DIVISION 1 - GENERAL REQUIREMENTS

Section 01010 - Summary of Work

I. GENERAL

A. STIPULATIONS

The section "Special Requirements" forms a part of this section by this reference thereto and shall have the same force and affect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SCOPE OF WORK

1. Work included under this project at Shippensburg University (SU), Shippensburg Township, Cumberland County, Pennsylvania consists of sitework, interior and exterior renovations, and new additions to the Martin House and Garage. Work shall include, but is not necessarily limited to, the furnishing of all labor, superintendence, materials, tools and equipment and performing all work necessary to complete all construction to the satisfaction of, and subject to approval of the Professional and the State System of Higher Education.

2. All construction work shown on the contract drawings and not expressly mentioned in the specifications and all work specified and not shown on the drawing but obviously necessary to the proper execution of same shall be performed by the Contractor, as it is not the intent to delineate or describe every detail and feature of work. No additions to the Contract Sum will be approved for any materials, equipment and/or labor to perform work hereunder unless it can be clearly shown to be beyond the scope and intent of the drawings and specifications and absolutely essential to the proper execution of the work.

D. DESCRIPTION OF WORK

1. General Construction (Contract SU-2010/6B.1): The work to be performed under these specifications and the accompanying drawings comprises the furnishing of all labor, materials, tools, and other services and facilities necessary to perform the work, including, but not necessarily limited to:

(1) Selective demolition of portions of the House and Garage structures.
(2) Site work including driveway work, new terrace, drainage and utility work
(3) New Additions.
(4) Excavation, concrete, masonry and stone foundations.
(5) Wood framing, corrective floor work at the Third Floor, windows, doors, siding and roofing work.
(6) Interior alterations and new finishes.
(7) Overall coordinating of all trades and work.

2. HVAC Construction (Contract SU-2010/6B.2): The work to be performed under these specifications and the accompanying drawings comprises the furnishing of all labor, materials, tools, and other services and facilities necessary to perform the work, including, but not necessarily limited to:

(1) Alterations to the existing HVAC systems and controls and installation of new HVAC systems.

(2) Alterations for new controls.

3. Plumbing Construction (Contract SU-2010/6B.3): The work to be performed under these specifications and the accompanying drawings comprises the furnishing of all labor, materials, tools, and other services and facilities necessary to perform the work, including, but not necessarily limited to:

(1) Alterations to the existing Plumbing systems and installation of new Plumbing systems.
(2) Alterations to existing bathrooms.
(3) Installation of new bathrooms.

4. Electrical Construction (Contract SU-2010/6B.4): The work to be performed under these specifications and the accompanying drawings comprises the furnishing of all labor, materials, tools, and other services and facilities necessary to perform the work, including, but not necessarily limited to:

(1) Alterations to the existing Electrical systems and controls and installation of new Electrical systems.
(2) Work in connection with the electrical service to the House.
(3) Installation of miscellaneous new interior and exterior lighting fixtures/systems.

E. WORK SCHEDULE AND COORDINATION

1. Martin House and Garage will not be occupied by faculty, staff and students during the course of this Project.

2. Upon university issue of Notice to Proceed, approval of submittals, and conduct of initial job conference, contractors may start on-site work.

3. The General Contractor shall coordinate all work on the project with all trades, and/or with separate Contractors so as to assure the proper prosecution of the work.

4. The Contractor shall submit for approval of the Shippensburg University Associate Vice President for Facilities prior to start of any on-site work the plan and schedule for accomplishing the work. The Contractor shall request approval of short term HVAC system shut-downs (less than one day) for specific work elements to the Associate Vice President for Facilities no later than two (2) days before such shut-down. Power outages that involve portions of the buildings may have to be scheduled for off-hours or weekends.

5. Normal hours of work are from 7:00 a.m. through 4:30 p.m.

F. UNIVERSITY OCCUPANCY AND RELATED SCHEDULING

1. The Martin House and Garage will not be occupied during the work. The Contractor shall be responsible to protect from damage or loss any finishes, surfaces, components, furnishings and equipment remaining in the facility.

G. CONTRACTOR USE OF PREMISES

1. The Contractor shall limit his use of the premises to the work indicated, so as to allow for Owner occupancy and use by others.

2. Confine operations at the site to the areas permitted under the Contract, Ordinances, Permits, and Laws.

3. Portions of the site beyond areas on which work is indicated are not to be disturbed.

4. Keep existing driveways and entrances serving the premises clear and available to the Owner and his employees at all times.

5. Maintain existing building in a safe and weather-tight condition throughout the Contract period.

6. Take all precautions necessary to protect the building and its occupants during the contract period. Repair damage caused by construction operations.

7. Keep public areas, such as hallways, stairs, elevator, lobbies, and toilet rooms free from accumulation of waste, rubbish or construction debris.

8. Smoking or open fires will not be permitted within the building enclosure or on the premises.

9. Use of toilets within the buildings by the Contractor and his personnel will not be permitted. Contractor shall provide and maintain temporary toilet facilities for use of all Project employees. Temporary toilet facilities shall comply with regulations of authorities having jurisdiction and directives of the University.

10. Cooperate with those in authority on the premises to prevent the entrance and exit of all workers and/or others whose presence is forbidden or undesirable and in bringing, storing or removing all materials and equipment (observe all rules and regulations in force on the grounds), to avoid unnecessary dust or accumulated debris or the undue interference with the convenience, sanitation or routine of SU and to prevent the loss of or damage to the property of SU and its occupants. The Contractor shall repair any and all damage he/she may cause to the building or property to the full satisfaction of Shippensburg University.

11. Do not load structure with weight that will endanger structure.

12. Do not unreasonably encumber site with materials and equipment.

13. Confine stockpiling of materials and location of storage sheds to the areas directed by Owner/Engineer and or found on drawings.

14. Assume full responsibility for protection and safekeeping of products stored on premises.

15. Move any stored products which interfere with operations of owner or other contractor, as directed and at no additional cost to the university.

16. Obtain and pay for use of additional storage or work areas needed for operations.

17. Special Conditions:

    a. All Projects - Suspension From:

        (1) Metal roof decks, new or existing, shall not be used for suspension of ductwork, conduit, ceiling systems, lighting fixtures or any other miscellaneous equipment.

(2) These components shall be suspended from the structural members or a suspension system supported by the structural members. All concentrated loads must be approved by the professional. If concentrated loads are not approved, the Prime Contractor furnishing the equipment must provide acceptable means of distributing the load.

b. Project with Demolition Work: Demolition work shall be defined as work involving removal of structural members, floor and roof decks, non-structural partitions, pipes, ductwork, and equipment.

H. USE OF EXISTING FACILITIES

1. Activities will be maintained by the University in this facility during the course of this contract. Difficulties of working in the vicinity of existing operational buildings are recognized; however, the Contractor must cooperate to keep noise, dirt, and other interference to a minimum. Housekeeping shall be such to assure no disruption of the University's normal operations. The Contractor shall schedule work well in advance and give notice to the Associate Vice President for Facilities of any disruption.

2. Existing facility must be maintained weather-tight and dust free at all times. The Contractors shall make all necessary provisions to this end and shall be responsible for any damage resulting from noncompliance with this requirement.

I. UNIVERSITY FURNISHED ITEMS

The University will furnish an escort if required when the Contractor reports to perform services. Normally, the Contractor will not be provided keys. If provided keys, the Contractor will return keys to Shippensburg University after conclusion of each visit. The Contractor will not remove keys from the premises.

J. SITE VISIT

All bidders, before submitting proposals, should visit the site to thoroughly familiarize themselves with the existing conditions. This visit can be conducted in conjunction with the Pre-Bid Conference which will be held at date, time, and location stated in the Notice to Contractors. Upon finding any discrepancies between existing conditions and these specifications, prospective bidders shall report these discrepancies for clarification to the authorized Shippensburg University point of contact prior to submitting bid. Failure of the bidder to visit the site and recognize, take into account and include in his/her bid, site conditions not indicated in these specifications that affect the work, shall not be considered cause for increase in the bid price.

K. SPECIAL PROVISIONS AND ADDITIONAL DATA

Shippensburg University is one of 14 universities of the Pennsylvania State System of Higher Education. The University requires coordination to minimize disruption and to ensure the safety of participants. Accordingly, certain special provisions and additional data apply with respect to this contract:

1. Initial Job Conference: No later than ten (10) calendar days after Notice to Proceed, the Contractor shall arrange with the University's Associate Vice President for Facilities to schedule an initial job conference. The Contractor will attend this campus meeting prepared to announce and introduce, in writing, by name and title, the job supervisor who will be in active charge of the work and with whom the University is empowered to deal in any day-to-day coordination of the work. It is expected that this supervisor, or his/her duly appointed successor, will be on campus

at any time while work on the Contract is in progress, including the work of subcontractors. No work will occur prior to this conference; this conference will mark the beginning of work. The Contractor shall notify the Associate Vice President for Facilities if there is a change in job supervisor.

2. Submittals:

   a. The following submittals are required no later than seven (7) calendar days from Notice to Proceed:

      (1) Construction schedule.
      (2) Schedule of Values or contract cost breakdown as required in Section 01027, Applications for Payment.
      (3) List of Sub-Contractors complete with names, addresses, phone numbers and scope and date of subcontracts.
      (4) Submittal schedule listing each submittal in chronological order and including the following information for each submittal: Submittal category, related section number, description, name of (sub)-Contractor, date schedule for submittal, date required for approval to prevent delay of schedule.

   b. Administrative Forms: Use of System forms may be waived if the Contractor can demonstrate to the satisfaction of the Contracting Officer that Contractors establish computerized business management information system generates documents containing the same essential data elements as required by System forms.

