN ACCORDANCE WITH CHAPTER 17A OF THE CALIFORNIA BUILDING CODE.

Pursuant to Section 1709A, Chapter 17A of the 2010 California Building Code, the contractor identified herein is responsible for the construction of main wind- or seismic-force-resisting system, designated seismic system or wind- or seismic-resisting components listed in the statement of special inspections of this project and; is hereby submitting this statement of responsibility to the building official of the jurisdiction having authority over this permit and to the owner of this project.

PROJECT NAME: CVUSD PERSONNEL DEPT. TENANT IMPROVEMENT

APPROVAL NO: _______________________________ PROJECT NO: _______________________________
(For projects with multiple approval numbers but with the same project number, you may list all approval numbers on a separate sheet.)

PROJECT ADDRESS: ________________________________________________________________

CONTRACTOR’S COMPANY NAME: ______________________________________________________

State of California Contractor’s License Number: _______________________________ Expiration Date: _______________________________

NAME: (TYPE OR PRINT): _____________________________________________________________

(FIRST) (M.I.) (LAST)

Title / Position in the Contractor’s / Builder’s Organization: ________________________________

MAILING ADDRESS: _______________________________________________________________

Email: ___________________________________________ Phone: ______________________________

1. I acknowledge and, am aware, of special requirements contained in the statement of special inspections noted on the approved plans;

2. I acknowledge that control will (or have had) be exercised to obtain conformance with the construction documents approved by the building official;

3. I will have (or have had) in-place procedures for exercising control within our (the contractor’s / builder’s) organization, for the method and frequency of reporting and the distribution of the reports; and

4. I certify that I will, (or have had) have a qualified person within our (the contractor’s / builder’s) organization to exercise such control.

Signature: ___________________________________________ Date: ____________________________
SECTION 01 41 00
TESTING LABORATORY AND INSPECTION SERVICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Cooperate with the District’s selected testing agency, the District’s assigned Inspector, and others responsible for testing and inspecting the Work, and assist the District by coordinating such testing and inspecting services as specified in this Section and/or elsewhere in the Contract Documents.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Related Work Specified Elsewhere:

1. Requirements for testing may be required in other Sections of these Specifications.

2. Where no testing requirements are specified or required by reference standards or authorities having jurisdiction, the District may require such testing to be performed under current pertinent standards for testing. Payment for such testing will be made as described herein.

C. Work Not Included:

1. The District will select a pre-qualified independent testing laboratory and Inspector as approved by the Division of the State Architect (DSA), Department of General Services, Architect and Structural Engineer.

2. The District will pay for initial services of the testing laboratory as further described hereinafter.

1.3 QUALITY ASSURANCE

A. The District will select an independent testing laboratory to conduct the tests. Selection of the material required to be tested shall be by the laboratory or the District’s representative and not by the Contractor.

B. Qualifications of Testing Laboratory: The testing laboratory, approved by DSA, shall be qualified to the District’s acceptance in accordance with ASTM E-329. The testing laboratory shall be qualified by the Division of State Architect.
C. Codes and Standards: Testing, when required, will be in accordance with pertinent codes and regulations and with selected standards of the American Society for Testing and Materials and other organizations or agencies which publish recognized codes, standards, or tests. Refer to Article 3.04 - Required Testing of this Section.

1.4 TEST REPORT DISTRIBUTION

A. Promptly process and distribute required copies of test reports and related instructions to ensure necessary retesting and/or replacement of materials with the least possible delay in progress of the Work.

B. One copy of Test Reports shall be forwarded to the Division of The State Architect by the testing agency. Such reports shall include tests made, regardless of whether such tests indicate that the material is satisfactory or unsatisfactory. Samples taken but not tested shall also be reported. Records of special sampling operations as required shall also be reported. The reports shall show that the material or materials were sampled and tested in accordance with the requirements of Title 24 and with the approved specifications. Test reports shall show the specified design strength. They shall also state definitely whether or not the material or materials tested comply with requirements.

C. Each Testing Agency shall submit to the Division of the State Architect a verified report in duplicate covering tests which are required to be made by that agency during the progress of the project. Such report shall be furnished each time that work on the project is suspended, including tests up to that time, and at the completion of the project.

1.5 PAYMENT FOR TESTING SERVICES

A. Initial Services: The District will pay for initial testing and inspection except as specifically modified herein- after or as specified otherwise in technical sections, provided the results of inspection indicate compliance with the Contract Documents.

B. Retesting: When initial tests or inspection indicate noncompliance with the Contract Documents, subsequent retesting or re-inspection occasioned by the noncompliance shall be performed by the same testing laboratory or Inspector and the costs thereof will be deducted by the District from the Contract Sum. Retesting and re-inspection will continue until test or inspection results indicate compliance.

C. Code Compliance Testing: Inspections and tests required by codes or ordinances, or by authorities having jurisdiction and made by a legally constituted authority, shall be the responsibility of and shall be paid for by the District, but back-charged to the Contractor in case of retesting due to non-compliance.
D. Specified Inspections and Tests: Tests and inspections specified in the Specifications, directly or by reference, shall be coordinated by the Contractor at his expense and paid for by the District. Corrections of noncompliance and test failures shall be paid for by the District, but shall be back-charged to the Contractor. Re-inspection and retesting shall be in accordance with paragraph 1.04-B.

E. Contractor's Convenience Testing: Inspecting or testing performed exclusively for the Contractor's convenience shall be the sole responsibility of and at the expense of the Contractor.

1.6 INSPECTION BY THE DISTRICT

A. The District and District’s representatives will have access, for the purpose of inspection, to parts of the work and to the shops wherein the work is in preparation, and the Contractor shall maintain proper facilities and provide safe access for such inspection.

B. The District shall have the right to reject materials and workmanship which are defective, and to require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without charge to the District. If the Contractor does not correct such rejected work within a reasonable time, fixed by written notice, the District may correct rejected work and charge the expense to the Contractor.

C. Should it be considered necessary or advisable by the District at any time before final acceptance of the entire work to make an examination of work already completed by removing or tearing out the same, the Contractor shall on request promptly furnish necessary facilities, labor and materials. If such work is found to be defective in respect due to fault of the Contractor or his subcontractor, he shall defray expenses of such examinations and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, the additional cost of labor and material necessarily involved in the examination and replacement will be allowed the Contractor.

1.7 DISTRICT’S INSPECTOR

A. A Class 1 Inspector employed by the District, approved by DSA in accordance with the requirements of State of California Building Code, Title 24, Part 1, and qualified in accordance with Division of The State Architect will be assigned to the work. Reference DSA IR A-7 and IR A-8 for project Inspector certification and approval and duties and performance rating by DSA. The inspector duties are specifically defined in Title 24, Part 1, Section 4-342, reprinted herein:

"4-342 Duties of the Project Inspector"

(A) General: The inspector shall act under the direction of the Architect or registered Engineer (and under supervision of the Division of the State Architect).

(B) Duties. The general duties of the Inspector in fulfilling his or her responsibilities are as follows:
(1) Continuous Inspection Requirement. He or she must have actual personal knowledge, obtained by his personal and continuous inspection of the work of construction in all stages of its progress, that the requirements of the approved plans and specifications are being completely executed.

Continuous inspection means complete inspection of every part of the work. Work, such as concrete work or brick work which can be inspected only as it is placed, shall require the constant presence of the Inspector. Other types of work which can be completely inspected after the work is installed may be carried on while the Inspector is not present. In any case, the Inspector must personally inspect every part of the work. In no case shall the Inspector have or assume duties which will prevent him or her from giving continuous inspection.

The project Inspector may obtain personal knowledge of the work of construction, either on-site or off-site, performed under the inspection of a special Inspector or Assistant Inspector (Section 4-333) from the reporting of others on testing or inspection of materials and workmanship for compliance with the plans, specifications and applicable standards. The exercise of reasonable diligence to obtain the facts shall be required.

(2) Relations With Architect or Engineer: The Inspector shall work under the general direction of the Architect or registered Engineer. All inconsistencies or seeming errors in the plans and specifications shall be reported promptly to the Architect or registered Engineer for his interpretation and instructions. In no case, however, shall the instruction of the Architect or registered Engineer be construed to cause work to be done which is not in conformity with the approved plans, specifications, and change orders.

(3) Job File: The project Inspector shall keep a file of approved plans and specifications (including all approved addenda or change orders) on the job, at all times, and shall immediately return unapproved documents to the Architect for proper action. The Inspector, as a condition of his employment, shall have and maintain on the job, codes and documents referred to in the plans and specifications.

(4) Inspector's Semimonthly Reports: The Inspector shall keep the Architect or registered Engineer thoroughly informed as to the progress of the work by making semimonthly reports in writing as required in Section 4-337.

(5) Notifications to Division of the State Architect: The Inspectors shall notify the Division of the State Architect:

(a) When work is started on the project.
(b) At least 48 hours in advance of the time when foundation trenches will be complete, ready for footing forms.

(c) At least 48-hours in advance of the first pour of concrete.

(d) When work is suspended for a period of more than two weeks.

(6) Construction Procedure Records: The Inspector shall keep a record of certain phases of construction procedure including, but not limited to, the following:

(a) Concrete Pouring Operations: The record shall show the time and date of placing concrete and the time and date of removal of forms in each portion of the structure.

(b) Welding Operations: The record shall include identification marks of welders, list of defective welds, manner of correction of defects, etc.

(c) All such records of construction procedure shall be kept on the job until the completion of the work. These records shall be made a part of the permanent school records.

(7) Deviations: The Inspector shall notify the Contractor, in writing, of any deviations from the approved plans and specifications which are not immediately corrected by the Contractor when brought to his or her attention. Copies of such notice shall be forwarded immediately to the Architect or registered Engineer, and to the (Division of the State Architect) office.

Failure on the part of the Inspector to notify the Contractor of deviations from the approved plans and specifications shall in no way relieve the Contractor of responsibility to complete the work covered by his or her contract in accordance with the approved plans and specifications and laws and regulations.

(8) Verified Report: The project and special Inspectors shall each make and submit (to the Division of the State Architect) verified reports (see Section 4-336).

The Inspector shall prepare and deliver to the Division of the State Architect detailed statements of fact regarding materials, operations, etc., when requested.
(c) Violations: Failure, refusal, or neglect on the part of the Inspector to notify the Contractor of work which does not comply with the requirements of the approved plans and specifications, or failure, refusal, or neglect to report immediately, in writing, such violation to the Architect or registered Engineer, to the School Board, and to the (Division of the State Architect) office shall constitute a violation of the act and shall be cause for the (Division of the State Architect) office to take action.

