

PROJECT SPECIFICATIONS - TABLE OF CONTENTS

(SPS+ Architects Project No. 19101)

March 23, 2020

Table of Contents

Division 00 – Procurement And Contracting Requirements

Not-used

Division 01 – General Requirements

01 0100	Summary
01 2000	Application for Payment
01 3000	Administrative Requirements / Submittals
01 4000	Quality Requirements
01 5000	Temporary Facilities And Controls
01 5050	Minimum Safety Guidelines
01 6000	Product Requirements
01 6116	VOC Content Restrictions
01 7000	Execution And Closeout Requirements
01 7329	Cutting and Patching
01 7800	Closeout Submittals

Division 02 – Existing Conditions

02 4100	Selective Demolition
---------	----------------------

Division 03 – Concrete

Not-used

Division 04 – Masonry

Not-used

Division 05 – Metals

Not-used

Division 06

Not-used

Division 07

Not-used

Division 08 – Doors and Windows

Not-used

Division 09 – Finishes

Not-used

Division 10 – Specialties

Not-used

Division 12 – Furnishings

Not-used

Divisions 13 – 21

Not-used

Division 22 – Plumbing

Not-used

Division 23 – Mechanical

Not-used

Division 26 –Electrical

Not-used

Division 27 –Communications

Not-used

Division 31 –Earthwork

Not-used

Division 32 –Exterior Improvements

Not-used

Division 33 –Sanitary Sewerage

Not-used

**SECTION 01 0100
SUMMARY**

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: **Boiler and MUA Unit Replacement Tsehootsoi Elementary School**
- B. Owner: Window Rock Unified School District #8
- C. Architect: SPS+ Architects LLP
- D. The Project consists of: Systems Improvement at Tsehootsoi Elementary School in Ft. Defiance AZ consisting of:

The Tenant improvement for Tsehootsoi Elementary School Scope of Work includes partial interior work to remove and replace 2 existing boilers, pumps, and associated modification to piping and flues in the boiler room.

Removed existing HVAC units and provide 3 new rooftop top units, gas fired make up air units. Provide new gas piping system and necessary to serve new boiler and make up air units. Provide new duct support detail.

Upgrade HVAC controls system with new work being installed.

There will be select area interior demo work to remove existing units. Patch and replace in-kind new ceiling where new work is installed.

Provide new structural steel attachments per structural sketches to accommodate new units on roof. Patch and repair existing roof to accommodate new rooftop unit and curb, where necessary.

1.03 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Sum as described in the Contract Documents.

END OF SECTION

SECTION 01 2000
APPLICATION FOR PAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Price and Contract Time.
- C. Change procedures.
- D. Correlation of Contractor submittals based on changes.

1.02 SCHEDULE OF VALUES

- A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit a draft to Architect for approval.
- B. Forms filled out by hand will not be accepted.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit a sample to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Execute certification by the signature of the authorized officer.

1.04 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Price or Contract Time, Architect will issue instructions directly to Contractor.
- B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
 - 1. The document will describe the required changes and will designate the method of determining any change in Contract Price or Contract Time.
 - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 7 days.

- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
- E. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- F. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Price.

1.05 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Price, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 - 1. All closeout procedures specified in Section 01 7000.

END OF SECTION

SECTION 01 3000
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Progress photographs.
- B. Submittals for review, information, and project closeout.
- C. Submittal procedures.

1.02 RELATED REQUIREMENTS

1.03 PROJECT COORDINATION

- A. Owner Representative: Erwin White, WRUSD#8 Support Services.
- B. Architect Representative: Richard K. Begay, AIA, Associate, SPS+ Architects, LLP
- C. Cooperate with the Owner in the allocation of mobilization areas of the site; for field offices and sheds, for Owner access, traffic, and parking facilities.
- D. During construction, coordinate use of site and facilities through the Architect/Owner.
- E. Comply with the Architect's procedures for project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- F. Comply with instructions of the Owner/Architect for use of temporary utilities and construction facilities.
- G. Make the following types of submittals to Architect.
 - 1. Requests for interpretation.
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Design data.
 - 6. Manufacturer's instructions and field reports.
 - 7. Applications for payment and change order requests.
 - 8. Progress schedules.
 - 9. Coordination drawings.
 - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
 - 11. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 SAFETY

- A. During the period of construction, the OSHA Standards shall be followed. The contractor is to comply with the Department of Labor's Construction Industry, Safety, and Health Standards (29 CFR 1926)

3.02 PROGRESS PHOTOGRAPHS

- A. Submit photographs (minimum of 10) with each application for payment, taken not more than 3 days prior to submission of an application for payment.
- B. Photography Type: Digital; electronic files.
- C. Provide photographs of site and construction throughout the progress of Work produced, acceptable to Architect.
- D. In addition to periodic, recurring views, take photographs of each of the following events:
 - 1. Demolition