3. Parking: All parking of Contractor's vehicles and equipment will be within the areas established at the initial pre-construction conference. No privately-owned vehicles (vehicles not obviously marked with the Contractor's corporate logo) will be brought to the campus unless properly registered with the University Police Department.

4. Traffic, Office and Storage: The Contractor will make suitable prior arrangements with the University Police Department for the delivery of large equipment or materials in large vehicles to the job site. The intent is to avoid such deliveries at time of peak commuter traffic to the University. Location of a storage trailer(s) and/or office trailer at the job site will be done with prior agreement in the initial pre-construction conference. The Contractor may provide and maintain, at own expense, a suitable office on the premises along with storage facilities for tools and such materials which might be damaged by the weather. Mobile office and storage facilities may be used. The Contractor will not be permitted to use office space within any building of the University nor to use University space as temporary storage. The Contractor may use Shippensburg University as the delivery site as long as the Contractor provides and identifies a responsible individual to accept delivery and provides labor and equipment to unload the delivery trucks to store the materials at the work site.

5. Telephone Connections: The Contractor will not be required to establish a job site telephone but may make arrangements with the University Communication Center Manager if they so choose. Such service will be at the Contractor's sole cost. It is specifically stated that the Contractor will not request message service from the Associate Vice President for Facilities or any other office of the University in the absence of his/her communications facility. It remains the Contractor's sole responsibility to administer this Contract from his/her home office.

6. Safety: The University will provide traffic barriers and pylons to secure space for Contractor activity as agreed in the pre-construction conference. It will also assist the Contractor in policing violators of the barrier system. However, it shall be the

Contractor's sole responsibility to protect the lives and property of others from injury from his activity and to cease operations when continued work could impact on the safety of others. Such instances shall be reported to the Director of Public Safety for appropriate follow-up action.

7. Working Hours: Normal working hours for this Contract will be 7:00 AM to 4:30 PM. Any change in these hours and any work to be performed on Saturday, Sunday, or holidays shall have prior written approval from the Associate Vice President for Facilities and may be approved subject to no disruption of university schedule, and subsequently approved by the university, they shall be performed at no additional cost to the university. At no time will a work item begin or work that has not been inspected be covered outside of normal working hours. The Associate Vice President for Facilities will be advised when work will extend outside of normal working hours.

8. Workmanship and Conduct: All work shall be done in a workmanlike manner by skilled technicians using the commonly accepted best practices of the trade. The Contractor shall remain responsible for inspection and correction of any poor workmanship or work not in compliance with the Contract. Work shall be scheduled to minimize interference with the normal operation of the University. The Contractor is responsible for behavior of employees and will immediately remove from the site any employee engaging in racial or sexual harassment, whether by word or deed.

9. Hoists, Ladders and Scaffolding: The Contractor is referred to and agrees to comply with the terms, regulations, and conditions contained in the latest edition of the Department of Labor and Industry Regulations for Construction and Repairs. The Contractor shall erect, maintain, and operate at his/her own expense scaffolding and hoisting facilities and equipment for his/her own use. The operator of all equipment shall be properly licensed for equipment in use and shall be fully experienced in the safe operation of the equipment in use. The Contractor shall supply and assemble, erect, maintain and operate at his/her own expense, scaffolding and hoisting facilities and equipment for his/her own use. The Contractor shall supply and assemble, erect and move into proper location, all derricks, hoists, lifting apparatus and similar equipment necessary for the execution and installation of his work at his/her own expense and cost. There are no existing internal or external roof access hatches, ladders, etc. The Contractor shall erect a personnel elevator or ladders for access to the roof external to the building.

10. Damage: Regardless of the proximate cause, in the event of any damage occurring to University or private property by any Contractor activity during the life of the contract, the Contractor shall promptly advise the Associate Vice President for Facilities, and participate in a joint assessment of the damage with University personnel. It is essential that the Contractor take all actions necessary to avoid delayed claims by third parties.

11. Clean Up: At the end of each day, the Contractor shall clean the immediate environment of scraps, packaging containers, and other trash and have same removed from campus. This includes waste and packaging that has blown outside of the construction area. At the end of the Contract, all staging, fencing, scaffolding, containers, packaging and other debris shall be removed from the premises and the entire area around the buildings left in a "broom swept" condition. In the event grassed areas are damaged and/or rutted or shrubbery damaged by Contractor activity, such as by storage of materials or vehicular movements, the Contractor shall expeditiously have the appropriate repairs to the lawns made at his/her expense, including any necessary seeding.

12. Verification of Measurements: Before ordering any materials or doing any work, verify all measurements at the site. No extra compensation will be allowed because of differences between actual measurements and dimensions shown. Refer such differences between actual measurements and dimensions to the Professional for consideration before beginning work.

13. Inspection of Construction:

    a. Definition: "WORK" includes, but is not limited to, materials, workmanship, and manufacturer and fabrication of components.

    b. The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the Contract conforms to Contract requirements. The Contractor shall maintain complete inspection records and make them available to Shippensburg University.

    c. Shippensburg University inspections/tests are for the sole benefit of Shippensburg University and do not:

        (1) Relieve the Contractor of responsibility for providing adequate quality control measures;
        (2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;
        (3) Constitute or imply acceptance;
        (4) Affect the continuing rights of Shippensburg University after acceptance of the completed work.

    d. The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without Shippensburg University's written authorization.

14. Site Fence: For exterior work, the contractor will be required to erect a site fence and a material storage area fence for security and safety of passersby. The site fence and storage area fence will be a standard 6'-0" high chain-link fence on 1½" o.d. galvanized pipe post. Contractor shall provide appropriate sized gates for pedestrian and vehicle access. The contractor shall provide fencing at his expense. The University police shall provide normal police surveillance of the Contractor's area. However, the University accepts no responsibility for pilferage, loss or damage to the Contractor's property.

15. First Right of Refusal: The university will be given the first right of refusal on all removed equipment. Existing removed useful pieces of equipment and materials shall be tagged by the university, shall remain the property of the university and shall be stored at the site where directed by the university. Equipment shall be stored as complete units with all associated accessories and auxiliary equipment. Equipment shall be disconnected and carefully removed under this contract and shall be transported to the storage areas as directed. Equipment shall be stored in a neat and workmanlike manner, tagged and identified for future use.

16. Each Contractor shall be responsible for PA Department of Labor and Industry inspection requirements, including but not limited to, notification, acting as the university’s authorized agent, coordination and obtaining approvals.

17. Storage and Dispensing of Fuel and Lubricants

a. Fuel and Lubricants. Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall not be stored on site. Storage of fuel on the project site shall be accordance with all Federal, State, and local laws and regulations.

b. Oily and Hazardous Substances. Prevent oil or hazardous substances from entering the ground, drainage areas, or navigable waters. In accordance with 40 CFR 112, surround all temporary fuel oil or petroleum storage tanks with a temporary berm or containment of sufficient size and strength to contain the contents of the tanks, plus 10 percent freeboard for precipitation. The berm will be impervious to oil for 72 hours and be constructed so that any discharge will not permeate, drain, infiltrate, or otherwise escape before cleanup occurs.

c. Petroleum Products. Conduct the fueling and lubricating of equipment and motor vehicles in a manner that protects against spills and evaporation. All used oil generated on site will be managed in accordance with 40 CFR 279. The Contractor will determine if any used oil generated while on-site exhibits a characteristic of hazardous waste. In addition, used oil containing 1000 parts per million of solvents will be considered a hazardous waste and disposed of at Contractor's expense. Used oil mixed with a hazardous waste will also be considered a hazardous waste. All hazardous waste will be managed in accordance with the approved Environmental Protection Plan.

d. Spill Control Plan. The Spill Control Plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations. This plan shall include as a minimum:

(1) The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Facility Fire Department, Facility Response Personnel, Facility Environmental Office in addition to the legally required Federal, State, and local reporting channels if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.
(2) The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.
(3) Training requirements for Contractor's personnel and methods of accomplishing the training.
(4) A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.
(5) The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.
(6) The methods and procedures to be used for expeditious contaminant cleanup.

e. Spill and Discharge Control. Written spill and discharge containment/control procedures shall be developed and implemented. These procedures shall address radioactive wastes, shock sensitive wastes, laboratory waste packs,

material handling equipment, as well as drum and container handling, opening, sampling, shipping and transport. These procedures shall describe prevention measures, such as building berms or dikes; spill control measures and material to be used (e.g. booms, vermiculite); location of the spill control material; personal protective equipment required to cleanup spills; disposal of contaminated material; and who is responsible to report the spill. Storage of contaminated material or hazardous materials shall be appropriately bermed, diked and/or contained to prevent any spillage of material on uncontaminated soil. If the spill or discharge is reportable, and/or human health or the environment are threatened, the University shall be notified as soon as possible.

18. Points of Contact:

a. Submittal of Bids:

Ms. Deborah Martin, Director of Purchasing and Contracting
Shippensburg University
Old Main Building, Room 300
1871 Old Main Drive
Shippensburg, PA 17257-2299
Phone: 717-477-1121 FAX: 717-477-4004

b. Technical Matters:

Mr. Lance Bryson, PE, Associate VP for Facilities
Shippensburg University
Reed Operations Center
1871 Old Main Drive
Shippensburg, PA 17257-2299
Phone: 717-477-1451 FAX: 717-477-4032

II. PRODUCTS

A. APPROVALS: Included in this section of the specifications is a list of approvals required by the University of all materials to be incorporated into the project. The University reserves the right to require additional approvals if necessary. No material, equipment, or supplies listed herein shall be incorporated into the work until the Contractor shall signify approval of submittal by stamping, initialing, and dating each piece of data submitted for University approval. The Contractor's failure to comply will result in return of the data for resubmission.