Note: Authority cited: Section 39152 and 81142, Education Code.
Reference: Sections 39151, 39153, 81141 and 81143, Education Code. "

B. The work of construction in stages of progress shall be subject to the personal continuous observation of the Inspector as continuous observation is defined by Title 24. He shall have free access to all parts of the work at any time. The Contractor shall furnish the Inspector reasonable facilities for obtaining such information as may be necessary to keep him fully informed respecting the progress and manner of the work and the character of the materials. Inspection of the work shall not relieve the Contractor from obligation to fulfill this Contract.

1.8 DISTRICT'S OTHER PERSONNEL

A. From time to time, other personnel in the employ of the District may inspect the Work when the Work is in progress but shall have no authority to direct the Contractor or request changes in the Work except as may be provided elsewhere in the Contract Documents.

1.9 REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT

A. Architect shall have access to the site in accordance with Title 24, Part 1, 4-334.

B. Field Engineers and Inspectors from DSA. Structural Safety Section, Fire & Life Safety Review and Access Compliance shall have access to the site in accordance with Title 24, Section 108.

PART 2 - PRODUCTS
(Not Applicable)

PART 3 - EXECUTION

3.1 COOPERATION WITH TESTING LABORATORY AND INSPECTORS

A. Inspectors and representatives of the testing laboratory shall have access to the work. Provide facilities for such access in order that the testing, inspection, and the obtaining of samples may be done properly.
B. Contractor shall deliver material specimens to the District’s testing lab, which must by terms of the Contract be tested prior to inclusion in the Project, at least 45 days prior to scheduled delivery to the job site.

C. Material shipped by the Contractor from the source of supply prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said representative that such testing and inspection will not be required shall not be incorporated in the job.

3.2 TAKING SPECIMENS

A. Field specimens and samples for testing, unless otherwise provided in these Contract Documents, shall be selected and taken by the Testing Laboratory or Inspector and not the Contractor. Sampling equipment and personnel will be provided by the testing laboratory. Deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory. Soil samples for approval of import fill shall be delivered to the Testing Laboratory by the Contractor, as directed by the Testing Laboratory.

3.3 SCHEDULES FOR TESTING

A. Establishing Schedule:

1. By advance discussion with the testing laboratory selected by the District, determine the time required for the laboratory to perform its tests and to issue each of its findings.

2. Provide required time within the Construction Schedule.

B. Revising Schedule: When changes of construction schedule are necessary during construction, coordinate such changes of schedule with the testing laboratory as required.

C. Adherence to Schedule: When the testing laboratory is ready to test according to the determined schedules, but is prevented from testing or taking specimens due to incompleteness of the work, extra charges for testing attributable to the delay may be back-charged to the Contractor and will be deducted by the Owner from the Contract Sum.

3.4 REQUIRED TESTING & INSPECTION

Tests and inspections for the following items will be required in accordance with referenced Sections/Chapters of California Building Code, Title 24, Part 2:
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. Throughout the Contract Documents, reference is made to codes and standards which establish qualities and types of workmanship and materials, and methods for testing and reporting on the pertinent characteristics.

B. Provide materials and workmanship which meet or exceed the specifically named code or standard.

C. Deliver to the Architect required proof that the materials or workmanship, or both, meet or exceed the requirements of the specifically named code or standard. Such proof shall be in the form requested by the Architect and will generally be required to be copies of a certified report of tests conducted by a testing agency acceptable for that purpose to the Architect.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. Specific naming of codes or standards occurs on the Drawings and in other Sections of these Specifications. Comply with laws, ordinances, and regulations of authorities having jurisdiction. Proof of compliance with laws, ordinances, and regulations shall be by the signed approval of the respective authorities having jurisdiction. Costs relative thereto shall be borne by the Contractor.

1.4 QUALITY ASSURANCE

A. Familiarity with Pertinent Codes and Standards: Verify the requirements of the specifically named codes and standards as well as requirements mandated by law, ordinance and authority. Verify that the items procured and installed in this Work meet or exceed the specified requirements.

B. Be familiar with all codes, ordinances, City and State, as required for the construction of this project. Where any conflicts occur between Federal, State, and local laws, codes, ordinances, and regulations, the most stringent shall govern.

C. Rejection of Noncomplying Items: The Architect reserves the right to reject items incorporated into the Work which fail to meet such minimum requirements.
1.5 APPLICABLE CODES

A. Work and materials of the project shall conform to the following list of the 2013 California Code of Regulations, a List of Codes, copies of which shall be maintained at the job site by the Contractor throughout the duration of the work. Should any conditions or construction be discovered which is not covered by the Contract Documents wherein the finished work will not comply with listed Codes, a Construction Change Document or a separate set of Plans and Specifications, detailing and specifying the required work shall be submitted and approved by the Division of the State Architect before proceeding with the associated work.

B. Applicable Codes as of January 1, 2011

1. 2013 California Building Standards Administrative Code, Part 1, Title 24, California Code of Regulations (CCR) with Amendments.


9. Title 19, CCR, Public Safety, State Fire Marshal Regulations.

C. Partial List of Applicable Standards:

Reference code section for NFPA Standards, 2013 CBC (SFM)

NFPA 17  Dry Chemical Extinguishing Systems, 2002 Editions
NFPA 17a Wet Chemical Systems, 2013 Edition
NFPA 20  Stationary Pumps, 2013 Edition
NFPA 72  National Fire Alarm Code, (California Amended) 2013 Edition
(Note, see UL Standard 1971 for “Visual Devices”)

1.5 REFERENCE STANDARDS

A. Standards referenced in the Specifications are usually referred to by the abbreviation of the organization's name and the designation of the document (e.g., ASTM A36). Documents in common use may be referred to by their own designation (e.g., the California Electrical Code is published by the National Fire Protection Association as NFPA-70 but is referred to as CEC, and is part of a series of documents or standards referred to as the National Fire Code). References are to the latest issue of the publication available on the date stipulated for the receipt of bids.

STANDARDS ORGANIZATIONS

AA  Aluminum Association
AAMA  American Architectural Manufacturer's Association
AASHTO American Association of State Highway and Transportation Officials
ACI  American Concrete Institute
AGA  American Gas Association
AISC  American Institute of Steel Construction
AITC  American Institute of Timber Construction
AMCA Air Movement and Control Association, Inc.
ANSI American National Standards Institute, Inc.
APA  American Plywood Association
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ARI</td>
<td>Air Conditioning and Refrigeration Institute</td>
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<tr>
<td>ASHRAE</td>
<td>American Society of Heating, Refrigerating, and Air-Conditioning Engineers</td>
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<tr>
<td>ASME</td>
<td>American Society of Mechanical Engineers</td>
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<tr>
<td>ASTM</td>
<td>American Society for Testing and Material</td>
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<tr>
<td>AWPA</td>
<td>American Wood Preservers' Association</td>
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<tr>
<td>AWPB</td>
<td>American Wood Preservers' Bureau</td>
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<tr>
<td>AWS</td>
<td>American Welding Society</td>
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<tr>
<td>AWWA</td>
<td>American Water Works Association</td>
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<tr>
<td>BHMA</td>
<td>Builders' Hardware Manufacturers Association</td>
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<tr>
<td>CBC</td>
<td>California Building Code, 2013</td>
</tr>
<tr>
<td>CDA</td>
<td>Copper Development Association</td>
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<tr>
<td>CEC</td>
<td>California Electric Code (CEC)</td>
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<tr>
<td>CEQA</td>
<td>California Environmental Quality Act</td>
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<tr>
<td>CGA</td>
<td>Compressed Gas Association</td>
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<tr>
<td>CISPI</td>
<td>Cast Iron Soil Pipe Institute</td>
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<tr>
<td>CGA</td>
<td>Compressed Gas Association</td>
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<tr>
<td>CMR</td>
<td>California Mechanical Code - See IAPMO</td>
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<tr>
<td>CPC</td>
<td>California Plumbing Code - See IAPMO</td>
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<tr>
<td>CPSC</td>
<td>Consumer Product Safety Commission</td>
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<tr>
<td>CRSI</td>
<td>Concrete Reinforcing Steel Institute</td>
</tr>
<tr>
<td>CS</td>
<td>Commercial Standard of U.S. Dept. of Commerce</td>
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<tr>
<td>CTI</td>
<td>Ceramic Tile Institute</td>
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<tr>
<td>CSMA</td>
<td>Chemical Specialties Manufacturing Association</td>
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<tr>
<td>FGMA</td>
<td>Flat Glass Marketing Council</td>
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<tr>
<td>FM</td>
<td>Factory Mutual System</td>
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<tr>
<td>FS</td>
<td>Federal Specification</td>
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<tr>
<td>Abbreviation</td>
<td>Organization/Association</td>
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<tr>
<td>GA</td>
<td>Gypsum Association</td>
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<tr>
<td>HI</td>
<td>Hydraulic Institute, Hydraulics Institute</td>
</tr>
<tr>
<td>IAPMO</td>
<td>International Association of Plumbing and Mechanical Officials</td>
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<tr>
<td>ICC</td>
<td>International Conference of Building Officials</td>
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<tr>
<td>IEEE</td>
<td>Institute of Electrical and Electronics Engineers</td>
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<td>IES</td>
<td>Illuminating Engineering Society</td>
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<tr>
<td>MIL</td>
<td>Military Specifications</td>
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<tr>
<td>ML/SFA</td>
<td>Metal Lath/Steel Framing Association</td>
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<tr>
<td>MSS</td>
<td>Manufacturers Standardization Society of the Valve and Fittings Industry</td>
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<tr>
<td>NAAMM</td>
<td>National Association of Architectural Metal Manufacturers</td>
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<td>NBS</td>
<td>National Bureau of Standards</td>
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<td>NEBB</td>
<td>National Environmental Balancing Bureau</td>
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<td>NEMA</td>
<td>National Electric Manufacturers Association</td>
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<td>N FLUID PA</td>
<td>National Fluid Power Association</td>
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<td>NFPA</td>
<td>National Fire Protection Association</td>
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<tr>
<td>NRCA</td>
<td>National Roofing Contractors Association</td>
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<tr>
<td>NSF</td>
<td>National Sanitation Foundation</td>
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<tr>
<td>NWWDA</td>
<td>National Wood Window and Door Association</td>
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<tr>
<td>PS</td>
<td>Product Standard (of NBS)</td>
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<tr>
<td>SMACNA</td>
<td>Sheet Metal and Air Conditioning Contractors National Association</td>
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<tr>
<td>SDI</td>
<td>Steel Deck Institute</td>
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<tr>
<td>SJI</td>
<td>Steel Joist Institute</td>
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<tr>
<td>SSPC</td>
<td>Steel Structures Painting Council</td>
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1.6 REFERENCE COPIES

A. A minimum of one copy of Codes, Regulations, and Standards referenced in the drawings or the specifications, or applicable to the work, shall be furnished to the Owner's Representative at least (2) two weeks prior to the commencement of work affected by such codes, regulations or standards.