4. Electrical wiring
 5. Stud framing
 6. Insulation
 7. Drywall
 8. Finishes
 9. Millwork
- E. Digital Photographs: 24 bit color, minimum resolution of 1024 by 768, in JPG format; provide files unaltered by photo editing software.
1. Delivery Medium: On photo USB drive or email.
 2. File Naming: Include project identification, date and time of view, and view identification.
 3. Photo CD(s): Provide 1 copy including all photos cumulative to date and PDF file(s), with files organized in separate folders by submittal date.
 4. Hard Copy: Printed hardcopy (grayscale) of PDF file and point of view sketch.
- 3.03 SUBMITTALS FOR REVIEW
- A. When the following are specified in individual sections, submit them for review:
1. Product data.
 2. Shop drawings.
 3. Samples for selection.
 4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed only for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.
- 3.04 SUBMITTALS FOR INFORMATION
- A. When the following are specified in individual sections, submit them for information:
1. Design data.
 2. Certificates.
 3. Test reports.
 4. Inspection reports.
 5. Manufacturer's instructions.
 6. Manufacturer's field reports.
 7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.
- C. Contractor to provide a submittal for roof patch for Architect review prior to performing repair of roofing surface for new penetrations, new equipment curbing or repairs from demolition.
- 3.05 SUBMITTALS FOR PROJECT CLOSEOUT
- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout:
1. Project record documents (As-Builts)
 2. Operation and maintenance data.
 3. Warranties.
 4. Bonds.
 5. Final Completion Photographs.
 6. Inventory list & Receipt of maintenance materials.
 7. Other types as indicated.
- D. Submit for Owner/District benefit during and after project completion.

3.06 NUMBER OF COPIES OF SUBMITTALS

- A. Documents for Review:
 - 1. Small Size Sheets, Not Larger Than 8-1/2 x 11 inches (215 x 280 mm): Submit the number of copies that Contractor requires, plus 2 copies that will be retained by Architect.
 - 2. Larger Sheets, Not Larger Than 24 x 36 inches (910 x 1220 mm): Submit the number of opaque reproductions that Contractor requires, plus two copies that will be retained by Architect.
- B. Documents for Information: Submit 3 copies.
- C. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.07 SUBMITTAL PROCEDURES

- A. Shop Drawing Procedures:
 - 1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related Work.
 - 2. Generic, non-project specific information submitted as shop drawings do not meet the requirements for shop drawings.
- B. Transmit each submittal with a copy of approved submittal form.
- C. Transmit each submittal with an approved form.
- D. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
- E. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information are in accordance with the requirements of the Work and Contract Documents.
- F. Schedule submittals to expedite the Project, and coordinate submission of related items.
- G. For each submittal for review, allow 10 days excluding delivery time to and from the Contractor.
- H. Identify variations from Contract Documents and Product or system limitations that may be detrimental to the successful performance of the completed Work.
- I. Provide space for Contractor and Architect review stamps.
- J. When revised for resubmission, identify all changes made since the previous submission.
- K. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- L. Submittals not requested will not be recognized or processed.

END OF SECTION

SECTION 01 4000
QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. References and standards.
- B. Quality assurance submittals.
- C. Control of installation.
- D. Tolerances.
- E. Manufacturers' field services.

1.02 SUBMITTALS

- A. Certificates: When specified in individual specification sections, submit a 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.
- B. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- C. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator.
 - 1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 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 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. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 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.

3.03 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 and certify 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.

3.06 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not conforming to specified requirements.
- B. If in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct an appropriate remedy or adjust payment.

END OF SECTION

SECTION 01 5000
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 TEMPORARY UTILITIES

- A. Owner will provide the following:
 - 1. Electrical power and metering, consisting of connection to existing facilities.
 - 2. Water supply, consisting of connection to existing facilities.
- B. Existing facilities may not be used.
- C. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TELECOMMUNICATIONS SERVICES

- A. Provide, maintain telecommunications services to field activities at time of project mobilization.
- B. Telecommunications services shall include:
 - 1. Windows-based personal computer dedicated to project telecommunications, with necessary software and laser printer.
 - 2. Internet Connections: Minimum of one; DSL modem or faster.

1.04 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization. Coordinate with WRUSD#8.
- B. Maintain daily in clean and sanitary condition.

1.05 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.07 EXTERIOR ENCLOSURES

- A. Provide temporary insulated 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.

1.08 INTERIOR ENCLOSURES

- A. Provide temporary partitions and ceilings as indicated to separate work areas from Owner occupied areas, to prevent penetration of dust and moisture into Owner occupied areas, and to prevent damage to existing materials and equipment.
- B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:

1.09 SECURITY

- A. Provide security and facilities to protect Work, and Owner operations from unauthorized entry, vandalism, or theft.

1.10 VEHICULAR ACCESS AND PARKING

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

1.11 WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.
- C. 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.

1.12 PROJECT IDENTIFICATION

- A. Provide project identification sign.
- B. Erect on site at location.