B. APPROVAL LIST: CONTRACTOR

DESCRIPTION OF ITEMS TO BE SUBMITTED	Source of Supply	Product Data	Shop Dwgs.	Samples	Certificate	Other (see Section)
Standard Doors and Frames	X	X	X		X	
Door Hardware	X	X	X		X	X
Windows	X	X	X		X	
Gypsum Board Assemblies	X	X				
Flooring	X	X			X	
Paints and Coatings	X	X				
Toilet Accessories	X	X				
Domestic Water Piping		X				
Sanitary Waste and Vent Piping		X				
Plumbing Fixtures	X	X				
HVAC Equipment	X	X	X		X	
Fans	X	X			X	
Conduit		X				
Building Wire and Cable		X				
Wiring Devices	X	X				
Interior Luminaries	X	X			X	

End of Section

SECTION 01023

ALTERNATES

PART 1 - GENERAL

1.01 DESCRIPTION

A Bid Alternate is a separately-priced optional scope of work that appears on the Bid Form and may or may not be included in the Contract when the Contract is awarded.

1.02 PROCEDURES

A. This section identifies each Bid Alternate by number, and describes the basic scope of work for that Bid Alternate. Portions of the Specifications stipulate pertinent requirements for products and methods for the work under each Bid Alternate.

B. The bid price for each Bid Alternate shall be inclusive of all costs, to include for labor, material, equipment, supervision, overhead, profit, and bond, in connection with the work described for that Bid Alternate.

C. Prices for Bid Alternate(s) may be added to the Base Bid to arrive at a total Contract Sum and may be used in determining the ranking of the bids from lowest to highest amounts.

D. Bid Alternates shall be independent of each other, unless otherwise specified.

E. The System may accept any or all of the Bid Alternates in any combination with the Base Bid. The System reserves the right to accept or reject any or all Bid Alternates.

F. Bid Alternates may be awarded as a part of the Contract only at the time that the Contract is awarded. After award of the Contract, work representing those scopes of work in Bid Alternates may added by change order only.

G. All work under Bid Alternates shall conform to the Contract Documents. The Contractor Also shall coordinate pertinent related work and modify surrounding work as required to properly integrate the work of any awarded Bid Alternate, and to provide the complete construction required by the Contract.

1.03 BID ALTERNATES FOR THIS CONTRACT

General Contractors:

<u>BID ADD ALTERNATE NO. 1: Garage Doors</u>
The amount to be added to the Base Bid amount to remove the existing three (3) garage doors and install two (2) new garage doors (1 single car and 1 double car) with electric garage door openers, including re-working of the existing brick wall/creation of the new wider, arched opening. (Base Bid amount to include the replacement of the three (3) single doors with new doors including new electric openers).

BID ADD ALTERNATE NO. 2: Third Floor Guest Bedroom and Bathroom
The amount to be added to the Base Bid amount to carry out all general construction work in connection with the renovations at the Third Floor Guest Bedroom 305 and Guest Bathroom 306.

BID DEDUCT ALTERNATE NO. 3: Interior Painting
The amount to be deducted from the Base Bid associated with wall and trim, priming, and painting of all walls, trim, windows, and all other miscellaneous currently painted items. (This painting work would be carried out by the Owner and coordinated by the General Contractor if this Alternate is accepted). Preparation, priming, and painting of all ceilings is to be included in the Base Bid amount.

HVAC Construction:

BID ADD ALTERNATE NO. 1: Third Floor Guest Bedroom and Bathroom
The amount to be added to the Base Bid amount to carry out all HVAC work in connection with the renovations at the Third Floor Guest Bedroom 305 and Guest Bathroom 306.

Plumbing Construction:

BID ADD ALTERNATE NO. 1: Third Floor Guest Bedroom and Bathroom
The amount to be added to the Base Bid amount to carry out all Plumbing work in connection with the renovations at the Third Floor Guest Bedroom 305 and Guest Bathroom 306.

Electrical Construction:

BID ADD ALTERNATE NO. 1: Third Floor Guest Bedroom and Bathroom
The amount to be added to the Base Bid amount to carry out all Electrical work in connection with the renovations at the Third Floor Guest Bedroom 305 and Guest Bathroom 306.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION 01 23 00

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01027 - APPLICATIONS FOR PAYMENT

I. GENERAL

A. STIPULATIONS

The section "Special Requirements" forms a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

This Section specifies administrative and procedural requirements governing each Prime Contractor's applications for payment.

1. Coordinate the Schedule of Values and Applications for Payment with the Contractor's Construction Schedule and List of Subcontracts.

2. The Contractor shall submit the required form in accordance with the applicable administrative procedures to be issued by the System at the pre-construction conference.

D. SCHEDULE OF VALUES

1. Each Prime Contractor shall coordinate preparation of its Schedule of Values for its part of the work with preparation of the Contractor's Construction Schedule.
   a. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
      (1) Contractor's Construction Schedule
      (2) Application for Payment Form
      (3) List of Subcontractors, Principal Suppliers, and Fabricators: Identify as MBE\WBE subcontractors any subcontractors or suppliers that were used on the bid proposal form to meet the REAA Dollar amount
      (4) Schedule of Allowances
      (5) List of Products
      (6) Schedule of Submittals

   b. Submit the Schedule of Values to the Professional at the earliest feasible date, but in no case later than 7 days before the date schedule for submittal of the initial Application for Payment. The Contractor shall use the Schedule of Values form for the purpose of providing a project cost breakdown. Once approved by the System Project Manager, it shall be used as the Schedule of Values for the Application for Payment.

   c. <u>Mobilization</u>
      (1) The contractor may include 1.5% of the contract award as itemized costs not-to-exceed $90,000 for mobilization costs for contracts up to $6,000,000. On contracts exceeding $6,000,000 mobilization costs in excess of $90,000 will be determined by negotiation with the System before submission of the cost breakdown. The contractor will be required to submit specific items and costs for evaluation by the System. The System's decision will be final.

(2) Mobilization costs applicable to this project shall be listed on the Schedule of Values form, as follows:

Contractor's Field Office
Inspector's Field Office (unless otherwise specified)
Heating, Lighting, & Telephone Installation for the Offices
Bonds
Installation of Signs
Site Survey
Building Permits
Fence, If Required
Sidewalk shelter, where required
Safety and First Aid Equipment
Temporary Power Set-Up, Power Distribution, Water

2. Format and Content: Use the Project Manual Table of Contents as a guide to establish the items for the Schedule of Values. Use the format in this Section.

a. Arrange the Schedule of Values in a tabular form, as shown on the Schedule of Values, with separate columns to indicate the following for each item listed.

(1) Generic Name
(2) Related Specification Section
(3) Name of Subcontractor, Name of Manufacturer or Fabricator Supplier
(4) Change Orders (numbers) that have affected Value
(5) Dollar Value
(6) Percentage of Contract Sum to the nearest one-hundredth percent, adjusted to total 100 percent.

b. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and Progress Reports. Break principal subcontract amounts down into several line items.

c. Round amounts off to the nearest whole dollar; the total shall equal the Contract Sum.

d. Margins of Cost: Show line items for indirect costs, and margins on actual costs, only to the extent that such items will be listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete including its total cost and proportionate share of general overhead and profit margin.

At the Contractor's option, temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown as separate line items in the Schedule of Values or distributed as general overhead expense.

e. Update and resubmit the Schedule of Values when Change Orders or Construction Change Directives result in a change in the Contract Sum.

E. APPLICATIONS FOR PAYMENT

1. Each Application for Payment shall be consistent with previous applications and payments as certified by the Professional and paid for by the Owner. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the Final Application for Payment involve additional requirements, as outlined herein.

2. Payment Application Times: Each progress payment date is as indicated in the Pre-Construction meeting. The period of construction work covered by each application or payment is the period indicated in the Agreement.

3. Payment Application Forms: The Application and Certificate for Payment form, AIA Document G702 and G703 will be used.

4. Application Preparation: For every application, complete every entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Contractor. Incomplete applications will be returned without action.
   a. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.

   b. Include amounts of fully executed Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.

   c. Prevailing Wage Act Certifications: For each project in which prevailing wages are required, the contractor shall comply with all the requirements of the Prevailing Wage Act, including the submission of weekly wage reports to the System. No application for payment will be considered complete without the attachment of the certification of the wages paid by the contractor, for the time period of the application for payment.

5. Transmittal: Submit three (3) executed copies of each Application for Payment to the Professional by means ensuring receipt within 24 hours. Transmit each copy with a transmittal form listing attachments, and recording appropriate information related to the application in a manner acceptable to the Professional.

F. INITIAL APPLICATION FOR PAYMENT

Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include the following:

1. List of Subcontractors
2. List of Principal Suppliers, Fabricators
3. Schedule of Products
4. Approved Schedule of Values
5. Contractor's Construction Schedule (preliminary, if not final)
6. Schedule of Unit Prices
7. List of Contractor's Staff Assignments
8 Copies of Building Permits
9. Copies of Authorizations and Licenses from Governing Authorities for Performance of the Work (if required)

G. PAYMENT FOR STORED MATERIALS

The System will consider making payment on account for materials or equipment not incorporated in the work, but delivered and suitably stored at the site, or at some other location agreed upon. For materials or equipment that are delivered and suitably stored at the site, the method of payment is included in the application for payment process outlined in the General Requirements. If the contractor desires to receive payment for materials which have been delivered to the contractor, paid for and stored at the contractors place of business or some other storage site, then the following provisions must be followed:

1. There must be a determination by the System, in writing, that the materials and/or equipment are critical to the Project. This shall be accomplished using the System's Permission to Store Materials Form.