B. A minimum of one copy of Codes, Regulations, and Standards referenced in the drawings or the specifications, or applicable to the work, shall be maintained and available at the job site.

PART 2 - PRODUCTS
(Not Applicable)

PART 3 - EXECUTION
(Not Applicable)

END OF SECTION 01 42 00
SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

B. Related Work Specified Elsewhere:
   1. Installation and connections to existing utility lines are described in the Sections of these Specifications relative to permanent connections required.
   2. Requirements for storage areas shall be also as specified in Section 01600.

1.2 SUMMARY

A. Section Includes: Construction facilities and temporary controls including:
   1. Temporary utilities such as heat, water, electricity, and telephone.
   2. Sanitary facilities for construction personnel.
   3. Enclosures such as tarpaulins, barricades, and canopies.
   4. Provision of fire safety and fire fighting facilities
   5. Security requirements
   6. Vehicular Parking and Access
   7. Waste removal facilities and services

B. Related Requirements:
   1. Section 01 10 00 "Summary" for work restrictions and limitations on utility interruptions.

1.3 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, testing agencies, and authorities having jurisdiction.

B. Sewer Service: Pay sewer-service use charges for sewer usage by all entities for construction operations.

C. Water Service: Pay water-service use charges for water used by all entities for construction operations.
D. Electric Power Service: Pay electric-power-service use charges for electricity used by all entities for construction operations.

1.4 QUALITY ASSURANCE

A. The Construction Documents represent the finished project and do not include the method of construction. The Contractor is responsible for temporary bracing, shoring, and support necessary to achieve the finished project. The Contractor is responsible for deterring and enforcing all construction load limits on any structure.

B. Maintain required exits to safe dispersal area and public way at all times.

C. Maintain required accessible path of travel for School daily operations.

D. The Contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property. This requirement shall apply continuously and not be limited to normal working hours. The Contractor shall defend, indemnify, and hold the Architect free and harmless from any and all claims, demands and all liability, real or alleged, in connection with the performance of work on this project, except for liability arising from the sole negligence of the Architect.

E. Conform with the following criteria of the California Fire Code, Chapter 14 – Fire Safety During Construction, Alteration or Demolition of a Building:

Section:

1401.1 Scope

1. Structures in the course of construction, alterations or demolition, including those in underground locations. Compliance with NFPA 241 is required for items not specifically addressed herein.

1403 Heating Devices

1. Temporary heating devices shall be listed and labeled in accordance with the California Mechanical Code.
2. Oil-fired heaters shall comply with CFC 603.
3. LP gas heaters comply with CFC Chapter 38.
4. Refueling operations for liquid fueled equipment or appliances shall be conducted in accordance with CFC Section 3405. Equipment shall be allowed to cool prior to refueling.
5. Installation clearances to combustibles from temporary heating devices shall be maintained in accordance with the labeled equipment. When in operation, temporary heating devices shall be fixed in places and protected from damage, dislodgement or overturning in accordance with the manufacturer’s instructions.
6. Supervision: Temporary heating devices shall be supervised and maintained only by competent personnel.

1404 Precautions Against Fire:
1. Smoking. Smoking shall be prohibited. When required by the chief, a suitable number and type of NO SMOKING signs shall be posted and approved ashtrays shall be provided.

2. Waste Disposal. Combustible debris shall not be accumulated within buildings. Combustible debris, rubbish and waste material shall be removed from building at the end of each shift of work. Combustible debris, rubbish and waste materials shall not be disposed of by burning on the site.


4. Spontaneous Ignition: Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container.

5. Fire Watch: When required by the Fire Code Official for building demotion that is hazardous in nature, qualified personnel shall be provided to serve as an on-site fire watch. Fire watch personnel shall be provided with at least one approved means for notification of the fire department and their sole duty shall be to perform constant patrols and watch for the occurrence of fire.

6. Cutting and Welding. Cutting and welding operations shall be in accordance with Chapter 26.

7. Electrical: Temporary wiring for electrical power and lighting installations used in connection with the construction, alteration, or demolition of buildings, structures, equipment or similar activities shall comply with the California Electrical Code.

1405 Flammable and Combustible Liquids:

1. Storage of flammable and combustible liquids shall be in accordance with Section 3404.

2. Class I and Class II liquids: The storage, use and handling of flammable and combustible liquids at construction sites shall be in accordance with section 3406.2. Ventilation shall be provided for operations involving the application of materials containing flammable solvents.

3. Housekeeping: Flammable and combustible liquid storage areas shall be maintained clear of combustible vegetation and waste materials. Such storage areas shall not be used for the storage of combustible materials.

4. Precautions Against Fire: Sources of ignition and smoking shall be prohibited in flammable and combustible liquid storage areas. Signs shall be posted in accordance with Section 310.

5. Handling at Point of Final Use: Class I and II liquids shall be kept in approved safety containers.

6. Leakage and Spills. Leaking vessels shall be immediately repaired or taken out of service and spills shall be cleaned up and disposed of properly.

1406.1 Storage and Handling of flammable gasses shall comply with Chapter 35

1407 Explosive Materials:

1. Explosive materials shall be stored, used and handled in accordance with Chapter 33.

2. Blasting operations shall be conducted in accordance with Chapter 33.

3. Demolition using explosives: Approved fire hoses for use by demolition personnel shall be maintained at the demolition site whenever explosives are used for demolition. Such fire hoses shall be connected to an approved water
supply and shall be capable of being brought to bear on post detonation fires anywhere on the site of the demolition operation.

1408 Owners Responsibility for Fire Protection:

1. Program Superintendent: The owner shall designate a person to be the fire prevention program superintendent who shall be responsible for the fire prevention program and ensure that it is carried out through completion of the project. The fire prevention program superintendent shall have the authority to enforce the provisions of this chapter and other provisions as necessary to secure the intent of this chapter. Where guard service is provided, the superintendent shall be responsible for the guard service.

2. Pre-fire plans: The fire prevention program superintendent shall develop and maintain an approved pre-fire plan in cooperation with the fire chief. The fire chief and the fire code official shall be notified of the changes affecting the utilization of the information contained in such pre-fire plans.

3. Training: Training of responsible personnel in the use of fire protection equipment shall be the responsibility of the fire prevention program superintendent.

4. Fire Protection Devises: The fire prevention program superintendent shall determine that all fire protection equipment is maintained and serviced in accordance with this code. The quality and type of fire protection equipment shall be approved.

5. Hot Work Operations: The fire prevention program superintendent shall be responsible for the supervising the permit system for hot work operations in accordance with Chapter 26.

6. Impairment of fire Protection Systems: Impairments to any fire protection system shall be in accordance with section 901.

7. Temporary Covering of Fire Protection Devices: Coverings placed on or over fire protection devices to protect them from damage during construction processes shall be immediately removed upon the completion of the construction process in the room or area in which the devices are installed.

1409 Fire Reporting:

1. Emergency telephone: Readily accessible emergency telephone facilities shall be provided in an approved location at the construction site. The street address of the construction site and the emergency telephone number of the fire department shall be posted adjacent to the telephone.

1410 Access for Fire Fighting:

1. Required access: Approved vehicle access for firefighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available.
2. Key Boxes shall be provided as required by Chapter 5.

1411 Means of Egress:

1. Stairways Required: Not applicable.
2. Maintenance: Required means of egress shall be maintained during construction and demolition, remodeling or alterations and additions to any building. Exception: Approved temporary means of egress systems and facilities.

1412 Water Supply for Fire Protection:

1. When required: An approved water supply for the fire protection, either temporary or permanent, shall be made available as soon as combustible material arrives on the site.

1413 Standpipes, not applicable

1414 Automatic Sprinkler System:

1. Completion before occupancy. In buildings where an automatic sprinkler system is required by this code or the California Building Code, it shall be unlawful to occupy any portion of the building or structure until the automatic sprinkler system installation has been tested and approved, except as provided in section 105.3.4.
2. Operation of valves. Operation of sprinkler control valves shall be allowed only by properly authorized personnel and shall be accompanied by notification of duly designated parties. When the sprinkler protection is being regularly turned off and on to facilitate connection of newly completed segments, the sprinkler control valves shall be checked at the end of each work period to ascertain that protection is in service.

1415 Portable Fire Extinguishers:

1. Where required: Structures under construction, alteration or demolition shall be provided with not less than one approved portable fire extinguisher in accordance with Section 906 and sized for not less than ordinary hazard as follows:
2. At each stairway on all floor levels where combustible materials have accumulated.
3. In every storage and construction shed.
4. Additional portable fire extinguishers shall be provided where special hazards exist including, but not limited to the storage and use of flammable and combustible liquids.

1416 Motorized Equipment:

1. Conditions of use: Internal combustion powered construction equipment shall be used in accordance with all of the following conditions.
2. Equipment shall be located so that exhausts do not discharge against combustible material.
3. Exhausts shall be piped to the outside of the building.
4. Equipment shall not be refueled while in operation.
5. Fuel for equipment shall be stored in an approved area outside of the building.

1417 Safeguarding Roofing Operations:

1. Roofing operations utilizing heat-producing systems or other ignition sources shall be conducted in accordance with Sections 1417.2 and 1417.3 and Chapter 26.
2. Asphalt and Tar Kettles shall be operated in accordance with Section 303.
3. Fire Extinguishers for Roofing Operations shall comply with Section 906. There shall be not less than one multipurpose portable fire extinguisher with a minimum 3-A 40 B:C rating on the roof being covered or repaired.

1.5 PROJECT CONDITIONS

A. Make required connections to existing utility systems with minimum disruption to services.

B. When disruption of the existing service is required, do not proceed without the Owner's and Architect's review and, when required, provide alternate temporary service.

C. Environmental Requirements: Provide and maintain heat, fuel, materials, and services necessary to protect work and materials against injury from extreme heat, cold, dry winds, dust, or dampness as follows:

1. During the placing, setting and curing of concrete and cement work, provide sufficient heat to ensure the heating of spaces involved do not fall to less than 50 degrees Fahrenheit.
2. Suspend operations on work when subject to damage by climatic conditions, flooding, or because of insufficient curing or drying of surfaces or materials.
3. Take necessary action to protect site and Work from wind, flood, and storm damage.
4. Provide dust-control treatment that is nonpolluting and nontracking reapply treatment as required to minimize dust.

PART 2 - PRODUCTS

2.1 General

A. Construction facilities shall be subject to the Architect's review and approval.

2.2 UTILITIES GENERAL

A. Contractor shall pay to install, maintain, operate, remove temporary utilities and pay for the fuel/water consumed.
B. Existing facilities may be used only if approved in advance in writing by the District.
C. New permanent facilities may be used only if approved in advance in writing by the District.
D. Use trigger-operated nozzles for water hoses, to avoid waste of water.