1.13 FIELD OFFICES

- A. Office: GC to provide means to facilitate construction meetings. If allowed by WRUSD, a existing space may be used. Space to be weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with furniture.
- B. Provide space for Project meetings, with table and chairs to accommodate 8 or more persons.

1.14 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet (600 mm). Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition.
- E. Restore new permanent facilities used during construction to specified condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

- 3.01 COMPLY WITH NFPA 241, "SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS."

END OF SECTION

SECTION 01 5050
MINIMUM SAFETY GUIDELINES

PART 1 GENERAL

1.01 SITE SAFETY GUIDELINES

- A. Regulations:
All work shall be performed in compliance with all applicable Federal, State and local laws, statutes, rules, and regulations, including OSHA and EPA standards. Prime contractors and subcontractors shall provide safety representatives on site who shall be responsible for ensuring implementation of all procedures within the Safety Guidelines.
- B. Personal Protective Equipment:
The contractor shall furnish and require employees to utilize appropriate personal protective equipment for the tasks performed. All employees shall be required to wear hard hats when in the construction area. All employees shall be required to wear safety glasses at all times when in the construction area. (Exception: Hard hats and safety glasses are not required when in office environments unless indoor hazards dictate their use.) Hearing protection is required where posted in addition to when noisy equipment is being used. Respiratory protection is required when dictated by environmental conditions or the work being performed. The contractor shall ensure that employees required to wear respirators have been appropriately trained, tested and are qualified for respirators use.
- C. Fall Protection:
100% fall protection. Guardrail or personal fall arrest system is required at elevations above six feet. A Fall Protection safe work plan shall be developed and implemented for all elevated work. A full body harness and shock-absorbing lanyard are required for personal fall arrest systems. Anchorage points for personal fall arrest systems must be independent and must be capable of supporting at least 5000 pounds per employee attached.
- D. Speed Limit:
The contractor's personnel shall observe any posted speed limits that maybe modified (lowered) from time to time as driving conditions change.
- E. First Aid:
The contractor shall maintain proper first aid readiness on the job site for employees and shall know the location of the nearest emergency medical facility.
- F. Housekeeping:
The contractor shall maintain all staging and work areas in a clean, well-organized manner at all times. All debris is to be contained to prevent wind and storm conditions from dispersing the debris.
- G. Sanitation:
The contractor shall maintain proper sanitation at the site for employees including drinking water and restroom facilities. A separate job site agreement may be made to identify and isolate a restroom for contractor employee use during a project.
- H. Wind Storms:

Work subject to damage from wind and storm conditions shall be secured or otherwise protected to reduce the probability of damage from these elements.

- I. Mobile Equipment:
The contractor's personnel shall not be permitted to ride on any type of equipment unless proper cages, seats, belts or other personnel securing devices are provided and used. Also, vehicles and mobile equipment with partially obstructed rear views shall be equipped with backup alarms.
- J. Compressed Gas Cylinders:
Cylinders shall be stored in a secure upright position. Oxygen and fuel shall be separated by 20 feet or a barrier with 1/2 hour fire resistance which is 5 feet high. Valve protection caps shall be installed on cylinder without regulators.
- K. Compressed Air:
Compressed air shall not be used to blow dirt, dust, etc., from clothing or skin. Compressed air used for cleaning materials (metallic shavings, etc.) shall be regulated to a maximum of 30 psi.
- L. Public Safety:
The contractor shall use every available means to ensure the safety of the general public and contractor personnel at all staging and work locations.
- M. Electrical Work:
Ground fault circuit interrupters are required for electrical tools and cord connections. Cords and tools shall not be laid in wet locations or walkways. Pre-job inspection is required for all electric tools and cords. Defective equipment shall be removed from the work area and either repaired or disposed of. Only non-metallic ladders shall be used for electrical work.
- N. Blue Stake Arizona:
The contractor is responsible for ascertaining the location of all underground installations that exist in the defined work area prior to beginning the job. The contractor shall take the necessary safeguards to ensure the integrity of these systems and protection of personnel from these systems where appropriate, shall include propane delivery systems, water, sewer, electric, communications systems, etc.
- O. Power Lines:
The contractor shall be aware of overhead electrically energized conductors and shall ensure that personnel maintains the required separation of materials, equipment, and personnel from the conductors.
- P. Temporary Material Storage:
Material yards or set up yards shall not be located near or under power lines. Special attention shall be given to crane safety and the OSHA regulations requiring specific minimum clearances from electrically energized conductors. A signalman shall be used when required.
- Q. LOTO:
All work performed that requires the control of hazardous energy (a.k.a. Lock Out Tag Out) to achieve zero mechanical state, shall be communicated and coordinated with Owner. This applies specifically to the use of multiple hasp locks and tags where controls

are applied and where they are removed from electrical panels, piping, machines or equipment.