2. Payment shall be conditioned upon submission by the contractor of Bills-of-Sale Forms (provided by the System) to establish the System's title to such material and/or equipment which remain under the custody and control of the contractor regardless of the exclusions in the insurance policies as required under the System's Bill-of-Sale Form.

H. APPLICATION FOR PAYMENT AT SUBSTANTIAL COMPLETION

Requirements for substantial completion are found in Section 01700-Project Closeout. Following issuance of the Certificate of Substantial Completion, submit an Application for Payment for reduction in retainage. This application shall reflect any Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the work. Administrative actions and submittals that precede or coincide with this application include:

1. In the Application for Payment, show 100 percent completion for the portion of the Work claimed as substantially complete and accepted by the System as such.

2. For those items that are not 100 percent completion, provide a schedule to complete the incomplete work items and a cost estimate to complete each item, as identified on the professionals punch list of uncompleted work items attached to the certificate of substantial completion.

3. Submit evidence (revised Certificate of Insurance) of continuing insurance coverage for those uncompleted work items, complying with insurance requirements in the contract documents.

4. Consent of Surety for Reduction of Retainage (AIA form G707A)

5. Submit a final liquidated damages settlement statement (if applicable).

I. FINAL PAYMENT

Requirements for final completion are found in Section 01700-Project Closeout.
Following issuance of the Certificate of Final Completion, submit an Application for Final Payment. Administrative actions and submittals which must precede or coincide with submittal of the application for payment for final payment include the following:

1. Provide the Consent of Surety to Final Payment (AIA G707)
2. Proof That Taxes, Fees and Similar Obligations Have Been Paid

II. PRODUCTS (Not Applicable)

III. EXECUTION (Not Applicable)

SCHEDULE OF VALUES

_____UNIVERSITY

ARCHITECT NAME:	CONTRACTOR'S NAME:	PROJECT NUMBER:
ADDRESS:	ADDRESS:	DESCRIPTION:
APPROVED: Signature	TELEPHONE NO.	
DATE:	TYPE OF CONTRACT:	

ITEM NUMBER	ITEM DESCRIPTION	NUMBER AND KIND OF UNIT	COST PER UNIT	MATERIAL COST	LABOR AND OTHER COST	EXTENDED PRICE

I (we) hereby certify that the above is a true and correct breakdown including all materials, accessories, labor, insurance, etc., per contract requirements.

_____ _____ (Contractor)

Signature of Authorized Representative

Title _____ Date

DIVISION 1 - GENERAL REQUIREMENTS

Section 01035 - MODIFICATION PROCEDURES

I. GENERAL

A. STIPULATIONS

The "Special Requirements" and “General Conditions” to the contract form a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

1. This section specifies administrative and procedural requirements for handling and processing contract modifications.

2. Related Sections: The following sections contain requirements that relate to this section.

   a. Division 1, Section 01026 - "Unit Prices" for administrative requirements governing use of unit prices, if applicable.

   b. Division 1, Section 01027 - "Application for Payment" for administrative procedures governing applications for payment.

D. MINOR CHANGES IN THE WORK

Supplemental instructions authorizing minor changes in the work, not involving an adjustment to the contract sum or contract time, will be issued by the professional on the System's minor change order form.

E. CHANGE ORDER PROPOSAL REQUESTS

1. System-Initiated Proposal Requests: Proposed changes in the work that will require adjustment to the contract sum or contract time will be issued by the professional on the System constructor change order form, with a detailed description of the proposed change and supplemental or revised drawings and specifications, if necessary.

   a. Proposal requests issued by the professional are for information only. Do not consider them an instruction either to stop work in progress, or to execute the proposed change.

b. Unless otherwise indicated in the proposal request, within 20 days of receipt of the proposal request, submit to the professional for the System's review an estimate of cost necessary to execute the proposed change.

(1) Include a list of quantities of products to be purchased and unit costs, along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.

(2) Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

(3) Include a statement indicating the effect the proposed change in the work will have on the contract time.

2. Contractor-Initiated Change Order Proposal Requests: When latent or other unforeseen conditions require modifications to the contract, the contractor may propose changes by submitting a request for a change to the professional.

a. Include a statement outlining the 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 contract time.

b. Include a list of quantities of products to be purchased and unit costs along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.

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

3. Proposal Request Form: Use forms as provided by the System for change order proposal requests.

F. CONSTRUCTION CHANGE DIRECTIVE

1. Construction Change Directive: When the System and the contractor are not in total agreement on the terms of a change order proposal request, the System may issue a construction change directive, instructing the contractor to proceed with a change in the work, for subsequent inclusion in a change order.

a. The construction change directive will contain a complete description of the change in the work and designate the method to be followed to determine change in the contract sum or contract time.

b. All time cards or timesheets that will be used to record the contractor's employees that performed, and all delivery slips for materials and supplies necessary for the completion of the work, must be signed on a daily basis by a System representative. The signature by the System representative is only for the purpose of verifying the performance of, and not the approval or acceptance of, the work completed.

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

G. CHANGE ORDER PROCEDURES

Upon the System's professional approval of a change order proposal request, the professional will issue a change order for signatures of System and contractor on System-provided form, as provided in the conditions of the contract.

II. PRODUCTS (Not applicable)

III. EXECUTION (Not applicable)

DIVISION 1 - GENERAL REQUIREMENT

SECTION 01040 - PROJECT COORDINATION

I. GENERAL

A. STIPULATIONS

The "Special Requirements" and “General Conditions” to the contract form a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

1. This Section specifies administrative and supervisory requirements necessary for project coordination including, but not necessarily limited to:

   a. Coordination
   b. Administrative and supervisory personnel
   c. General installation provisions
   d. Cleaning and protection

2. Field Engineering is included in Section "Field Engineering."

3. Progress Meetings, coordination meeting and pre-installation conferences are included in Section "Project Meetings."

4. Requirements for the Contractor's Construction Schedule are included in Section "Submittals."

D. COORDINATION

1. Coordination: The General Contractor shall coordinate construction activities included under various sections of these specifications to assure 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.

   a. Where installation of one part of the work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.

b. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

c. Make adequate provisions to accommodate items scheduled for later installation.

d. The general contractor shall coordinate all work on the project with all trades, and/or with separate contractors so as to assure the proper prosecution of the work, additionally installing certain items that will be furnished by other contractors, which bear a direct relationship to the general construction. Such items of work shall include, but not be limited to, thru-wall louvers and grilles, flashings to floor drains, flashing to vent pipes, access panels and work of similar import.

e. The general contractor shall coordinate all testing on the project with each prime contractor. Reference Section 01400 - Quality Control Services.

2. Where necessary, the general contractor shall prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

   Prepare similar memoranda for the System and separate contractors where coordination of their work is required.

3. Administrative Procedures: The Lead Contractor shall coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the work. Such administrative activities include, but are not limited to, the following:

   a. Preparation of schedules
   b. Installation and removal of temporary facilities
   c. Delivery and processing of submittals
   d. Progress meetings
   e. Project Closeout activities

4. Conservation: All prime contractors shall coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. The Contractor(s) shall salvage materials and equipment involved in performance of, but not actually incorporated in, the work. Refer to other sections for disposition of salvaged materials that are designated as System's property.

E. SUBMITTALS

1. Coordination Drawings: Prepare and submit coordination drawings where close and careful coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components.

   a. Show the interrelationship of components shown on separate shop drawings.

   b. Indicate required installation sequences.

   c. Comply with requirements contained in Section "Submittals."

   d. Refer to Division-15 Section "Basic Mechanical Requirements," and Division-16 Section "Basic Electrical Requirements" for specific coordination drawing requirements for mechanical and electrical installations.

2. Staff Names: Within 15 days of notice to proceed, submit a list of the contractor's principal staff assignments, including the superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers.

   a. Post copies of the list in the project meeting room, the temporary field office, and each temporary telephone.

II. PRODUCTS (not applicable)

III. EXECUTION

A. GENERAL INSTALLATION PROVISIONS

1. Inspection of Conditions: Require the installer of each major component to inspect both the substrate and conditions under which work is performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

2. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in the contract documents.

3. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

4. Provide attachment and connection devices and methods necessary for securing work. Secure work true to line and level. Allow for expansion and building movement.

5. Visual Effects: Provide uniform joint widths in exposed work. Arrange joints in exposed work to obtain the best visual effect. Refer questionable choices to the Professional for final decision.

6. Recheck measurements and dimensions, before starting each installation.

7. Install each component during weather conditions and project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

8. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

9. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Professional for final decision.

B. CLEANING AND PROTECTION

1. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at substantial completion.

2. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

C. LIMITING EXPOSURES: Each prime Contractor shall supervise its construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to the following:

Excessively high or low temperatures
Thermal shock
Excessively high or low humidity
Water or ice
Heavy traffic
Soiling, staining and corrosion
Misalignment
Excessive weathering
Unprotected storage
Improper shipping or handling
Theft
Vandalism

DIVISION 1 - GENERAL REQUIREMENT

SECTION 01045 - CUTTING AND PATCHING

I. GENERAL

A. STIPULATIONS

The "Special Requirements" and “General Conditions” to the contract form a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

1. This section specifies administrative and procedural requirements for cutting and patching.

2. Refer to the drawings and other sections of these specifications for specific requirements and limitations applicable to cutting and patching individual parts of the work.

   Requirements of this section apply to HVAV and electrical installations. Refer to Division-15 and Division-16 sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

3. Demolition of selected portions of the building for alterations is included in Specification Section “Demolition".

D. SUBMITTALS

1. Cutting and Patching Proposal: 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:

   a. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.

   b. 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.

c. List products to be used and firms or entities that will perform work.

d. Indicate dates when cutting and patching is to be performed.

e. List utilities that will be distributed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.

f. 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.

g. Approval by the Professional to proceed with cutting and patching does not waive the Professional's right to later require complete removal and replacement of a part of the work found to be unsatisfactory.