2.3 UTILITIES

A. Water:
   1. Provide necessary temporary water lines and water supply and, upon completion of the work, remove temporary facilities.
   2. Furnish water needed for construction. Comply with the regulations of local water authority including transport of reclaimed water for construction.
   3. Utilize backflow preventers on water lines at point of connection to District’s water supply. Backflow preventers shall comply with the requirements of the local water district.
   4. Contractor is responsible to meter his use of construction water.

B. Electricity and Lighting:
   1. Provide necessary temporary wiring and temporary lighting needed for proper performance and observation (minimum 20fc for rough work and 50fc for finish work). Upon completion of the work, remove temporary utilities.
   2. Provide area distribution boxes so located that the individual trades may use 100 feet maximum length extension cords to obtain adequate power and artificial lighting at points where required for the work, for inspection and for safety.
   3. Furnish electricity needed for construction.

C. Heating and Ventilation:
   1. See Section 01 35 20 Construction Indoor Air Quality.
   2. Provide and maintain heating, ventilation and dehumidification as needed for proper conduct of operations included in the work.

D. Telephone and Internet Service:
   1. Provide, maintain, and pay for telephone and internet service to field offices at time of project mobilization.
   2. Provide, maintain and pay for a minimum of three dedicated phone lines to the Inspector's office - one for phone, one for fax and one for data - at time of project mobilization. Contractor shall provide cell phones with 24 hour emergency contact.

E. Utilities for Testing: Normal quantities required to make final tests of installed permanent systems shall be furnished at no cost to the Owner.

F. Temporary facilities in the public right-of-way are subject to approval. Obtain and pay for any permits required.

G. Temporary Sanitary Facilities
1. Provide and maintain required sanitary facilities and enclosures. Provide at time of project mobilization.
2. Use of existing campus or District facilities is not permitted.
3. Maintain daily in clean and sanitary condition. Locate away from District occupied areas.
4. Locate facilities away from staff and student occupied areas of the campus.
5. At end of construction, remove temporary facilities and return existing facilities and premises to same or better condition as originally found.

2.4 BARRIERS / BARRICADES

A. Provide barriers/barricades to prevent unauthorized entry into construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

1. Barricades shall be sufficiently adequate to prevent entry by students.
2. Barricades /barriers shall be provided to protect staff and students at all times.
3. Barricades/barriers shall be provided to protect the Work in progress from vandalism, theft and other similar unauthorized activities.
4. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
5. Provide adequate protection for plants, trees groundcover, lawns and irrigation designated to remain. Replace damaged landscaping and irrigation lines to the satisfaction of the District.
6. Protect vehicles, equipment, stored materials, site, and structures from damage.

B. Fencing

1. Provide 8 foot high chain link fencing around construction site; equip with vehicular and pedestrian gates with locks.
2. Maintain clear access at fire lanes and other required points of exit.
3. If required to limit noise and other distractions, Contractor may be required to provide an 8 foot high solid plywood barricade in selected locations.

C. Exterior Enclosures

1. Provide temporary weather tight closure of exterior openings to accommodate acceptable working conditions and protection for products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

D. Interior Enclosures

1. Provide temporary partitions and ceilings as indicated to separate work areas from Owner occupied areas, to prevent penetration of dust and moisture into
Owner-occupied areas, and to prevent damage to existing materials and equipment and protect staff and students.

2. Construction: Framing and plywood sheet materials with closed joints and sealed edges at intersections with existing surfaces.
3. Relocate screens as necessary.
4. Coordinate the screen locations with school Project Manager and Facilities Director.
5. Maintain required exits and occupant circulation within buildings.

2.5 SECURITY

A. Provide security and facilities to protect Work, existing facilities, and District's operations from unauthorized entry, vandalism, or theft.
B. Coordinate with District's security program.
C. Comply with the District's requirements for competent continuous supervision and monitoring of the Contractor's and subcontractor's employees and other construction personnel on site. Comply with the fingerprinting clearance requirements of the District and the California Department of Justice.
D. Provide ID badges to all construction personnel when required by the District. Comply with the District's "Sign In Policy" at each site.
E. Comply with CFC Chapter 14 during all phases of project.

2.6 VEHICULAR ACCESS AND PARKING

A. Coordinate site access and local haul routes with governing authorities and District representative.
B. Provide and maintain access to fire hydrants and fire access lanes, free of obstructions.
C. Provide means of removing mud from vehicle wheels before entering streets, parking lots or other paved areas.
D. Provide temporary parking areas to accommodate construction personnel. Coordinate locations with District's representative.
   1. Existing parking at the school is not adequate to accommodate all construction personnel. District will limit the Contractor's use of the parking lot to designated areas or stalls or may limit parking to the Contractor's construction yard / lay down area. Since available parking for Contractor's use will be limited, the Contractor will be required to have most construction personnel park off site.
   E. Do not allow vehicle parking on existing concrete or decorative pavement. Tire marks will be the responsibility of the Contractor to remove to the satisfaction of the District and the Architect. If marks cannot be satisfactorily removed, Contractor may be requested to replace pavement.
F. If required by District, restripe or provide temporary (adhesive) parking striping, traffic cones and/or barricades for traffic control adjacent to or affected by new construction.

2.7 WASTE REMOVAL

A. See Section 01 74 19 - Waste Management, for additional requirements.

B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.

C. Provide containers with lids. Remove trash from site weekly.

D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

F. Use of District's trash containers for construction debris is not permitted.

2.8 PROTECTION OF SITE DURING GRADING OPERATIONS

A. The Contractor will be required to comply with all conditions of the State Water Resources Control Board per Article 69 of the General Conditions of the Contract Documents.

B. Contractor shall comply with the lawful requirements of any applicable agency having jurisdiction in regards to discharges of storm water during the grading and construction process.

C. Provide sand bags, silt fences and/or other applicable temporary devices as required to contain dirt, mud and water during grading and excavation operations and to prevent mud, silt, dirt and contaminated water from migrating onto adjacent areas of the site or into storm drains.

2.9 PROJECT IDENTIFICATION / SIGNS

A. Provide a 4’ x 8’ self-supporting temporary project sign. Supporting posts to be wood 4 x4’s embedded minimum 4 feet into tamped (compacted) soil to discourage easy removal. Verify text and graphics with Architect and District prior to fabrication. Remove the sign at the completion of the project or when directed to do so by the District’s representative.

B. Erect on site at location approved by District's representative.

C. Provide directional signage, if needed, to direct construction traffic to the approved access points during construction.
D. No other signs are allowed without District permission except those required by law.

2.10 FIELD OFFICES - See Section 01 52 50

PART 3 – EXECUTION

3.1 MOISTURE AND MOLD CONTROL


B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
2. Keep interior spaces reasonably clean and protected from water damage.
3. Periodically collect and remove waste containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install material that is wet.
6. Discard, replace, or clean stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.

D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use permanent HVAC system to control humidity.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.

   a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.

c. Remove materials that cannot be completely restored to their manufactured moisture level within 48 hours.

3.2 MAINTENANCE AND REMOVAL

E. Maintain facilities and temporary controls as long as needed for the safe and proper completion of the work.

F. Remove such construction facilities and temporary controls as rapidly as progress of the work will permit, or as directed by the Architect and prior to Substantial Completion.

G. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.

H. Clean and repair damage caused by installation or use of temporary work.

END OF SECTION 01 50 00
SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

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

B. Related Requirements:

1. Section 01 23 00 "Alternates" for products selected under an alternate.
2. Section 01 25 00 "Substitution Procedures" for requests for substitutions.
3. Section 01 42 00 "References" for applicable industry standards for products specified.

1.3 DEFINITIONS

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

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.
1.4 GENERAL

A. Material and Equipment Incorporated into the Work:
   1. Conform to applicable specification and standards.
   2. Comply with size, make, type, and quality specified.

B. Manufactured and Fabricated Products:
   1. Design, fabricate and assemble in accordance with the best engineering and shop practices.
   2. Manufacture like parts of duplicate units to standard sizes and gages for interchangeability.
   3. Two or more items of the same kind shall be identical, by the same manufacturer.

C. Reused Materials: Where the contract documents indicate that existing materials may be reused, such materials shall be cleaned and reincorporated in the work.
   1. Materials to be reused shall be approved for reuse by the Inspector.

D. Supplementary materials not specifically described in each Section, but required for a complete and proper installation of the Work, shall be new, first quality of their respective kinds, and subject to review and acceptance by the District.

E. Prior to delivery of materials to the construction zone check with the School District Project Manager and School Facility Director for an acceptable access route and time. Under no circumstances shall the Contractor, subcontractors, or any employees use any area outside the construction zone without prior clearance from the School Project Manager, and Facilities Director.

F. Storage of all materials, equipment, and supplies shall be limited to scheduled areas of work in progress, or to designated exterior locations approved and arranged with the School Site Project Manager and Facilities Director.

1.5 PRODUCT DELIVERY

A. Arrange deliveries of products in accordance with construction schedules and in ample time to facilitate inspection prior to installation. Notify the Inspector of Record, in writing, when items are delivered to the site, so he may inspect and verify quality, and quantities delivered are as intended.

B. Coordinate deliveries to avoid conflict with work and conditions at site, taking into consideration:
   1. Work of the Contractors, or District.
   2. Limitations of storage space.
   3. Availability of equipment and personnel for handling products.
   4. Owner's use of premises.

C. Deliver products in undamaged condition in original containers or packaging, and with identifying labels intact and legible.

D. Partial deliveries of component parts of equipment shall be clearly marked to identify the equipment, to permit easy accumulation of parts, and to facilitate assembly.
E. Immediately on delivery, inspect shipment to ensure:
   1. Product complies with requirements of Contract Documents and reviewed submittals.
   2. Quantities are correct.
   3. Containers and packages are intact and labels are legible.
   4. Products are undamaged and properly protected.

F. The District reserves the right to observe delivered materials, to review the accompanying bills of lading, and to reject the following:
   1. Materials not identifiable as accepted products of the accepted manufacturer.
   2. Materials exhibiting shelf-lives in excess of those stipulated by the manufacturer.
   3. Materials not bearing the appropriate label of Underwriters Laboratories (UL), where applicable.
   4. Materials in opened or excessively damaged containers.
   5. Materials exhibiting evidence of moisture, organic matter, or other adulterants.

G. In the event of damage or rejection by the District for stipulated cause, immediately make repairs and replacements necessary to the acceptance of the Architect and at no additional cost to the Owner.

1.6 STORAGE

A. Payment will not be made by the Owner for materials stored off-site, until such time as the materials are incorporated into the Work.

B. Store products immediately on delivery, store in accordance with manufacturer's instructions and as further required by the Owner's Storm Water Pollution Prevention Plan, and protect until installed in the Work.