- R. Existing Equipment:
All electrical and mechanical switching on Owner equipment shall be done in accordance with applicable industry procedures.
- S. Barrier Tape and Flagging:
The contractor shall ensure that all personnel are familiar with and comply with barrier tapes. Red barrier tape with "Danger" tags attached shall indicate a dangerous condition within the taped area and that entrance into the taped area is prohibited without the authorization of the individual whose name appears on the tag. Yellow or yellow and black barrier tape with "Caution" tags attached indicates that caution is necessary within the taped area. Entrance is permitted as long as personnel takes the necessary precautions to protect themselves from the hazardous condition(s). The lack of attached "Danger" or "Caution" tags does not change the meaning of the colored barrier tape.
- T. Scaffolding:
Scaffolding shall be erected, dismantled or modified only under the supervision of a competent person. Proper access must be provided to all scaffolds. A guardrail system is required on all scaffolds/work platforms more than 6 feet high. Toe boards are required on scaffolds/work platforms more than 10 feet high. No one may ride on a manually propelled scaffold unless it has a standard railing system and is moved from the flooring surface. Wheels must be locked on all rolling scaffolds when not being moved.
- U. Hazard Communication:
The contractor shall maintain a listing of all chemical products and a copy of each product's Material Safety Data Sheet (MSDS) for chemicals on the construction site.
- V. Chemical Waste:
All solvents and other chemical-cleaning agents, when used, shall be collected, contained and properly labeled as specified by industry practice. Under no circumstances are waste solvents and/or other chemicals to be dumped on the ground, down drainage systems or placed in regular trash receptacles. The contractor will be responsible for the disposal of any hazardous waste and shall comply with all regulations pertaining to the disposal of such.
- W. Hazard Comm. Training:
Contractors and subcontractors must have a hazards communication program to inform personnel of the hazards associated with the chemicals they work with. To assure that all on-site personnel is trained in the recognition and avoidance of hazards, training must also be provided in the personal protective equipment to be used in association with the use of these chemicals.
- X. Special Hazards:
Asbestos, chemicals and other toxic substances (i.e., PCB's, sulfuric acid, sodium hydroxide, chlorine, etc.) may be found on district properties. The contractor's personnel shall be familiar with the applicable safety and environmental rules governing these substances prior to their disturbance.
- Y. Solid Waste:
Empty drums, bags or other chemical containers to be disposed of shall be emptied as much as possible by pumping and/or pouring and shall be labeled and located safely.

The contractor shall be responsible for the proper disposal of such containers, bags, drums, etc.

- Z. Spill Reporting:
The contractor shall immediately report any accidental spillage of hazardous substances, solvents or cleaning agents to the architect. The spillage shall be contained and removed by the contractor as indicated by the appropriate state agency representative.
- AA. Housekeeping:
The contractor's interest in occupational and environmental safety can often be predicted by the degree in which housekeeping is performed at staging and work areas. WRUSD#8 will not tolerate poor housekeeping practices. The contractor shall ensure that all debris is removed prior to it interfering with the safety of employees and/or the general public, and at least daily. In addition, hoses, welding leads, power cords, etc., shall not be strung across established walkways, but shall be suspended above or below the walkway to avoid tripping hazards.
- AB. Manufactured Ladders:
 - 1. Ladders with broken or missing rungs, broken or split side rails or otherwise damaged, shall not be used.
 - 2. All portable ladders shall be equipped with non-skid safety feet and shall be placed on a stable base. The access areas at the top and bottom of ladders in use shall be kept clear.
 - 3. The side rails shall extend 36 inches above the landing. When this is not practical, grab rails shall be installed. All ladders in use shall be tied, blocked or otherwise secured to prevent accidental displacement.
- AC. Job-Made Ladders:
 - 1. Job made ladders shall be fabricated in compliance with the regulations in OSHA 1926.1053.
 - 2. The general rules applying to the use of manufactured ladders also apply to the use of job-made ladders.
 - 3. NOTE: The contractor shall provide additional runways and ladders as he may require for the execution of the work. All such apparatus, equipment, and construction shall meet all requirements for safety and all provisions of laws and ordinances applicable thereto. Permanent stairs shall be erected as soon as possible, and the contractor shall provide same with temporary protective treads, handrails and shaft protection.
 - 3. Ladder Training shall be in accordance with OSHA 1926.1060.

1.02 FIRE SAFETY GUIDELINES

- A. The contractor shall recognize and minimize all potential fire hazards, become familiar with on-site fire protection systems and enforce applicable fire regulations. The contractor shall maintain an appropriate number of the proper size and type fire extinguishers in the immediate work area.