E. QUALITY ASSURANCE

1. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.

Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:

(a) Foundation construction
(b) Bearing and retaining walls
(c) Structural concrete
(d) Structural steel
(e) Lintels
(f) Structural decking
(g) Stair systems
(h) Miscellaneous structural metals
(i) Exterior curtain wall construction
(j) Equipment supports
(k) Piping, ductwork, vessels and equipment
(l) Structural systems of special construction in Division-13

2. 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. Obtain approval of the cutting and patching proposal before cutting and patching the

following operating elements or safety related systems:

(a) Shoring, bracing, and sheeting
(b) Primary operational systems and equipment
(c) Air or smoke barriers
(d) Water, moisture, or vapor barriers
(e) Membranes and flashings
(f) Fire protection systems
(g) Noise and vibration control elements and systems
(h) Control systems
(i) Communication systems
(j) Conveying systems
(k) Electrical wiring systems
(l) Special construction specified by Division-13 sections

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

   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:

   (a) Processed concrete finishes
   (b) Ornamental metal
   (c) Matched-veneer woodwork
   (d) Window wall system
   (e) Stucco and ornamental plaster
   (f) Acoustical ceilings
   (g) Carpeting
   (h) HVAC enclosures, cabinets or covers

4. Cutting and patching, such as where piping and ducts are removed, or new ducts and piping are installed through existing construction for openings larger than 36 square inches or holes larger than 6 inches in diameter will be provided by the general contractor. Cutting and patching, and patching such as where piping and ducts are removed, or new ducts and piping are installed through existing construction for openings 36 square inches or smaller or holes 6 inches in diameter or smaller will be provided by the respective M/E trade. Cutting will also apply to the metal decking at the penthouse roof.

5. Where work is to be provided above existing removable ceiling not indicated for replacement, such ceilings will be removed, stored and replaced by the general contractor.

II. PRODUCTS

A. Materials

Use materials that are identical to existing materials. 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.

III. EXECUTION

A. Inspection

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. Preparation

1. Temporary Support: Provide temporary support of work to be cut.

2. 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.

3. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

4. Take all 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.

C. PERFORMANCE

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

   a. 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.

2. 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.

a. 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.

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

c. Cut through concrete and masonry using a cutting machine such as a carborundum saw or diamond core drill.

d. Comply with requirements of applicable sections of Division-2 where cutting and patching requires excavating and backfilling.

e. 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.

3. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

a. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.

b. 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.

c. 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.

(1) 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.

d. Patch, repair or rehang existing ceilings as necessary to provide an even plane surface of uniform appearance.

D. CLEANING

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.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01095 - REFERENCE STANDARDS AND DEFINITIONS

I. GENERAL

A. STIPULATIONS

The "Special Requirements" and General Conditions" to the contract form a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. DEFINITIONS

1. General: Basic Contract definitions are included in the General Provisions.

2. Indicated: The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, other paragraphs or schedules in the Specifications, and similar requirements in the Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help the reader locate the reference; no limitation on location is intended.

3. Directed: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Professional," "requested by the Professional," and similar phrases.

4. Approve: The term "approved," where used in conjunction with the Professional's action on the Contractor's submittals, applications, and requests, is limited to the Professional's duties and responsibilities as stated in General Provisions.

5. Regulation: The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

6. Furnish: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."

7. Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations."

8. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."

9. Installer: An "Installer" is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or sub-subcontractor, for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.

    a. The term "experienced" when used with the term "Installer" means having a minimum of 5 previous Projects similar in size and scope to this Project, being familiar with the precautions required, and having complied with requirements of the authority having jurisdiction.

    b. Trades: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.

    c. Assignment of Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in the operations to be performed. The specialists must be engaged for those activities, and assignments are requirements over which the Contractor has no choice or option. Nevertheless, the ultimate responsibility for fulfilling Contract requirements remains with the Contractor.

        (1) This requirement shall not be interpreted to conflict with enforcement of building codes and similar regulations governing the Work. It is also not intended to interfere with local trade union jurisdictional settlements and similar conventions.

10. Project Site is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land upon which the Project is to be built.

11. Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

D. INDUSTRY STANDARDS

1. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents. Such standards are made a part of the Contract Documents by reference.

2. Publication Dates: Where the date of issue of a referenced standard is not specified, comply with the standard in effect as of date of Contract Documents.

3. Conflicting Requirements: Where compliance with two or more standards is specified, and the standards establish different or conflicting requirements for minimum quantities or quality levels, refer requirements that are different, but apparently equal, and uncertainties to the Professional for a decision before proceeding.

   a. 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. In complying with these requirements, indicated numeric values are minimum or maximum, as appropriate for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.

4. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.

   a. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.

   b. Although copies of standards needed for enforcement of requirements may be included as part of required submittals, the Professional reserves the right to require the Contractor to submit additional copies as necessary for enforcement of requirements.

5. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

E. GOVERNING REGULATIONS/AUTHORITIES

1. The Professional has contacted authorities having jurisdiction where necessary to obtain information necessary for preparation of Contract Documents; that information may or may not be of significance to the Contractor. Contact authorities having jurisdiction directly for information and decisions having a bearing on the Work.

2. State and Federal Laws: All contractors shall comply with all state and federal laws; these laws include but are not limited to the following:

STATE LAWS

I. Purdon's Statutes - Title 3 (Agriculture)

PA Fertilizer Law of 1956, Act of May 29, 1956 (P.L. (1955) 1795, No. _____), as amended, 3 P.S. 68.1 et seq.

PA Pesticide Control Act of 1973, Act of March 1, 1974 (P.L. 90, No. 24), as amended, 3 P.S. 111.21 et seq.

Agricultural Liming Materials Act, Act of March 17, 1978 (P.L. 15, No. 9), as amended, 3 P.S. 132-1 et seq.

The PA Plant Pest Act of 1937, Act of April 21, 1937 (P.L. 318, No. ____), as amended, 3 P.S. 214-1 et seq.

Noxious Weed Control Law, Act of April 7, 1982 (P.L. 228, No. 74), as amended, 3 P.S. 255.1 et seq.

Soil Conservation Law, Act of May 15, 1945 (P.L. 547, No. ____), as amended, 3 P.S. 849 et seq.

(Relating to weather modification), Act of January 19, 1968 (P.L. (1965) 1292, No.___), as amended, 3 P.S. 1101 et seq.

II. Purdon's Statutes - Title 16 (Counties)

(Relating to land use), Act of January 13, 1966 (P.L. (1965) 1292, No.___ as amended, 16 P.S. 11941 et seq.

III. Purdon's Statutes - Title 18 (Crimes and Offenses)

The Crimes Code, Act of December 6, 1972 (P.L. 1482, No. 334), as amended, 18 PA C.S.A. 101 et seq.

IV. Purdon's Statutes - Title 24 (Education)

Public School Code of 1949, Act of March 10, 1949 (P.L. 30, No. ___ as amended, 24 P.S. 7-741 et seq.

V. Purdon's Statutes - Title 30 (Fish)

The Fish and Boat Code, Act of October 16, 1980 (P.L. 996, No. 175), as amended, 30 PA C.S.A. 101 et seq.

VI. Purdon's Statues - Title 32 (Forests, Waters and State Parks)

(Relating to water power and water supply permits), Act of June 14, 1923 (P.L. 704, No. __), as amended, 32 P.S. 645.1 et seq.

Water Well Drillers License Act, Act of May 29, 1956 (P.L. (1955) 1840, No. _____), as amended, 322 P.S. 645.1 et seq.

(Relating to Flood Control), Act of August 7, 1936 (P.L. 106, 1st Ex. Sess., No. 46), as amended, 32 P.S. 653 et seq.

Flood Plain Management Act, Act of October 4, 1978 (P.L. 851, No. 166), as amended, 32 P.S. 679.101 et seq.

Storm Water Management Act, Act of October 4, 1978 (P.L. 864, No. 167), as amended, 32 P.S. 680.1 et seq.

Dam Safety and Encroachments Act, Act of November 26, 1978 (P.L. 1375, No. 325), as amended, 32 P.S. 693.1 et seq.

(Relating to Stream Clearance), Act of June 5, 1947 (P.L. 422, No. _____ as amended, 32 P.S. 701 et seq.

(Relating to Potomac River Pollution), Act of May 29, 1945 (P.L. 1134, No._____), as amended, 32 P.S. 741 et seq.

(Relating to Schuylkill River Pollution), Act of June 4, 1945 (P.L. 1383, No._____), as amended, 32 P.S. 751.1 et seq.

(Relating to Delaware River pollution), Acdt of June 4, 1945 (P.L. 272, No. _____), as amended, 32 P.S. 815.31 et seq.

Delaware River Basin Compact, Act of July 7, 1961 (P.L. 518, No._____), as amended, 32 P.S. 815.101 et seq.

Ohio River Valley Water Sanitation Compact, Act of April 2, 1945 (P.L. 103, No._____), as amended, 32 P.S. 816.1 et seq.

Great Lakes Basin Compact, Act of March 22, 1956 (P.L. (1955) 1333, No._____), as amended, 32 P.S. 817 et seq.

Brandywine River Valley Compact, Act of September 9, 1959 (P.L. 848, No. _____), as amended, 32 P.S. 818 et seq.

Wheeling Creek Watershed Protection and Flood Prevention District Compact, Act of August 2, 1967 (P.L. 189, No. ___), as amended, 32 P.S. 819.1 et seq.

Susquehanna River Basin Compact, Act of July 17, 1968 (P.L. 368, No. 181), as amended, 32 P.S. 820.1 et seq.