C. Store products subject to damage by elements in weather tight enclosures.
   1. Maintain temperatures within limits recommended by manufacturer's instructions.
   2. Provide humidity control for sensitive products, as required by manufacturer.
   3. Store unpacked products in a manner accessible for inspection.

D. Exterior Storage:
   1. Provide substantial platforms, blocking, or skids to support fabricated products above ground and prevent soiling or staining.
      a. Cover products subject to discoloration or deterioration from exposure to the elements, with impervious sheet coverings. Provide adequate ventilation to avoid condensation.
      b. Comply with requirements of Owner's Storm Water Pollution Prevention Plan.
   2. Store loose granular materials on solid paved surfaces, or provide plywood platforms to prevent mixing with foreign matter.
      a. Provide surface drainage to prevent flow or ponding of rainwater.
      b. Prevent mixing of refuse or chemically injurious materials or liquids.
      c. Comply with requirements of Owner's Storm Water Prevention Plan.
1.7 MAINTENANCE OF STORAGE

A. Maintain periodic system of inspection of stored products on scheduled basis to assure that:
   1. State of storage facilities is adequate to provide required conditions.
   2. Required environmental conditions are maintained on a continuing basis.
   3. Surfaces of products exposed to elements are not adversely affected.

B. Mechanical and electrical equipment which requires servicing during long term storage shall have complete manufacturer’s instructions for servicing accompanying each item, with notice of enclosed instructions shown on exterior of package.

1.8 PROTECTION AFTER INSTALLATION

A. Provide protection of installed products to prevent damage from subsequent operations. Remove protection materials when no longer needed, prior to completion of work.

B. Control traffic to prevent damage to equipment and surfaces.

1.9 PRODUCT WARRANTIES

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

   1. Manufacturer’s Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
   2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

   1. Manufacturer’s Standard Form: Modified to include Project-specific information and properly executed.
   2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
   3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Section 01 77 00 "Closeout Procedures."
PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

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

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00
SECTION 01 71 00

CLEANING

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: Cleaning throughout the construction period, and final project cleaning After acceptance of the “Punch List” has been completed.

B. Related Work Described Elsewhere: In addition to standards specified herein, comply with requirements for cleaning as described in other sections of these Specifications.

1.3 QUALITY ASSURANCE

A. Inspection: Conduct daily inspection, and more often if necessary, to verify that requirements of cleanliness are being met.

B. Codes and Standards: In addition to the requirements specified herein, comply with pertinent requirements of authorities having jurisdiction.

C. The Contractor shall be responsible for keeping work area in a neat and safe condition.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

A. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.2 COMPATIBILITY

A. Use cleaning materials and equipment which are compatible with the surfaces being cleaned, as recommended by the manufacturer of the material to be cleaned.

PART 3 - EXECUTION

3.1 PROGRESS CLEANING

A. General:
1. Retain stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic, and providing the required protection of materials.

2. Do not allow the accumulation of scrap, debris, waste material, and other items not required for construction of this work. Debris shall be removed from the site and disposed of in a lawful manner. Disposal receipts or dump tickets shall be furnished to Architect upon request.

3. At least twice each month, and more often if necessary, remove scrap, debris, and waste material from the job site.

4. Provide adequate storage for items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.

B. Site:

1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove items to the place designated for their storage. Combustible waste shall be removed from the site. Flammable waste shall be kept in sealed metal containers until removed from the site.

2. Weekly, and more often if necessary, inspect, arrangements of materials stored on the site; restack, tidy, or otherwise service arrangements to meet the requirements specified above.

3. Maintain the site in a neat and orderly condition.

C. Structures:

1. Weekly, and more often if necessary, inspect the structures and pick up scrap, debris, and waste material. Remove items to the place designated for their storage.

2. Weekly, and more often if necessary, sweep interior spaces clean.

   a. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort and a handheld broom, i.e., "broom-clean".

3. As required preparatory to installation of succeeding materials, clean the structures of pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using equipment and materials required to achieve the required cleanliness.

4. Following the installation of finish floor materials, clean the finish floor daily, and more often if necessary, and while work is being performed in the space in which finish materials have been installed.
"Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from foreign material which, in the opinion of the Architect, may be injurious to the finish floor material, i.e., "vacuum clean".

3.2 FINAL CLEANING

A. Definition: Except as otherwise specifically provided, "clean", for the purpose of the Article, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials, i.e., "scrub and polish clean".

B. General: Prior to completion of the work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste, conduct final progress cleaning as described above.

C. Site: Unless otherwise specifically directed by the Architect, water and broom clean paved areas on the site and public paved areas directly adjacent to the site. Remove resultant debris.

D. Structures:

1. Exterior: In areas affected by the work under this contract, visually inspect exterior surfaces and remove traces of soil, waste material, smudges, and other foreign matter. Remove traces of splashed material from adjacent surfaces. If necessary to achieve a uniform degree of exterior cleanliness, hose down the exterior of the structure.

   In the event of stubborn stains not removable with water, the Architect may require light sandblasting or other cleaning at no additional cost to the Owner.

2. Interior: In areas affected by the work under this contract, visually inspect interior surfaces and remove traces of soil waste material, smudges, and other foreign matter. Remove traces of splashed materials from adjacent surfaces. Remove paint drippings, spots, stains, and dirt from finished surfaces. Use only the cleaning materials and equipment instructed by the manufacturer of the surface material.


4. Polished surfaces: On surfaces requiring the routine application of buffed polish, apply the polish recommended by the manufacturer of the material being polished. Glossy surfaces shall be cleaned and shined as intended by the manufacturer.

E. Timing: Schedule final cleaning after the Final Punch List has been completed by the Architect to enable the Owner to accept a completely clean project.
3.3 CLEANING DURING DISTRICT'S OCCUPANCY

A. Should the District occupy the work or any portion thereof prior to its completion by the Contractor and acceptance by the District, responsibilities for interim and final cleaning of the occupied spaces shall be determined by the Architect in accordance with the General Conditions of the Contract.

END OF SECTION 01 71 00
SECTION 01 73 00
EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY
A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
   2. Field engineering and surveying.
   3. Installation of the Work.
   4. Cutting and patching.
   5. Coordination of Owner-installed products.
   6. Progress cleaning.
   7. Starting and adjusting.
   8. Protection of installed construction.

B. Related Requirements:
   1. Section 01 10 00 "Summary" for limits on use of Project site.
   2. Section 01 33 00 "Submittal Procedures" for submitting surveys.
   3. Section 01 77 00 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.
   4. Section 02 41 19 "Selective Demolition" for demolition and removal of selected portions of the building.

1.3 DEFINITIONS
A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.

B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.
1.4 INFORMATIONAL SUBMITTALS

A. Certificates: Submit certificate signed by land surveyor certifying that location and elevation of improvements comply with requirements.

B. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

C. Certified Surveys: Submit two copies signed by land surveyor.

D. Final Property Survey: Submit 2 copies showing the Work performed and record survey data.

1.5 QUALITY ASSURANCE

A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.

2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:
   a. Primary operational systems and equipment.
   b. Fire separation assemblies.
   c. Fire-suppression systems.
   d. Mechanical systems piping and ducts.
   e. Control systems.
   f. Communication systems.
   g. Fire-detection and -alarm systems.
   h. Electrical wiring systems.

3. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.
PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

1. Description of the Work.
2. List of detrimental conditions, including substrates.
3. List of unacceptable installation tolerances.
4. Recommended corrections.

D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.
3.2 PREPARATION

A. Existing Utility Information: Furnish information to District that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Section 01 31 00 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.

B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.

1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
2. Establish limits on use of Project site.
3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
4. Inform installers of lines and levels to which they must comply.
5. Check the location, level and plumb, of every major element as the Work progresses.
6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.

D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect and Construction Manager.

3.4 FIELD ENGINEERING

A. Identification: Owner will identify existing benchmarks, control points, and property corners.

B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

D. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.

E. Final Property Survey: Engage a land surveyor to prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.

1. Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a site corner to a legal point.
2. Recording: At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey."
3.5 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.

2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.
3.6 CUTTING AND PATCHING

A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

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

C. Temporary Support: Provide temporary support of work to be cut.

D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 01 10 00 "Summary."

F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.

3. Concrete: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.

4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.

5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.

6. Proceed with patching after construction operations requiring cutting are complete.

H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as
invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
   a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
   b. Restore damaged pipe covering to its original condition.
3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
   a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.

I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.7 OWNER-INSTALLED PRODUCTS

A. Site Access: Provide access to Project site for Owner's construction personnel.

B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.

1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
2. Preinstallation Conferences: Include Owner's construction personnel at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.
3.8 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

   a. Use containers intended for holding waste materials of type to be stored.

4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 01 50 00 "Temporary Facilities and Controls." Section 01 74 19 "Construction Waste Management and Disposal."

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
J. Limiting Exposures: Supervise construction operations to assure that no part of the
construction, completed or in progress, is subject to harmful, dangerous, damaging, or
otherwise deleterious exposure during the construction period.

3.9 STARTING AND ADJUSTING

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

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

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

D. Manufacturer's Field Service: Comply with qualification requirements in
Section 01 40 00 "Quality Requirements."

3.10 PROTECTION OF INSTALLED CONSTRUCTION

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

B. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 01 73 00
SECTION 01 74 00

WARRANTIES, GUARANTEE S, AND BONDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplemental Conditions and Division 01 Specifications Sections, apply to this section, and including all Technical Specifications Sections, and the Operating and Maintenance Requirements of Division 31 and 32.

B. Related Sections:
   1. Section 01 77 00 – Closeout: Submittal of Final Verified Reports and Notice of Completion, as a condition of project acceptance and payment.
   2. Section 01 78 39 - Project Record Documents as a condition of project acceptance and payment.
   3. Section 01 78 23 - Operating and Maintenance Data: Incorporation of warranties, guarantees, and bonds into instruction manuals.

C. Approval of the warranties, guarantees, and bonds by the District is a prerequisite to payment at Substantial Completion and scheduling for acceptance by the Governing Board of the District.

1.2 SUMMARY

A. Section Includes: General requirements for written warranties, guarantees, and bonds required by the Contract Documents.

1.3 FORMAT

A. Binders: Contractor shall use commercial quality 8-1/2 by 11 inches, three-side rings with durable plastic covers; two-inch maximum ring size.

B. All warranties shall be submitted in hard copy and in electronic PDF format on properly identified CDs.

C. Cover: Contractor shall identify each binder with typed titles, e.g. “CLASSROOM BUILDING WARRANTIES,” “MULTI-PURPOSE BUILDING WARRANTIES, ETC.”

D. Table of Contents: Contractor shall provide title of project; name, address, and telephone number of Contractor and equipment suppliers, and name of responsible principal. Contractor shall identify each item with the number and title of the specific specification, document provisions, or section in which the name of the product or work item is specified.