- B. Materials and/or equipment stored in cardboard cartons, wood crates or other combustible containers shall be stored in an orderly manner and accessibly located.
- C. Remove flammable or combustible materials from the immediate area or cover with suitable non-combustible shield prior to "hot work". Welding, flame cutting or spark producing operations require a fire extinguisher within 25 feet. A designated "Fire Watch" shall be implemented during and for 1/2 hour after any "hot work".
- D. The contractor shall ensure that potentially hazardous areas below work from which debris, parts, tools or cutting/welding slag can fall or splash on personnel are provided with an adequate barrier. The contractor shall ensure that welding operations are shielded or enclosed to protect employees from arc rays and immediately pick up all welding rod stubs. If cutting, welding, etc., are being done in a confined space, appropriate measures will be taken to properly ventilate the area.
- E. Employees shall not be allowed to start fires with gasoline or kerosene or other highly flammable materials. No open fires will be permitted. No tar or other melting kettles will be allowed inside or within 50 feet of any building.
- F. Not more than one day's supply of flammable liquids, such as oil, gasoline, paint or paint solvent, or roofing materials shall be brought into any building at any one time. All flammable liquids having a flash point of 110 degrees F, or below, which must be brought into any building, shall be in Underwriters Laboratories labeled safety cans. Spigots on drums containing flammable liquids are prohibited on the project site. Drums are to be equipped with approved vented pumps.
- G. Only a reasonable working supply of flammable building materials shall be located on the roof of any building.
- H. All tarpaulins used during the course of construction shall be flameproof, non-asbestos type, secured in place against damage or flapping from the wind.
- I. All oil-soaked rags, papers and other similar combustible material shall be removed from any building at the close of each day's work, or more often if necessary, and placed in metal containers, with self-closing lids.
- J. Gasoline or like flammable materials shall not be poured into sewers, manholes or traps, but shall be disposed of safely and legally.
- K. All heating devices used for temporary heating of facilities under construction shall be of a UL Listed type, shall have proper safeguards and shall be installed at such locations and in such manner to minimize the hazard. Oil-fired stoves and heating units shall have proper combustion controls. Oil-fired heaters shall have integral fuel tanks not to exceed 15 gallons capacity for each unit.
- L. No liquid fuels shall be used for starting solid fuel fires. Wood or other debris shall not be burned in open barrels.
- M. The contractor shall maintain free access to the building areas for firefighting equipment and shall at no time block off main roadways or fire aisles without providing adequate auxiliary roadways and means of entrance for firefighting equipment.

1.03 SECURITY GUIDELINES

Boiler and MUA Unit Replacement
Tsehootsoi Elementary School
Window Rock Unified School District #8

- A. Each job site or facility may have specific security regulations. Specifics will be described in the bid specs.
- B. Only persons authorized by the Owner and the contractor shall be permitted into the work site.
- C. Each job site or facility may establish work hours for the construction/contractor activities. The contractor shall maintain the work hours as requested and may be asked to stop work to accommodate special scheduled events in the interest of safety and security.
- D. Contractor shall properly store and secure all tools and equipment at the job site including equipment and vehicle ignition locks and locked gang boxes.
- E. The theft or misappropriation of any Owner property will result in the removal of the responsible party from the project.
- F. The possession or use of alcoholic beverages or illegal drugs is prohibited on job sites or on Owner property. Any person found to be under the influence or in possession of alcohol or illegal drugs shall be removed from the site.
- G. The possession or use of tobacco products is prohibited in all interior areas on the project site other than in specific exterior areas designated by the Owner.
- H. No firearms are permitted on the job site or any Owner property. Any act of a criminal nature that occurs at the job site may result in the filing of criminal charges.
- J. All contractors' personal vehicles shall be parked in parking areas designated by the Owner representative.

END OF SECTION

**SECTION 01 6000
PRODUCT REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage, and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.
- E. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

- A. Section 01 4000 - Quality Requirements: Product quality monitoring.
- B. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.

1.03 SUBMITTALS

- A. All Product, Data, & Shop Drawings submittals are to be initially submitted to Architect within 30 days of Notice to Proceed. Provide sample submittals requiring the choice of colors, patterns, or styles to be submitted within 30 days from Notice to Proceed. It is the Contractor's responsibility to recognize long-lead items, and to submit the submittals in a timely manner so as not to delay the project completion date.
 - 1. Proposed Products List: Submit a list of major products proposed for use, with the name of the manufacturer, trade name, and model number of each product.
 - a. Submit within 15 days after date of Notice to Proceed.
 - b. For products specified only by reference standards, list applicable reference standards.
 - c. Any substitutions should be requested prior to submittals.
 - 2. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
 - 3. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
 - 4. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - a. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.
- B. DO NOT USE products having any of the following characteristics:
 - 1. That has been made using or containing CFC's or HCFC's.
- C. Where all other criteria are met, Contractor shall give preference to products that:
 - 1. If used on the interior, have lower emissions, as defined in Section 01 6116.
 - 2. If wet-applied, have lower VOC content, as defined in Section 01 6116.
 - 3. Have a published GreenScreen Chemical Hazard Analysis.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions prior to Bid: Submit a request for substitution for any manufacturer not named.