Chesapeake Bay Commission Agreement, Act of June 25, 1985 (P.L. 64, No. 25), as amended, 32 P.S. 820.11 et seq.

(Relating to Preservation and Acquisition of Land for Open Space Uses), Act of January 19, 1968 (P.L. (1967) 992, No.___), as amended, 32 P.S. 5001 et seq.

Land and Water Conservation and Reclamation Act, Act of January 19, 1968 (P.L. (1967) 996, No.___), as amended, 32 P.S. 5101 et seq.

Bluff Recession and Setback Act, Act of May 13, 1980 (P.L. 122, No. 48), as amended, 32 P.S. 5201 et seq.
Wild Resource Conservation Act, Act of June 23, 1982 (P.L. 597, No. 170), as amended, 32 P.S. 5301 et seq.

VII. Purdon's Statutes - Title 34 (Game)

The Game and Wildlife Code, Act of July 8, 1986 (P.L. 442, No. 93), as amended, 34 Pa. C.S.A. 101 et seq.

VIII. Purdon's Statutes - Title 35 (Health and Safety)

(Related to public eating and drinking places), Act of May 23, 1945 (P.L. 926, No. ____), as amended, 35 P.S. 655.1 et seq.

The Public Bathing Law, Act of June 23, 1931 (P.L. 899, No.___), as amended,. 35 P.S. 701 et seq.

The Clean Streams Law, Act of June 22, 1937 (P.L. 1987, No.___), as amended, 35 P.S. 701 et seq.

(Related to Commonwealth Contribution to cost of Abating Pollution) Act of August 20, 1953 (P.L. 1217, No.___), as amended, 35 P.S. 701 et seq.

PA Safe Drinking Water Act, Act of May 1, 1984 (P.L. 206, No. 43), as amended, 35 P.S. 721.1 et seq.

PA Sewage Facilities Act, Act of January 24, 1966 (P.L. (1965) 1535, No._____), as amended, 35 P.S. 750.1 et seq.

PA Solid Waste-Resource Recovery Development Act, Act of July 20, 1974 (P.L. 572, No. 198), as amended, 35 P.S. 755.1 et seq.

(Related to pollution from abandoned mines), Act of December 15, 1965 (P.L. 1075, No.____), as amended, 35 P.S. 760.1 et seq.

(Related to burial of radioactive materials), Act of September 8, 1959 (P.L. 807, No.___), as amended, 35 P.S. 958.1 et seq.

(Related to Camp Regulation), Act of November 10, 1959 (P.L. 1400 No.___), as amended 35 P.S. 3001 et seq.

Air Pollution Control Act, Act of January 8, 1960 (P.L. (1959) 2119, No.____ as amended 35 P.S. 4001 et seq.

Solid Waste Management Act, Act of July 7, 1980 (P.L. 380, No. 97), as amended, 35 P.S. 6018.101 et seq.

Radiation Protection Act, Act of July 10, 1984 (P.L. 688, No. 147), as amended, 35 P.S. 7110.101 et seq.

Worker and Community Right-to-Know Act, Act of October 5, 1984 (P.L. 734, No. 159), as amended, 35 P.S. 7301 et seq.

IX. Purdon's Statutes - Title 36 (Highways and Bridges)

State Highway Law, Act of June 1, 1945 (P.L. 1242, No.____), as amended, 36 P.S. 670-101 et seq.

(Related to Junkyards along Highways), Act of July 28, 1966 (P.L. 91, Sp. Sess. No.__), as amended, 36 P.S. 2719.1 et seq.

Highway Vegetation Control Act, Act of December 20, 1983 (P.L. 293, No. 79), as amended, 36 P.S. 2720.1 et seq.

X. Purdon's Statutes - Title 43 (Labor)

(Related to General Safety), Act of May 18, 1937 (P.L. 654, No.___), as amended, 43 P.S. 25-1 et seq.

Seasonal Farm Labor Act, Act of June 23, 1978 (P.L. 537, No. 93), as amended, 43 P.S. 1301.101 et seq.

XI. Purdon's Statues - Title 52 (Mines and Mining)

The Coal Mine Sealing Act of 1947, Act of June 30, 1947 (P.L. 1177, No._____), as amended, 52 P.S. 28.1 et seq.

Coal Refuse Disposal Control Act, Act of September 24, 1968 (P.L. 1040, No. 318), as amended, 52 P.S. 30.51 et seq.

(Related to Coal Land Improvement), Act of July 19, 1965 (P.L. 216, No. 117), as amended, 52 P.S. 30.101 et seq.

(Related to Mine Fires and Subsidence), Act of April 3, 1968 (P.L. 92, No. 42), as amended, 52 P.S. 30.201 et seq.

PA Anthracite Coal Mine Act, Act of November 10, 1965 (P.L. 721, No. 346), as amended, 52 P.S. 70-101 et seq.

(Related to discharge of coal into banks of streams), Act of June 27, 1913 (P.L. 640, No.___), as amended, 52 P.S. 631 et seq.

Related to Caving-in, Collapse, Subsidence), Act of May 27, 1921 (P.L. 1198, No.___), as amended, 52 P.S. 672.1 et seq.

(Related to Subsidence), Act of September 20, 1961 (P.L. 1538, No.___), as amended, 52 P.S. 672.1 et seq.

Anthracite Strip Mining and Conservation Act, Act of June 27, 1947 (P.L. 1095, No.___), as amended 52 P.S. 681.1 et seq.

(Related to control and drainage of water from coal formations), Act of July 7, 1955 (P.L. 258, No.___), as amended, 52 P.S. 682 et seq.

PA Bituminous Coal Mine Act, Act of July 17, 1961 (P.L. 659, No. ____), as amended, 52 P.S. 701-101 et seq.
(Related to Abandoned Mines), Act of May 7, 1935 (P.L. 141, No. ____), as amended, 52 P.S. 809 et seq.

(Related to maps and plans), Act of June 15, 1911 (P.L. 954, No.____), as amended, 52 P.S. 823.

Surface Mining Conservation and Reclamation Act, Act of May 31, 1945 (P.LO. 1198, No. ___), as amended, 52 P.S. 1396.1 et seq.

The Bituminous Mine Subsidence and Land Conservation Act, Act of April 27, 1966 (P.L.31, 1st Sp. Sess., No.__) 52 P.S. 1406.1 et seq.

(Related to cave-in or subsidence of surface above mines), Act of July 2, 1937 (P.L. 2787, No.___), as amended, 52 P.S. 1407 et seq.

(Related to Coal Stripping), Act of June 18, 1941 (P.L. 133, No.___), as amended, 52 P.S. 1471 et seq.

(Related to Coal under State Lands), Act of June 1, 1933 (P.L. 1409, No. _____), as amended, 52 P.S. 1501 et seq.

(Related to Mining Safety Zones), Act of December 22, 1959 (P.L. 1994, No.____), as amended, 52 P.S. 3101 et seq.

(Related to Coal Mine Subsidence Insurance Fund), Act of August 23, 1961 (P.L. 1961 (P.L. 1068, No.___), as amended, 52 P.S. 3201 et seq.

(Related to Emergency Mine Subsidence Relief), Act of November 8, 1971 (P.L. 532, No. 136), as amended, 52 P.S. 3241 et seq.

Interstate Mining Compact, Act of May 5, 1966 (P.L. 40, Sp. Sess. No. 1, No.____), as amended, 52 P.S. 3251 et seq.

Noncoal Surface Mining Conservation and Reclamation Act, Act of December 19, 1984 (P.L. 1093, No. 219), as amended, 52 P.S. 3301 et seq.

XII. Purdon's Statutes - Title 58 (Oil and Gas)

Oil and Gas Conservation Law, Act of July 25, 1961 (P.L. 825, No.___), as amended, 58 P.S. 401 et seq.

PA Used Oil Recycling Act, Act of April 9, 1982 (P.L. 314, No. 89), as amended, 58 P.S. 471 et seq.

Coal and Gas Resource Coordination Act, Act of December 18, 1984 (P.L. 1069, No. 214), as amended, 58 P.S. 501 et seq.

Oil and Gas Act, Act of December 19, 1984 (P.L. 1140, No. 233), as amended, 58 P.S. 601.101 et seq.

XIII. Purdon's Statutes - Title 63 (Professions and Occupations)

Sewage Treatment Plant and Waterworks Operators' Certification Act, Act of November 18, 1968 (P.L. 1052, No. 322), as amended, 63 P.S. 1001 et seq.

XIV. Purdon's Statutes - Title 64 (Public Lands)

PA Appalachian Trial Act, Act of April 28, 1978 (P.L. 87, No. 41), as amended, 64 P.S. 801 et seq.

XV. Purdon's Statutes - Title 71 (State Government)

The Administrative Code of 1929, Act of April 9, 1929 (P.L. 177, No. 175), as amended, 71 P.S. 51 et seq.

Historic Preservation Act, Act of November 22, 1978 (P.L. 1160, No. 273), as amended, 71 P.S. 1047.1 et seq.

XVI. Purdon's Statutes - Title 72 (Taxation and Fiscal Affairs)

Project 70 Land Acquisition and Borrowing Act, Act of June 22, 1964 (P.L. 131, Sp. Sess., No.8), as amended, 72 P.S. 3946.1 et seq.

(Related to pollution control services), Act of March 4, 1971 (P.L. 6, No. 2), as amended, 72 P.S. 7602.1 et seq.

XVII. Purdon's Statutes - Title 73 (Trade and Commerce)

(Related to Explosives), Act of July 1, 1937 (P.L. 2681, No.___), as amended, 73 P.S. 151 et seq.

(Related to Explosives), Act of July 10, 1957 (P.L. 685, No.____), as amended, 73 P.S. 164 et seq.