E. 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 subcontractors, suppliers, and/or manufacturers with name, address, email, and telephone number of each responsible principal.
1.4 TIME PERIOD

A. Deliver manufacturers' warranties, guarantees, and bonds required by Contract Documents, with District named as beneficiary. Where manufacturers' warranty or guarantee extends for a longer time period than the Contractor's warranty and guaranty, deliver manufacturers’ warranties or guarantees in same manner.

B. 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 components within ten days after acceptance of that equipment or component.

C. Contractor shall submit for District approval all warranties and related documents within ten days after date of completion. Contractor must revise the warranties as required by the District prior to District’s approval of Contractors Final Application for Payment.

D. For items of work delayed beyond date of completion, Contractor shall provide an updated submittal within ten days after acceptance, listing the date of acceptance as the start of warranty period.

E. Contractor must submit three copies of compete set warranties in final form prior to final application for payment.

1.5 WARRANTY/GUARANTEE FORM

A. Submit written warranties and guarantees, except manufacturer's standard printed warranties and guarantees, on the Contractor's, subcontractors', material suppliers', or manufacturers' own letterhead, addressed to District, in the form attached to this Section.

B. Submit warranties and guarantees in duplicate, and in the form indicated, signed by cognizant entities, and by Contractor in every case, with modifications as approved by District to suit the conditions pertaining to the warranty or guarantee.

1.6 SUBMITTALS

A. Collect and assemble written warranties and guarantees into bound booklet form, and deliver bound books to Architect for delivery to District for final review and approval.

1. See Sections 01 78 23 for additional submittal requirements.

ATTACHMENT: Warranty/Guarantee Form
WARRANTY / GUARANTEE FORM

FOR __________________________ WORK

We, the undersigned, do hereby warranty and guarantee that the parts of the work described above which we have furnished or installed for:

CVUSD Personnel Dept. Tenant Improvement

are in accordance with the Contract Documents and that all said work as installed will fulfill or exceed all the Warranty and Guarantee requirements. We agree to repair or replace work installed by us, together with any other work which is displaced or damaged by so doing, that proves to be defective in workmanship, material, or operation within a period of ________(      ) year(s) from the date Notice of Completion is registered with the San Diego County Recorder, ordinary wear and tear and unusual neglect or abuse excepted.

In the event of our failure to comply with the above-mentioned conditions within a reasonable time period determined by the Owner, after notification in writing, we, the undersigned, all collectively and separately, hereby authorize the Owner to have said defective work repaired and/or replaced and made good, and agree to pay to the Owner upon demand all moneys that the Owner may expend in making good said defective work, including all collection cost and reasonable attorney fees.

Date: ____________________________

(Subcontractor, Sub-subcontractor, Manufacturer or Supplier)

By:________________________________________

Title:_______________________________________

State License No:____________________________

Local Representative: For maintenance, repair, or replacement service, contact:

Name:_______________________________________________________

Address:_____________________________________________________

Phone Number_____________________________________________

END OF SECTION 01 74 00
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PART 1 - GENERAL

1.1 WASTE MANAGEMENT REQUIREMENTS

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

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

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

D. District may decide to pay for additional recycling, salvage, and/or reuse based on Landfill Alternatives Proposal specified below.

E. Required Recycling, Salvage, and Reuse: The following may not be disposed of in landfills or by incineration:
   1. Aluminum and plastic beverage containers.
   2. Corrugated cardboard.
   3. Wood pallets.
   4. Clean dimensional wood: May be used as blocking or furring.
   5. Land clearing debris, including brush, branches, logs, and stumps.
   6. Asphalt paving: May be recycled into paving for project.
   7. Metals, including packaging banding, metal studs, sheet metal, structural steel, piping, reinforcing bars, door frames, and other items made of steel, iron, galvanized steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.

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

G. Contractor shall develop and follow a Waste Management Plan designed to implement these requirements.

H. The following sources may be useful in developing the Waste Management Plan.

I. Methods of trash/waste disposal that are not acceptable are:
   1. Burning on the project site.
   2. Burying on the project site.
   3. Dumping or burying on other property, public or private.
   4. Other illegal dumping or burying.
J. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, State and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1. California Green Building Code, SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

5.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.

5.408.1.1 Construction waste management plan. Where a local jurisdiction does not have a construction and demolition waste management ordinance that is more stringent, submit a construction waste management plan that
1. Identifies the construction waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
2. Determines if construction waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
3. Identifies diversion facilities where construction waste material collected will be taken.
4. Specifies that the amount of construction waste materials diverted shall be calculated by weight or volume, but not by both.

5.408.1.2 Waste management company. Utilize a waste management company that can provide verifiable documentation that the percentage of construction waste material diverted from the landfill complies with this section.

Note: The owner or contractor shall make the determination if the construction waste material will be diverted by a waste management company.

Exceptions to Sections 5.408.1.1 and 5.408.1.2:
1. Excavated soil and land-clearing debris
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets, where demolition of an existing structure(s) is necessary for the construction of a new structure.

5.408.1.3 Waste stream reduction alternative. The combined weight of new construction disposal that does not exceed 2 lbs/sq. ft. of building area may be deemed to meet the 50 percent minimum requirement as approved by the enforcing agency.

5.408.1.4 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Sections 5.408.1.1 through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

Notes:
1. Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located at http://www.bsc.ca.gov/CALGreen/default.htm may be used to assist in documenting compliance with the waste management plan.
2. Mixed construction and demolition debris (C&D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

5.408.2 Isolated jobsites. The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.
5.408.3 Excavated soil and land clearing debris [BSC]. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

**Exception:** Reuse, either on-or off-site, of vegetation or soil contaminated by disease or pest infestation.

2. California Green Building Code, **SECTION 5.504 POLLUTANT CONTROL**

5.504.1.3 Temporary ventilation. The permanent HVAC system shall only be used during construction if necessary to condition the building within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a 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.

5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the 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, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.

5.504.4 Finish material pollutant control. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.4.

5.504.4.1 Adhesives, sealants and caulks. Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products as specified in subsection 2, below.

2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507.
<table>
<thead>
<tr>
<th>ARCHITECTURAL APPLICATIONS</th>
<th>CURRENT VOC LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor carpet adhesives</td>
<td>50</td>
</tr>
<tr>
<td>Carpet pad adhesives</td>
<td>50</td>
</tr>
<tr>
<td>Outdoor carpet adhesives</td>
<td>150</td>
</tr>
<tr>
<td>Wood flooring adhesive</td>
<td>100</td>
</tr>
<tr>
<td>Rubber floor adhesives</td>
<td>60</td>
</tr>
<tr>
<td>Subfloor adhesives</td>
<td>50</td>
</tr>
<tr>
<td>Ceramic tile adhesives</td>
<td>65</td>
</tr>
<tr>
<td>VCT and asphalt tile adhesives</td>
<td>50</td>
</tr>
<tr>
<td>Drywall and panel adhesives</td>
<td>50</td>
</tr>
<tr>
<td>Cove base adhesives</td>
<td>50</td>
</tr>
<tr>
<td>Multipurpose construction adhesives</td>
<td>70</td>
</tr>
<tr>
<td>Structural glazing adhesives</td>
<td>100</td>
</tr>
<tr>
<td>Single-ply roof membrane adhesives</td>
<td>250</td>
</tr>
<tr>
<td>Other adhesive not specifically listed</td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPECIALTY APPLICATIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PVC welding</td>
<td>510</td>
</tr>
<tr>
<td>CPVC welding</td>
<td>490</td>
</tr>
<tr>
<td>ABS welding</td>
<td>325</td>
</tr>
<tr>
<td>Plastic cement welding</td>
<td>250</td>
</tr>
<tr>
<td>Adhesive primer for plastic</td>
<td>550</td>
</tr>
<tr>
<td>Contact adhesive</td>
<td>80</td>
</tr>
<tr>
<td>Special purpose contact adhesive</td>
<td>250</td>
</tr>
<tr>
<td>Structural wood member adhesive</td>
<td>140</td>
</tr>
<tr>
<td>Top and trim adhesive</td>
<td>250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBSTRATE SPECIFIC APPLICATIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal to metal</td>
<td>30</td>
</tr>
<tr>
<td>Plastic foams</td>
<td>50</td>
</tr>
<tr>
<td>Porous material (except wood)</td>
<td>50</td>
</tr>
<tr>
<td>Wood</td>
<td>30</td>
</tr>
<tr>
<td>Fiberglass</td>
<td>80</td>
</tr>
</tbody>
</table>

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](http://www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF).
### TABLE 5.504.4.2
#### SEALANT VOC LIMIT
Less Water and Less Exempt Compounds in Grams per Liter

<table>
<thead>
<tr>
<th>SEALANTS</th>
<th>CURRENT VOC LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural</td>
<td>250</td>
</tr>
<tr>
<td>Marine deck</td>
<td>760</td>
</tr>
<tr>
<td>Nonmembrane roof</td>
<td>300</td>
</tr>
<tr>
<td>Roadway</td>
<td>250</td>
</tr>
<tr>
<td>Single-ply roof membrane</td>
<td>450</td>
</tr>
<tr>
<td>Other</td>
<td>420</td>
</tr>
<tr>
<td><strong>SEALANT PRIMERS</strong></td>
<td></td>
</tr>
<tr>
<td>Architectural</td>
<td></td>
</tr>
<tr>
<td>Nonporous</td>
<td>250</td>
</tr>
<tr>
<td>Porous</td>
<td>775</td>
</tr>
<tr>
<td>Modified bituminous</td>
<td>500</td>
</tr>
<tr>
<td>Marine deck</td>
<td>760</td>
</tr>
<tr>
<td>Other</td>
<td>750</td>
</tr>
</tbody>
</table>

Note: For additional information regarding methods to measure the VOC content specified in these tables, see South Coast Air Quality Management District Rule 1168.