2.03 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver and place in location as directed; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- C. A request for substitution prior to Bid Date constitutes a representation that the submitter:
 - 1. Has investigated the proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner/District.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
- D. Substitution prior to Bid Date Submittal Procedure:

1. Submit 2 copies of the request for substitution for consideration.
Limit each request to one proposed substitution.
2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. The burden of proof is on proposer.
3. The Architect will notify Contractor in writing of the decision to accept or reject the request.

3.02 TRANSPORTATION AND HANDLING

- A. Package products for shipment in a manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of the packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed conveniently to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to the product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturer's warranty conditions if any.

Boiler and MUA Unit Replacement
Tsehootsoi Elementary School
Window Rock Unified School District #8

- H. Cover products subject to deterioration with an impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 6116
VOC CONTENT RESTRICTIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. The requirement for installer certification that they did not use any non-compliant products.

1.02 DEFINITIONS

- A. Interior of Building: Anywhere inside the exterior weather barrier.
- B. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.
- C. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including fire-stopping sealants and duct joint sealers.

1.03 REFERENCE STANDARDS

- A. CRI (GLP) - Green Label Plus Testing Program - Certified Products; Carpet and Rug Institute; Current Edition.
- B. Green Seal GS-36 - Commercial Adhesives; Green Seal, Inc.; 2011.
- C. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition; www.aqmd.gov.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: For each VOC-restricted product used in the project, submit evidence of compliance.
- C. Installer Certifications Regarding Prohibited Content: Require each installer of any type of product (not just the products for which VOC restrictions are specified) to certify that either 1) no adhesives, joint sealants, paints, coatings, or composite wood or agrifiber products have been used in the installation of his products, or 2) that such products used to comply with these requirements.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.01 FIELD QUALITY CONTROL

Boiler and MUA Unit Replacement
Tsehootsoi Elementary School
Window Rock Unified School District #8

- A. Owner reserves the right to reject non-compliant products, whether installed or not and require their removal and replacement with compliant products at no extra cost to Owner. Additional costs to restore indoor air quality due to the installation of non-compliant products will be borne by Contractor.

END OF SECTION

SECTION 01 7000
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances.
- C. Pre-installation meetings.
- D. Cutting and patching.
- E. Surveying for laying out the work.
- F. Cleaning and protection.
- G. Starting of systems and equipment.
- H. Demonstration and instruction of Owner personnel.
- I. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

1.02 REFERENCE STANDARDS

- A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.

1.04 QUALIFICATIONS

- A. For demolition work, employ a firm specializing in the type of work required.
 - 1. Minimum of 3 years of documented experience.

1.06 PROJECT CONDITIONS

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- B. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
 - 1. Provide dust-proof enclosures to prevent entry of dust generated outdoors.
 - 2. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner/District.
- C. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
 - 1. At All Times: Excessively noisy tools and operations will not be tolerated inside the building at any time of day; excessively noisy includes jackhammers.
 - 2. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.
 - 3. Indoors: Limit conduct of especially noisy interior work to the hours of 6 pm to 7 am. Coordinate all construction noise with WRUSD#8.
- D. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.07 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies and comply with their requirements.
- C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing 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.
- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of work of separate sections.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 PREPARATION

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

3.03 PREINSTALLATION MEETINGS

- A. When required in individual specification sections, convene a pre-installation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.

- D. Prepare agenda and preside at meeting:
 - 1. Review conditions of examination, preparation and installation procedures.
 - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

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

3.05 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.

3.06 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as shown.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
 - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000 as required to isolate adjacent tenant spaces.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
 - 1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
 - 2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.
- D. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
 - 2. Remove items indicated on drawings.
 - 3. Relocate items indicated on drawings.
 - 4. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 - 5. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, Telecommunications, and network): Remove, relocate, and extend existing systems to accommodate new construction.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
 - 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
 - b. Provide temporary connections as required to maintain existing systems in service.
 - 4. Verify that abandoned services serve only abandoned facilities.
 - 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of

supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.

- F. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
- G. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
 - 1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
- H. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- I. Refinish existing surfaces as indicated:
 - 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
 - 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- J. Clean existing systems and equipment.
- K. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- L. Do not begin new construction in alterations areas before demolition is complete.
- M. Comply with all other applicable requirements of this section.

3.07 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.
 - 4. Match work that has been cut to adjacent work.
 - 5. Repair areas adjacent to cuts to required condition.
 - 6. Repair new work damaged by subsequent work.
 - 7. Remove samples of installed work for testing when requested.
 - 8. Remove and replace defective and non-conforming work.

- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material *to full thickness of the penetrated element*.
- J. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 - 2. Match color, texture, and appearance.
 - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.08 PROGRESS CLEANING

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

3.09 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. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.10 SYSTEM STARTUP

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- C. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- D. Verify that wiring and support components for equipment are complete and tested.
- E. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- F. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.11 DEMONSTRATION AND INSTRUCTION

- A. Provide Demonstration and Training of equipment found in scope of work to ensure Owner understanding of systems operation and maintenance.

3.12 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.
- B. Testing, adjusting, and balancing HVAC systems: See HVAC drawings.