(Related to Black Powder), Act of May 31, 1974 (P.L. 304, No. 96), as amended, 73 P.S. 169 et seq.

(Related to excavation and demolition), Act of December 10, 1974 (P.L. 852, No. 287), as amended, 73 P.S. 176 et seq.

Site Development Act, Act of May 6, 1968 (P.L. ___, No. 61), as amended, 73 P.S. 361 et seq.

XVIII. Purdon's Statutes - Title 75 (Vehicles)

Vehicle Code, Act of June 17, 1976 (P.L. 162, No. 81), as amended, 75 PA C.S.A. 101 et seq.

Snowmobile Law, Act of June 17, 1976 (P.L. 162, No. 81), as amended, 75 PA C.S.A. 7701 et seq.

(Related to hazardous materials transport), Act of June 30, 1984 (P.L. 473, No. 99), as amended, 75 PA C.S.A. 8301 et seq.

XIX. Purdon's Statues - Title 77 (Workmen's Compensation)

PA Workmen's Compensation Act, Act of June 2, 1915 (P.L. 736, No. ____), as amended, 77 P.S. 1 et seq.

PA Occupational Disease Act, Act of June 21, 1939 (P.L. 566, No. 284), as amended, 77 P.S. 1201 et seq.

XX. Other Statutes

(Relating to Medical Waste-Manifesting and Transporter Licensing), Act of July 13, 1988 (P.L. ___, No. 93).

Municipal Waste Planning, Recycling and Waste Reduction Act, Act of July 28, 1988 (P.L. ___, No. 101).

Hazardous Sites Cleanup Act, Act of October 18, 1988 (P.L. __, No. 108).

XXI. Pennsylvania Constitution - Article I, Section 27 (Adopted May 28, 1971)

FEDERAL LAW

Acid Precipitation Act of 1980 (42 U.S.C. 8901-8912).

Act to Prevent Pollution from Ships (33 U.S.C. 1901-1912).

Agricultural Act of 1970 (16 U.S.C. 1501-1510).

Asbestos Hazard Emergency Response Act of 1986 [see Toxic Substances Control Act secs. 201-214 (15 U.S.C. 2641-2654)].

Atomic Energy Act of 1954 (42 U.S.C. 2014, 2021, 2021a, 2022, 2111, 2113, 2114).

Aviation Safety and Noise Abatement Act of 1979 (49 App. U.S.C. 2101-2125).

Clean Air Act (42 U.S.C. 7401-7642).

Clean Water Act [see Federal Water Pollution Control Act].

Coastal Zone Management Act of 1972 (16 U.S.C. 1451-1464).

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601-9675).

Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C. 11001-11050).

Energy Supply and Environmental Coordination Act of 1974 (15 U.S.C. 791-798).

Environmental Quality Improvement Act of 1970 (42 U.S.C. 4371-4375).

Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136-136v).

Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701-1784).

Federal Water Pollution Control Act (33 U.S.C. 1251-1387).

Geothermal Energy Research, Development, and Demonstration Act of 1974 (30 U.S.C. 1101-1164).

Global Climate Protection Act of 1987 (15 U.S.C. 2901 note).

Hazardous Substance Response Revenue Act of 1980 (see 26 U.S.C. 4611, 4612, 46612, 4662).

Low-Level Radioactive Waste Policy Act (42 U.S.C. 2021b-2021d).

Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1401-1445)

National Climate Program Act (15 U.S.C. 2901-2908).

National Environmental Policy Act of 1969 (42 U.S.C. 4321-4370a).

National Ocean Pollution Planning Act of 1978 (33 U.S.C. 1701-1709).

Noise Control Act of 1972 (42 U.S.C. 4901-4918)

Nuclear Waste Policy Act of 1982 (42 U.S.C. 10101-10270).

Outer Continental Shelf Land Act Amendments of 1978 (43 U.S.C. 1801-1866).

Public Health Service Act (42 U.S.C. 300f-300j-11).

Safe Drinking Water Act [see Public Health Service Act secs. 1401-1451 (42 U.S.C. 300f-300-j-11)].

Soil and Water Resources Conservation Act of 1977 (16 U.S.C. 2001-2009).

Solid Waste Disposal Act (42 U.S.C. 6901-6991i).

Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201-1328).

Toxic Substances Control Act (15 U.S.C. 2601-2654).

Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. 7901-7942).

Water Resources Research Act of 1984 (42 U.S.C. 10301-10309).

II. PRODUCTS – Not Applicable

III. EXECUTION – Not Applicable

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01200 - PROJECT MEETINGS

I. GENERAL

A. STIPULATIONS

The "Special Requirements" and “General Conditions” to the contract form a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

This Section specifies administrative and procedural requirements for project meetings including but not limited to:

1. Pre-Construction Conference
2. Pre-Installation Conferences
3. Coordination Meetings
4. Progress Meetings

D. PRE-CONSTRUCTION CONFERENCE

1. Construction Manager shall schedule a pre-construction conference and organizational meeting at the Project site or other convenient location no later than 15 days after execution of the Agreement and prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.

2. Attendees: The System, Professional and their consultants, the Contractor and its superintendent, major subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the Work.

3. Agenda: Discuss items of significance that could affect progress including, but not limited to such topics as:

a. Coordination of Prime Contractor's work
b. Tentative construction schedule
c. Critical Work sequencing
d. Designation of responsible personnel
e. Procedures for processing field decisions and Change Orders
f. Procedures for processing Applications for Payment

g. Distribution of Contract Documents
h. Submittal of Shop Drawings, Product Data and Samples
i. Preparation of record documents
j. Use of the premises
k. Office, Work and storage areas
l. Equipment deliveries and priorities
m. Safety procedures
n. First aid
o. Security
p. Housekeeping
q. Working hours
r. Cut and patching responsibilities
s. Clean-up

E. PROGRESS MEETINGS

1. Construction Manager to conduct progress meetings at the Project site bi-weekly except where conditions require them more frequently. Notify the System and Professional of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.

2. Attendees: In addition to representatives of the System and Professional, prime contractor, each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the Project and authorized to conclude matters relating to progress.

3. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the Project.

a. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be returned to schedule; 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. Review the present and future needs of each entity present, including such items as:

(1) Interface requirements
(2) Time
(3) Sequences
(4) Deliveries
(5) Off-site fabrication problems

(6) Access
(7) Site utilization
(8) Temporary facilities and services
(9) Hours of Work
(10) Hazards and risks
(11) Housekeeping
(12) Quality and Work standards
(13) Change Orders
(14) Documentation of information for payment requests

4. Reporting: No later than 3 days after each progress meeting date, distribute copies of minutes of the meeting to each party present and to other parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01300 - SUBMITTALS

I. GENERAL

A. STIPULATIONS

The "Special Requirements" and “General Conditions” to the contract form a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

1. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including:

   a. Contractor's construction schedule
   b. Submittal schedule
   c. Daily construction reports
   d. Shop Drawings
   e. Product Data
   f. Samples

2. Administrative Submittals: Refer to other Division-1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:

   a. Permits
   b. Applications for payment
   c. Performance and payment bonds
   d. Insurance certificates
   e. List of Subcontractors

3. The Schedule of Values submittal is included in Section 01027 - Applications for Payment.

4. Inspection and test reports are included in Section 01400 - Quality Control Services.

D. SUBMITTAL PROCEDURES

1. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

   a. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.

   b. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.

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

c. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.

(1) Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Professional will promptly advise the Contractor when a submittal being processed must be delayed for coordination.

(2) If an intermediate submittal is necessary, process the same as the initial submittal.

(3) Allow two weeks for reprocessing each submittal.

(4) No extension of Contract Time will be authorized because of failure to transmit submittals to the Professional sufficiently in advance of the Work to permit processing.

2. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

a. Provide a space approximately 4" x 5" on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.

b. Include the following information on the label for processing and recording action taken.

(1) Project name
(2) Date
(3) Name and address of Professional
(4) Name and address of Contractor
(5) Name and address of subcontractor
(6) Name and address of supplier
(7) Name of manufacturer
(8) Number and title of appropriate Specification Section
(9) Drawing number and detail references, as appropriate

3. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Professional using a transmittal form. Submittals received from sources other than the Contractor will be returned without action.

On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

E. CONTRACTOR'S CONSTRUCTION SCHEDULE

1. General Contractor to submit a fully developed construction schedule. The schedule to indicate the coordinated work of all prime contractors. Use the breakdown of units of Work as indicated in the Schedule of Values.

2. Bar Chart Schedule: Immediately upon receipt of notice of the award of a contract, the Contractor for general construction on the project shall furnish to each separate prime contractor. within fourteen (14) days, a horizontal bar-chart type contractor's construction schedule indicating critical activity of the proposed prosecution of the work under this contract. Each separate prime contractor shall submit to the Contractor for general construction within twenty-one (21) days after issuance of the notice of award of the contract, a schedule of the proposed prosecution of the work under this respective contract. The Contractor for general construction shall then submit to the professional, CM, and the System, within twenty-eight (28) days after issuance of the notice of award of his contract, a complete set of progress charts signed by all prime contractors indicating their approval, and showing in detail to the satisfaction of the professional, CM and the System, the proposed coordinated dates for the performance of each phase of the work under each contract on the entire project. The date of issuance of notice of award of a contract will be the actual start date of the contract.

   a. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values."

   b. Within each time bar indicate estimated completion percentage in 10 percent increments. As Work progresses, place a contrasting mark in each bar to indicate Actual Completion.

   c. Prepare the schedule on a sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for the entire construction period.

   d. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically sequences necessary for completion of related portions of the Work.

   e. Coordinate the Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests and other schedules.

   f. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Professional's procedures necessary for certification of Substantial Completion.