#### 5.504.4.3 Paints and coatings
Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.
<table>
<thead>
<tr>
<th>COATING CATEGORY</th>
<th>EFFECTIVE 1/1/2010</th>
<th>EFFECTIVE 1/1/2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat coatings</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Nonflat coatings</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Nonflat high gloss coatings</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Specialty Coatings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum roof coatings</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>Basement specialty coatings</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>Bituminous roof coatings</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Bituminous roof primers</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>Bond breakers</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>Concrete curing compounds</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>Concrete/masonry sealers</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Driveway sealers</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Dry fog coatings</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Faux finishing coatings</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>Fire resistant coatings</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>Floor coatings</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Form-release compounds</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Graphic arts coatings (sign paints)</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>High-temperature coatings</td>
<td>420</td>
<td></td>
</tr>
<tr>
<td>Industrial maintenance coatings</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Low solids coatings¹</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Magnesite cement coatings</td>
<td>450</td>
<td></td>
</tr>
<tr>
<td>Mastic texture coatings</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Metallic pigmented coatings</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Multicolor coatings</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Pretreatment wash primers</td>
<td>420</td>
<td></td>
</tr>
<tr>
<td>Primers, sealers and undercoaters</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Reactive penetrating sealers</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>Recycled coatings</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Roof coatings</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Rust preventative coatings</td>
<td>400</td>
<td>250</td>
</tr>
<tr>
<td>Shellacs:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear</td>
<td>730</td>
<td></td>
</tr>
<tr>
<td>Opaque</td>
<td>550</td>
<td></td>
</tr>
<tr>
<td>Specialty primers, sealers and undercoaters</td>
<td>350</td>
<td>100</td>
</tr>
<tr>
<td>Stains</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Stone consolidants</td>
<td>450</td>
<td></td>
</tr>
<tr>
<td>Swimming pool coatings</td>
<td>340</td>
<td></td>
</tr>
<tr>
<td>Traffic marking coatings</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Tub and tile refinishing coatings</td>
<td>420</td>
<td></td>
</tr>
<tr>
<td>Waterproofing membranes</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Wood coatings</td>
<td>275</td>
<td></td>
</tr>
<tr>
<td>Wood preservatives</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>Zinc-rich primers</td>
<td>340</td>
<td></td>
</tr>
</tbody>
</table>
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.

5.504.4.3 Aerosol paints and coatings. Aerosol paints and coatings shall meet the PWMIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:
1. Manufacturer’s product specification
2. Field verification of on-site product containers

5.504.4.4 Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the following:
1. Carpet and Rug Institute’s Green Label Plus Program
3. NSF/ANSI 140 at the Gold level or higher
4. Scientific Certifications Systems Sustainable Choice

5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute’s Green Label program.

5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.

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 for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 5.504.4.5.
<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>CURRENT LIMIT</th>
<th>JAN 1, 2012</th>
<th>JUL 1, 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardwood plywood veneer core</td>
<td>0.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardwood plywood composite core</td>
<td>0.08</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>Particle board</td>
<td>0.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium density fiberboard</td>
<td>0.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thin medium density fiberboard²</td>
<td>0.21</td>
<td>0.13</td>
<td></td>
</tr>
</tbody>
</table>

1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E 1333-96 (2002). For additional information, see California Code of Regulations, Title 17, Sections 93120 through 93120.12.

2. Thin medium density fiberboard has a maximum thickness of eight millimeters.

**5.504.4.5.1 Early compliance.** Reserved.

**5.504.4.5.3 Documentation.** Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications

2. Chain of custody certifications

1. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq)

2. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards

3. Other methods acceptable to the enforcing agency

**5.504.4.6 Resilient flooring systems.** For 50 percent of floor area receiving resilient flooring, install resilient flooring complying with the VOC-emission limits defined in the 2009 Collaborative for High Performance Schools (CHPS) criteria and listed on its High Performance Products Database; products compliant with CHPS criteria certified under the Greenguard Children & Schools program; certified under the Resilient Floor Covering Institute (RFCI) FloorScore program; or meet California Department of Public Health 2010 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 Specification 01350.)

**5.504.4.6.1 Verification of compliance.** Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.

**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 8. MERV 8 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation.
1.2 RELATED SECTIONS
A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specification Section, apply to work specified in this section.
B. Section 01 31 00 – Project Management and Coordinaction: Additional requirements for project meetings, reports, submittal procedures, and project documentation.
C. Section 01 50 00 – Temporary Facilities and Controls: Additional requirements related to trash/waste collection and removal facilities and services.
D. Section 01 60 00 – Product Requirements Waste prevention requirements related to delivery, storage, and handling.
E. Section 01 77 00 – Closeout Procedures: Trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.
F. Section 31 10 00 – Site Clearing: Handling and disposal of land clearing debris.

1.3 DEFINITIONS
A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.

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

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

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

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

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

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

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

N. Toxic: Poisonous to humans either immediately or after a long period of exposure.

O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.

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

1.4 SUBMITTALS

A. See Section 01 33 00 – Submittal Procedures.

B. Landfill Alternatives Proposal: Within 10 calendar days after receipt of Notice of Award of Bid, or prior to any trash or waste removal, whichever occurs sooner, submit a projection of trash/waste that will require disposal and alternatives to landfilling, with net costs.
   1. Submit to Architect for District's review and approval.
   2. If District wishes to implement any cost alternatives, the Contract Sum will be adjusted as specified elsewhere.
   3. Include an analysis of trash/waste to be generated and landfill options as specified for Waste Management Plan described below.
   4. Describe as many alternatives to landfilling as possible:
      a. List each material proposed to be salvaged, reused, or recycled.
      b. List the proposed local market for each material.
      c. State the estimated net cost resulting from each alternative, after subtracting revenue from sale of recycled or salvaged materials and landfill tipping fees saved due to diversion of materials from the landfill.
C. Once District has determined which of the landfill alternatives addressed in the Proposal above are acceptable, prepare and submit Waste Management Plan; submit within 10 calendar days after notification by Architect.

D. Waste Management Plan: Include the following information:

1. Analysis of the trash and waste projected to be generated during the entire project construction cycle, including types and quantities.

2. Landfill Options: The name, address, and telephone number of the landfill(s) where trash/waste will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all project trash/waste in the landfill(s).

3. Landfill Alternatives: List all waste materials that will be diverted from landfills by reuse, salvage, or recycling.

4. Meetings: Describe regular meetings to be held to address waste prevention, reduction, recycling, salvage, reuse, and disposal.

5. Materials Handling Procedures: Describe the means by which materials to be diverted from landfills will be protected from contamination and prepared for acceptance by designated facilities; include separation procedures for recyclables, storage, and packaging.

6. Transportation: Identify the destination and means of transportation of materials to be recycled; i.e. whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler.

E. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.

1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.

2. Submit Report on a form acceptable to District.

3. Landfill Disposal: Include the following information:
   a. Identification of material.
   b. Amount, in tons or cubic yards, of trash/waste material from the project disposed of in landfills.
   c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
   d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.

4. Incinerator Disposal: Include the following information:
   a. Identification of material.
   b. Amount, in tons or cubic yards, of trash/waste material from the project delivered to incinerators.
c. State the identity of incinerators, total amount of fees paid to incinerator, and total disposal cost.

d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.

5. Recycled and Salvaged Materials: Include the following information for each:
   a. Identification of material, including those retrieved by installer for use on other projects.
   b. Amount, in tons or cubic yards, date removed from the project site, and receiving party.
   c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
   d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
   e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.

6. Material Reused on Project: Include the following information for each:
   a. Identification of material and how it was used in the project.
   b. Amount, in tons or cubic yards.
   c. Include weight tickets as evidence of quantity.

7. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

PART 2 - PRODUCTS
(Not Applicable)

PART 3 - EXECUTION

3.1 WASTE MANAGEMENT PROCEDURES
   A. See Section 01 31 00 – Project Management and Coordination for additional requirements for project meetings, reports, submittal procedures, and project documentation.

   B. See Section 01 50 00 – Temporary Facilities and Controls for additional requirements related to trash/waste collection and removal facilities and services.

   C. See Section 01 60 00 – Product Requirements for waste prevention requirements related to delivery, storage, and handling.

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

   B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, District, and Architect.
C. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.

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

E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
   1. Provide containers as required.
   2. Provide materials for barriers and enclosures that are nonhazardous, recyclable, or reusable to the maximum extent possible; reuse project construction waste materials if possible.
   3. Provide adequate space for pick-up and delivery and convenience to subcontractors.
   4. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.

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

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

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

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

END OF SECTION 01 74 19
## FORM CWM-1: CONSTRUCTION WASTE IDENTIFICATION

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<tr>
<th>MATERIAL CATEGORY</th>
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* Insert units of measure.
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## FORM CWM-3: CONSTRUCTION WASTE REDUCTION WORK PLAN

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<td>Lumber: Cut-Offs</td>
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## FORM CWM-4: DEMOLITION WASTE REDUCTION WORK PLAN

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## FORM CWM-5: COST/REVENUE ANALYSIS OF CONSTRUCTION WASTE REDUCTION WORK PLAN

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C.V.U.S.D. PERSONNEL DEPT. T.I.

CONSTRUCTION WASTE MANAGEMENT FORMS

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<td>Plywood or OSB (scrap)</td>
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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section. In addition all technical specification sections and the operating and maintenance requirements of Divisions 22, 23, 26, and 28 are included.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Operation and maintenance documentation directory.
2. Emergency manuals.
3. Operation manuals for systems, subsystems, and equipment.
4. Product maintenance manuals.
5. Systems and equipment maintenance manuals.

B. Related Requirements:

1. Section 01 33 00 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.

1.3 DEFINITIONS

A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.

B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Architect will comment on whether content of operations and maintenance submittals are acceptable.

B. Format: Submit operations and maintenance manuals in the following format:
   a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
   b. Enable inserted reviewer comments on draft submittals.
   c. Size: Minimum 4 inch, three-ring binders for 8-1/2" x 11" punched pages, completely clear plastic covered for insertion of labels on spines and covers.
   d. Provide identifying tabbed pages. Classify by Division and by Section. All tabbing shall be in numerical order.
   e. Drawings:
      1) Provide reinforced punched binder tab. Bind drawings with text.
      2) Fan-fold larger drawings to size of text pages, for easy foldout.
   f. Cover: Identify each volume with typed or printed label, List:
      1) Title of Project
      2) Identity of separate structures as applicable.
      3) Identity of general subject matter covered in the manual.
   g. Spine: Identify each volume with typed or printed label stating OPERATING AND MAINTENANCE INSTRUCTIONS, GUARANTEES AND SERVICE CONTRACTS and the following information:
      1) Title of Project
      2) Divisions and Sections included within volume.
      3) Volume number (i.e. "1 of 4").

C. Preliminary: Submit one copy of proposed manuals to Architect at least 15 days prior to final inspection or acceptance.

D. Final: Following the indoctrination and instruction of the District’s operating and maintenance personnel, review proposed revisions to the manual with the Architect.

   1. Submit three copies of accepted data in final form 10 days after final inspection. Approval of submittal is a prerequisite at Substantial Completion prior to District’s scheduling project for acceptance by the Governing Board.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:

   1. List of documents.
   2. List of systems.
   3. List of equipment.
4. Table of contents.

B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.

C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.

D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.

E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:

1. Title page.
2. Table of contents.

B. Title Page: Include the following information:

1. Subject matter included in manual.
2. Name and address of Project.
3. Name and address of Owner.
4. Date of submittal.
5. Name and contact information for Contractor.
6. Name and contact information for Architect.
7. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
8. Cross-reference to related systems in other operation and maintenance manuals.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.

2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.