3.13 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
 - 1. Clean areas to be occupied by Owner prior to final completion before Owner occupancy.
- B. Use cleaning materials that are nonhazardous.
- C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

- E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- F. Clean filters of operating equipment.
- G. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, and drainage systems.
- H. Clean site; sweep paved areas, rake clean landscaped surfaces.
- I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.14 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing agencies or other authorities.
 - 1. Provide copies to Architect and Owner.
- B. Accompany Architect on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.
- C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.
- D. Submit written certification containing Contractor's Correction Punch List that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.
- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.
- F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner occupied areas.
- G. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
- H. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

END OF SECTION 01 7000

SECTION 01 7329

CUTTING AND PATCHING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cutting, fitting and patching, required to complete Work, and for:
 - 1. Making several parts fit together properly.
 - 2. Uncovering portions of Work to provide for installation of ill-timed Work.
 - 3. Removing and replacing defective and non-conforming Work.
 - 4. Removing samples of installed Work required for testing, as directed by Architect.
 - 5. Providing routine penetrations of non-structural surfaces for installation of piping and electrical conduit.

1.02 SUBMITTALS

- A. In advance of executing any cutting or alterations, submit written request to Architect requesting consent to proceed with cutting which affects:
 - 1. Work of Owner or other trades.
 - 2. Structural value or integrity of any element of Project.
 - 3. Integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
 - 4. Efficiency, operational life, maintenance or safety of operational elements.
 - 5. Visual qualities of sight-exposed elements.
- B. Include in the request:
 - 1. Identification of Project.
 - 2. Description of affected Work.
 - 3. The necessity for cutting, alteration or excavation.
 - 4. Effect of Work of Owner or other trades, or structural or weatherproof integrity of Project.
 - 5. Description of Proposed Work:
 - a. The scope of cutting, patching, alteration, or excavation.
 - b. Trades which will execute Work.
 - c. Products proposed to be used.
 - d. The extent of refinishing to be done.
 - 6. Alternatives to cutting and patching.
 - 7. Cost proposal, when applicable.
 - 8. Written permission of trades whose Work will be affected.
- C. Submit written notice to Architect designating time Work will be uncovered to provide for observation.

1.03 PAYMENT FOR COSTS

- A. Cost caused by ill-timed or defective Work or Work not conforming to Contract Documents, including costs for additional services of Architect and Engineer to be paid by Contractor.
- B. Cost of Work done on written instructions of Architect, other than defective or nonconforming Work, will be paid by Owner on approval of written Change Order. Provide written cost proposals prior to proceeding with cutting and patching proposed by

Architect.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Provide for replacement of Work removed. Comply with Contract Documents for the type of Work standards and Specification requirements for each specific product involved.

PART 3 EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions of Work, including elements subject to movement or damage during cutting and patching, and excavating and backfilling. After uncovering Work, inspect conditions affecting installation of new products and verify procedures with Architect.
- B. Report unsatisfactory or questionable conditions in writing to Architect/Engineer. Do not proceed with Work until further instructions are received.

3.02 PREPARATION

- A. Provide shoring, bracing and supports as required to maintain the structural integrity of Work.
- B. Provide devices and methods to protect other portions of Work from damage, including elements which may be exposed by cutting and patching Work. Maintain excavations free from water.

3.03 ERECTION, INSTALLATION AND APPLICATION

- A. Performance:
 - 1. Execute fitting and adjustment of products to provide finished installation to comply with and match specified tolerances and finishes.
 - 2. Execute cutting and demolition by methods which prevent damage to other Work to provide proper surfaces to receive installation of repairs and new Work.
- B. Employ original installer or fabricator to perform cutting and patching:
 - 1. Weather-exposed surfaces and moisture-resistant elements such as roofing, sheet metal, sealants, and waterproofing.
 - 2. Sight-exposed finished surfaces.
- C. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes as shown on Drawings and as specified.
- D. Fit Work airtight with pipes, sleeves, ducts, conduit and other penetrations through surfaces. Conform to fire code requirements for penetrations and maintain the integrity of fire walls and ceilings.
- E. Restore Work which has been cut or removed. Install new products to provide completed Work in accordance with requirements of Contract Documents and as required to match

surrounding areas and surfaces.

- F. Refinish entire surfaces as necessary to provide an even, matching finish as follows:
1. Painted Walls or Ceilings: To nearest intersection with another finish or corner.
 2. Where Applied Finishes Occur (i.e wallcovering, tile, wood paneling): To nearest intersection of finish without damage to the adjacent material. Where match of pattern, grain, texture, or similar finish cannot be made, refinish area to the intersection with other finish or corner.
 3. Manufactured or Shop Fabricated Materials: Replace entire affected surface or material.

END OF SECTION

SECTION 01 7800
CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project Record Documents.
- B. Operation and Maintenance Data.

1.02 RELATED REQUIREMENTS

- A. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Individual Product Sections: Specific requirements for operation and maintenance data.