1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.

   a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.

   b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.

2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.

3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.


5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.

   a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 EMERGENCY MANUALS

A. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:

1. Fire.
2. Flood.
5. Power failure.
7. System, subsystem, or equipment failure.
8. Chemical release or spill.

C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.

D. Emergency Procedures: Include the following, as applicable:

1. Instructions on stopping.
2. Shutdown instructions for each type of emergency.
3. Operating instructions for conditions outside normal operating limits.
4. Required sequences for electric or electronic systems.
5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

2. Performance and design criteria if Contractor has delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

B. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUALS

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
5. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.

E. Energy Conservation Features:

1. Provide a list of energy conservation features, materials, components, and mechanical devices installed in the building.

F. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins.
2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
2. Troubleshooting guide.
3. Precautions against improper maintenance.
4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
5. Aligning, adjusting, and checking instructions.
6. Demonstration and training video recording, if available.

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

F. Content, for each electric and electronic system as appropriate.

1. Description of system and component parts:
   a. Function, normal operating characteristics, and limiting conditions.
   b. Performance curves, engineering data, and tests.
   c. Complete nomenclature and commercial number of replaceable parts.

2. Circuit directories of panel boards:
   a. Electrical service
   b. Controls
   c. Communications

3. As-installed color-coded wiring diagrams.

4. Operating procedures:
   a. Routine and normal operating instructions.
   b. Sequences required.
   c. Special operating instructions.

5. Maintenance procedures:
   a. Routine operations
   b. Guide to "trouble-shooting."
   c. Disassembly, repair and reassembly.
   d. Adjustment and checking.
6. Manufacturer's printed operating and maintenance instructions.

7. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.

G. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

H. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.

I. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.

B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.

C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.

2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.

E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

1. Do not use original project record documents as part of operation and maintenance manuals.
2. Comply with requirements of newly prepared record Drawings in Section 01 78 39 "Project Record Documents."

G. Comply with Section 01 77 00 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

3.2 INSTRUCTION OF DISTRICT'S PERSONNEL

A. Prior to final inspection or acceptance, fully instruct Owner's designated operating and maintenance personnel in the operation, adjustment and maintenance of all products, equipment, and systems installed in project.

1. Provide services of factory-trained instructors from the manufacturer of each major item of equipment or system.
2. Provide for each instruction session or "in-service", a DVD Camcorder operator and DVD Camcorder to video tape the session. Video tapes shall be clearly labeled as to project, subject, and date. Submit tapes in triplicate.

B. Operating and maintenance manual shall constitute the basis of instruction.

1. Review contents of manual with personnel in full detail to explain all aspects of operation and maintenance.
2. Review instructions on how to efficiently use state required energy conservation features, materials, components, and mechanical devices.

END OF SECTION 01 78 23
SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for project record documents, including the following:

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.
4. Miscellaneous record submittals.

B. Related Requirements:

1. Section 01 29 00 “Payment Procedures: Timely Updates”
2. Section 01 73 00 "Execution" for final property survey.
3. Section 01 77 00 "Closeout Procedures" for general closeout procedures.
4. Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.3 QUALITY ASSURANCE

A. General: Delegate the responsibility for maintenance of Record Documents to one person on the Contractor's staff as accepted in advance by the Architect.

B. Accuracy of Records: Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of drawings and other documents where such entry is required to properly show the change. Accuracy of records shall be such that future search for items shown in the Contract Documents may reasonably rely on information obtained from the accepted Record Documents.

C. Timing of Entries: Make entries within 24 hours after receipt of information.
1.4 PAYMENT WITHHELD

A. The Architect reserves the right to withhold certification of payment requests for failure on the part of the Contractor to maintain Record Drawings in conformance with this Section.

1.5 SUBMITTALS

A. General: The Architect's review of the current status of Record Documents will be a prerequisite to the Architect's review of requests for progress payment and request for final payment under the contract.

B. Progress Submittals: Prior to submitting each request for progress payment, secure the Architect's review of the Record Documents as currently maintained.

C. Final Submittal: Prior to submitting request for final payment, submit the final Record Documents to the Architect and secure his or her acceptance.

1.6 PRODUCT HANDLING

A. Maintain the job set of Record Documents protected from deterioration and from loss and damage until completion of the work and transfer of the recorded data to the final Record Documents.

B. In the event of loss of recorded data, use means necessary to again secure the data to the Architect's acceptance; such means shall include, if necessary in the opinion of the Architect, removal and replacement of concealing materials and, in such case, replacements shall be to the standards originally specified in the Contract Documents.

PART 2 - PRODUCTS

2.1 RECORD DOCUMENTS

A. Job Set: Secure from the Architect, at no charge to the Contractor, one complete set of Documents comprising the Contract.

B. Final Record Documents: At a time near the completion of the work, secure from the Architect at no charge to the Contractor, one complete set of reproducible Drawings included in the Contract.

C. Before commencing backfilling of utilities or any other underground pipes, ducts, conduits, or structures, take photographs showing relationship of below ground utilities to structure(s) or other physical reference point. Provide three-ring binder containing 3-1/2" x 5" mounted and numbered prints of photos, categorized by locations and indicating utilities shown, plus a CD with electronic files of all photos. Provide a photo(s) of all connections, crossings, stub-outs or other critical points. If the Contractor neglects to take such photographs, Contractor shall uncover, at the Contractor's expense, the area(s) so neglected in order to provide the requisite photos.
Provide a composite Utility Site Plan with the number of each photograph placed on the plan at the location the photo was taken from, and a mark indicating which way the camera was pointed. All numbers and marks shall be in ink, and shall be clear, legible, and neatly done. Photo binder and photo plan shall be considered part of the Record Documents.

2.2 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
5. Note related Change Orders, record Product Data, and record Drawings where applicable.

B. Format: Submit record Specifications as paper copy.

2.3 RECORD PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
3. Note related Change Orders, record Specifications, and record Drawings where applicable.

B. Format: Submit record Product Data as paper copy.

1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

2.4 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of
the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

B. Format: Submit miscellaneous record submittals as PDF electronic file and paper copy.
   1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

PART 3 - EXECUTION

3.1 MAINTENANCE OF JOB SET

A. Identification: Upon receipt of the job set, identify each of the documents with a title "RECORD DOCUMENTS-JOB SET".

B. Preservation:
   1. Considering the contract completion time, the probable number of occasions upon which the job set must be taken out for new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the job set for the review of the Architect.
   2. Use the job set for no purpose other than entry of new data and for review by the Architect, until start of transfer of data to final Record Documents.
   3. Maintain the job set at the site of work as that site is designated by the Architect.

C. Making Entries on Drawings: Using an erasable colored pencil (not ink nor indelible pencil), clearly describe the change by note and by graphic line, as required. Date entries. Call attention to the entry by a "cloud" around the area or areas affected. In the event of overlapping changes, different colors may be used for each of the changes. In the event of superseding changes to any area of the drawing, erase only that portion of the preceding change that is affected by the subsequent change before entering the subsequent change.

D. Making Entries on Other Documents:
   1. Where changes are caused by directives issued by the Architect, clearly indicate the change by note in ink, colored pencil, or rubber stamp, and reference Division of the State Architect approved addenda and change orders.
   2. Where changes are caused by Contractor originated proposals reviewed by the Architect, including inadvertent errors by the Contractor that have been accepted by the Architect, clearly indicate the change by note in erasable colored pencil.
   3. Make entries in the pertinent documents as reviewed by the Architect.
   4. Reference specifications section 01 70 00, Closeout Procedures (Closeout Schedule and Procedure). Project Acceptance Requirements, Division of the State Architect for list of documents required at closeout.

E. Conversion of Schematic Layouts:
1. In most cases on the Drawings, arrangement of conduits and circuits, piping, ducts, and other similar items, is shown schematically and is not intended to portray precise physical layout. Final physical arrangement shall be as determined by the Contractor, subject to the Architect's review. However, design of future modifications of the facility may require accurate information as to the final physical arrangement of items and location of utilities which are shown only schematically on the Drawings.

2. Show on the job set of record Drawings, by dimension accurate to within 1 inch, the centerline of each run of items such as are described in the preceding paragraph above. Clearly identify the item by accurate note such as "cast-iron drain", "galvanized water pipe", etc. Show, by symbol or note, the vertical location of the item ("under slab", "in ceiling plenum", "exposed", etc.). Make identification sufficiently descriptive that it may be related reliably to the Specifications.

3. The Architect may waive the requirements for conversion of schematic layouts where, in the Architect's judgment, such conversion serves no beneficial purpose. However, do not rely upon waivers being issued except as specifically issued in writing by the Architect.

4. Timing of Entries: Be alert to changes in the work from how it is shown in the Contract Documents: Promptly, and in no case later than 24 hours after the change has occurred and been made known to the Contractor, make the entry or entries required.

F. Accuracy of Entries: Use means necessary, including proper instruments or tools for measurement, to determine actual locations of the installed items.

3.2 FINAL RECORD DOCUMENTS

A. General: The purpose of the final Record Documents is to provide factual information regarding the work, both concealed and visible, which will enable future modification of design to proceed without lengthy and expensive site measurement, investigation, and examination.

B. Review of Recorded Data Prior to Transfer: Following receipt of the reproducible set of drawings described here-in-above, and prior to start of transfer of recorded data thereto, secure a review by the Architect of recorded data. Make required revisions.

C. Transfer of Data to Drawings: Carefully transfer change data shown on the job set of Record Drawings to the corresponding reproducible set of drawings, coordinating the changes as required, and clearly indicating at each affected detail and other drawing the full description of changes made during construction and the actual location of items described above. Call attention to each entry by drawing a cloud around the area or areas affected. Make change entries on the documents neatly, consistently, and in ink or crisp black pencil.

D. Transfer of Data to Other Documents: If the documents other than drawings have been kept clean successfully during progress of the work, and if entries have been sufficiently orderly thereon and reviewed by the Architect, the job set of those documents (other than drawings) will be accepted by the Architect as the final portion
of the record documents. If any such document is not so accepted by the Architect, secure a new copy of that document from the Architect at the Architect's usual charge for reproduction carefully transfer the change data to the new copy and obtain the acceptance of the Architect.

E. Review and Approval: Submit the completed total set of Record Documents to the Architect as described above. Participate in review meeting or meetings as required by the Architect, make required changes in the Record Documents, and promptly deliver the final Hardcopy Record Documents and Electronic Record Documents to the Architect.

3.3 CHANGES SUBSEQUENT TO ACCEPTANCE

A. The Contractor shall have no responsibility for recording changes in the work subsequent to acceptance of the work by the Owner, except for changes resulting from replacements, repairs, and alterations made by the Contractor as a part of his guarantee. No changes will be allowed without approval of the Division of the State Architect.

END OF SECTION 01 78 39