1.03 SUBMITTALS

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

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Addenda.
 - 3. Change Orders and other modifications to the Contract.
- B. Ensure entries are complete and accurate, enabling future reference by Owner/District.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Record Drawings : Legibly mark each item to record actual construction including:
 - 1. Field changes of dimension and detail.
 - 2. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

END OF SECTION

SECTION 02 4119
SELECTIVE DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Demolition of portions of existing building and removal of materials from the site.
- B. Disconnecting and capping and removal of mechanical, plumbing and electrical components.

1.02 RELATED SECTIONS

- A. Section 01 50 00 – Construction Facilities and Temporary Controls
- B. Section 01 70 00 – Contract Closeout (project record documents)

1.03 SUBMITTALS

- A. Submit under provisions of Section 01 30 00.

1.04 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of Section 01 70 00.
- B. Accurately record actual locations of any capped or abandoned utility services.

1.05 QUALIFICATIONS

- A. Demolition Firm: Company specializing in performing the work of this section with minimum five (5) years documented experience.

1.06 REGULATORY REQUIREMENTS

- A. Conform to applicable codes for the demolition of structures, the safety of adjacent structures, dust control, runoff control, disposal and transportation of demolition materials to approved landfills.
- B. Do not close or obstruct roadways, sidewalks, malls or fire lanes without approval from the Owner.
- C. Conform to applicable regulatory procedures when discovering hazardous or contaminated materials.

1.07 SEQUENCING

- A. No specific sequence of demolition is required, the contractor may schedule activities in accordance with the best interest of the project

PART 2 PRODUCTS -- Not Used.

PART 3 EXECUTION

3.01 PREPARATION

- A. Provide, erect and maintain temporary barriers and security devices, as required for the safety of the public and the security of the construction.
- B. Prevent movement or settlement of the structures. Provide bracing and shoring as required.

3.02 DEMOLITION REQUIREMENTS

- A. Cease operations immediately if structure appears to be in danger. Notify Architect/Engineer. Do not resume operations until directed.
- B. Conduct operations with minimum interference to public or private accesses. Maintain protected egress and access at all times.
- C. Eliminate dust allowing none into the existing facilities. Install dust barriers as required to keep dust out of corridors and all adjacent areas. Use walk-off mats designed to remove dust at the corridor side of doors to rooms where demolition work is being done.
 - 1. Activities which generate silica dust, such as a concrete saw cutting, jackhammering, chipping, or abrasive blasting shall incorporate engineering controls to eliminate visible emissions.
 - 2. Do not use silica sand or other substances containing more than 1 percent crystalline silica as abrasive blasting material.
 - 3. Use concrete and masonry saws that provide water to the blade.
 - 4. Prevent human exposure to dust using methods such as removing dust with water, high-efficiency particulate air (HEPA) filters, and wet sweeping. Do not use compressed air or dry sweeping.

3.03 DEMOLITION

- A. Dismantling of Equipment: Dismantle equipment into components small enough to be carried away and transport those components to an approved landfill area off Owner's property.
- B. Utility services shall be disconnected at points indicated. Where such disconnection will interrupt utility services to an area not included in the contract, arrangement for such interruption shall be made with Owner and Architect at least 72 hours in advance of interruption.
- C. Demolition of existing metal studs and gypsum board.
- D. Demolish and remove existing mechanical and plumbing components including building air handler.

- E. Demolish and remove existing electrical and lighting components.

3.04 ASBESTOS PRECAUTIONS

- A. If, however, any suspected asbestos-bearing materials are encountered by the Contractor, he shall contact the Owner for verification, which will have it tested and if positive, will have it removed under a separate contract.

3.05 GENERAL INFORMATION

- A. All items not indicated as salvage or removed by Owner will become the property of the Contractor for his demolition and/or disposal.
- B. Contractor shall, with Owner's representative, review the building prior to demolition to ascertain that all items of value and which are to be turned over to Owner have been removed and properly stored and accounted for prior to building demolition.
- C. Contractor shall not allow persons other than those in his direct employ to remove and/or demolish any portions of the existing college facilities.
- D. Contractor shall not solicit or sell materials from or on the premises.
- E. Items to be protected by Contractor:
 - 1. Existing building equipment, furnishings, finishes and all components which are to remain.

3.06 DISPOSITION OF MATERIALS

- A. The Owner shall remove all materials which he wishes to salvage from the existing building, prior to the Contractor's demolition operations. All material remaining within or attached to these buildings become the property of the Contractor and shall be removed from the site.

3.07 CLEAN UP

- A. Debris and Rubbish: Remove debris and rubbish from the site daily. Do not allow to accumulate in building or on site. Remove debris from excavations.
- B. Debris Control: Remove and transport debris in a manner as to prevent spillage on streets or adjacent areas.
- C. Transport of demolition materials, scrap and miscellaneous debris from demolition work on a daily basis to an approved sanitary landfill.

END OF SECTION