3. Phasing: Provide notations on the schedule to show how the sequence of the Work is affected by requirements for phased completion to permit Work by separate Contractors and partial occupancy by the System prior to Substantial Completion.

4. Work Stages: Indicate important stages of construction for each major portion of the Work, including testing and installation.

5. Cost Correlation: At the head of the schedule, provide a two item cost correlation line, indicating "precalculated" and "actual" costs. On the line show dollar-volume of Work performed as of the dates used for preparation of payment requests. Refer to Section "Applications for Payment" for cost reporting and payment procedures.

6. Distribution: Following response to the initial submittal, print and distribute copies to the Professional, System, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.

   When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

7. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

F. SUBMITTAL SCHEDULE

1. After development and acceptance of the Contractor's construction schedule, prepare a complete schedule of submittals. Submit the schedule within 10 days of the date required for establishment of the Contractor's construction schedule.

   a. Coordinate submittal schedule with the list of subcontracts, schedule of values and the list of products as well as the Contractor's construction schedule.

   b. Prepare the schedule in chronological order; include submittals required during the first 90 days of construction. Provide the following information:

      (1) Scheduled date for the first submittal
      (2) Related Section number
      (3) Submittal category
      (4) Name of subcontractor
      (5) Description of the part of the Work covered
      (6) Scheduled date for resubmittal
      (7) Scheduled date the Professional's final release or approval

2. Distribution: Following response to initial submittal, print and distribute copies to the Professional, System, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.

   When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

3. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

G. DAILY CONSTRUCTION REPORTS

1. Prepare a daily construction report, recording the following information concerning events at the site; and submit duplicate copies to the Professional at weekly intervals:

   a. List of subcontractors at the site
   b. Approximate count of personnel at the site
   c. High and low temperatures, general weather conditions
   d. Accidents and unusual events
   e. Meetings and significant decisions
   f. Stoppages, delays, shortages, losses
   g. Meter readings and similar recordings
   h. Emergency procedures
   i. Orders and requests of governing authorities
   j. Change Orders received, implemented
   k. Services connected, disconnected
   l. Equipment or system tests and start-ups
   m. Partial Completions, occupancies
   n. Substantial Completions authorized

H. SHOP DRAWINGS

1. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.

2. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:

   a. Dimensions
   b. Identification of products and materials included
   c. Compliance with specified standards
   d. Notation of coordination requirements
   e. Notation of dimensions established by field measurement

3. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 30" x 42".

4. Initial Submittal: Submit one correctable translucent reproducible print and four blue- or black-line prints for the Professional's review; the reproducible print will be returned.

5. Final Submittal: Submit 4 blue- or black-line prints; submit 5 prints where required for maintenance manuals. 2 prints will be retained; the remainder will be returned.

   a. One of the prints returned shall be marked-up and maintained as a "Record Document".

   b. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.

6. Coordination drawings are a special type of Shop Drawing that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.

   a. Preparation of coordination Drawings is specified in section "Project Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.

   b. Submit coordination Drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.

I. PRODUCT DATA

1. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."

   a. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:

      (1) Manufacturer's printed recommendations
      (2) Compliance with recognized trade association standards
      (3) Compliance with recognized testing agency standards
      (4) Application of testing agency labels and seals
      (5) Notation of dimensions verified by field measurement
      (6) Notation of coordination requirements

   b. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

   c. Preliminary Submittal: Submit a preliminary single-copy of Product Data where selection of options is required.

   d. Submittals: Submit 4 copies of each required submittal. The Professional will retain one, and will return the other marked with action taken and corrections or modifications required. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.

   e. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.

      (1) Do not proceed with installation until an applicable copy of Product Data is in the installer's possession.

      (2) Do not permit use of unmarked copies of Product Data in connection with construction.

J. SAMPLES

1. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.

   a. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match the Professional's Sample if indicated. Include the following:

      (1) Generic description of the Sample
      (2) Sample source
      (3) Product name or name of manufacturer
      (4) Compliance with recognized standards
      (5) Availability and delivery time

   b. Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.

      (1) Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3), that show approximate limits of the variations.

      (2) Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation and similar construction characteristics.

   c. Preliminary submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product. Preliminary submittals will be reviewed and returned with the Professional's mark indicating selection and other action.

   d. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 4 sets; one will be returned marked with the action taken.

   e. Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal. Sample sets may be used to obtain final acceptance of the construction associated with each set.

2. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.

   Field Samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.

Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

K. PROFESSIONAL'S ACTION

1. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Professional will review each submittal, mark to indicate action taken, and return promptly. Compliance with specified characteristics is the Contractor's responsibility

2. Action Stamp: The Professional will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, to indicate the action taken.

II. PRODUCTS (Not Applicable).

III. EXECUTION (Not Applicable).

SECTION 01350 - HISTORIC TREATMENT 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 general protection and treatment procedures for entire Project and the following specific work:

1. Historic removal and dismantling.

1.3 DEFINITIONS

A. Consolidate: To strengthen loose or deteriorated materials in place.

B. Dismantle: To disassemble and detach items by hand from existing construction to the limits indicated, using small hand tools and small one-hand power tools, so as to protect nearby historic surfaces; and legally dispose of dismantled items off-site, unless indicated to be salvaged or reinstalled.

C. Existing to Remain: Existing items that are not to be removed or dismantled.

D. Historic: Spaces, areas, rooms, surfaces, materials, finishes, and overall appearance which are important to the successful preservation, rehabilitation, restoration and reconstruction as determined by Architect. The existing Long Home building's historic spaces, areas, rooms and surfaces are covered by this Section.

E. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by Architect.

F. Reconstruct: To remove existing item, replicate damaged or missing components, and reinstall in original position.

G. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.

H. Reinstall: To protect removed or dismantled item, repair and clean it as indicated for reuse, and reinstall it in original position, or where indicated.

I. Remove: Specifically for historic spaces, areas, rooms, and surfaces, the term means to detach an item from existing construction to the limits indicated, using hand tools and hand-operated power equipment, and legally dispose of it off-site, unless indicated to be salvaged or reinstalled.

J. Repair: To correct damage and defects, retaining existing materials, features, and finishes while employing as little new material as possible. Includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.

K. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.

L. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.

M. Reproduce: To fabricate a new item, accurate in detail to the original, and in either the same or a similar material as the original, unless otherwise indicated.

N. Restore: To consolidate, replicate, reproduce, repair, and refinish as required to achieve the indicated results.

O. Retain: To keep existing items that are not to be removed or dismantled.

P. Reversible: New construction work, treatments, or processes that can be removed or undone in the future without damaging historic materials unless otherwise indicated.

Q. Salvage: To protect removed or dismantled items and deliver them to Owner.

R. Stabilize: To provide structural reinforcement of unsafe or deteriorated items while maintaining the essential form as it exists at present; also, to reestablish a weather-resistant enclosure.

S. Strip: To remove existing finish down to base material unless otherwise indicated.

1.4 MATERIALS OWNERSHIP

A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during removal and dismantling work remain Owner's property. Carefully dismantle and salvage each item or object.

1.5 INFORMATIONAL SUBMITTALS

A. Construction Schedule for Historic Treatments: Indicate for entire Project the following for each activity to be performed in historic spaces, areas, and rooms, and on historic surfaces:

1. Detailed sequence of historic treatment work, with starting and ending dates, coordinated with Owner's continuing operations and other known work in progress.
2. Utility Services: Indicate how long utility services will be interrupted. Coordinate shutoff, capping, and continuation of utility services.
3. Use of elevator and stairs.
4. Coordination of Owner's and others' continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
5. Equipment Data: List gross loaded weight, axle-load distribution, and wheel-base dimension data for mobile and heavy equipment proposed for use. Do not use such equipment without Contractor's professional engineer's certification that the structure can support the imposed loadings without damage.

B. Qualification Data: For historic treatment specialist, historic removal and dismantling specialist, historic removal and dismantling specialist's field supervisors and historic removal and dismantling specialist's workers.

C. Preconstruction Documentation: Show preexisting conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by Contractor's historic treatment operations.

D. Historic Treatment Program: Submit before work begins.

E. Fire-Prevention Plan: Submit before work begins.

F. Inventory of Salvaged Items: After removal or dismantling work is complete, submit a list of items that have been salvaged.

1.6 QUALITY ASSURANCE

A. Historic Treatment Specialist Qualifications: An experienced firm regularly engaged in historic treatments similar in nature, materials, design, and extent to this work as specified in each section, and that has completed a minimum of five recent projects with a record of successful in-service performance that demonstrate the firm's qualifications to perform this work.

1. Field Supervisor Qualifications: Full-time supervisors experienced in historic treatment work similar in nature, material, design, and extent to that indicated for this Project. Supervisors shall be on Project site during times that historic treatment work is in progress. Supervisors shall not be changed during Project except for causes beyond the control of the specialist firm.
2. Worker Qualification: Persons who are experienced in historic treatment work of types they will be performing.

B. Historic Removal and Dismantling Specialist Qualifications: A qualified historic treatment specialist. General selective demolition experience is not sufficient experience for historic removal and dismantling work.

C. Historic Treatment Program: Prepare a written plan for historic treatment for whole Project, including each phase or process and protection of surrounding materials during operations. Describe in detail materials, methods, and equipment to be used for each phase of work. Show compliance with indicated methods and procedures specified in this and other Sections.

1. Dust and Noise Control: Include locations of proposed temporary dust- and noise-control partitions and means of egress from occupied areas coordinated with continuing on-site operations and other known work in progress.

D. Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of fire extinguishers, fire blankets, rag buckets, and other fire-prevention devices during each phase or process. Coordinate plan with Owner's fire-protection equipment and requirements. Include each fire watch's training, duties, and authority to enforce fire safety.

E. Mockups: Prepare mockups of specific historic treatment procedures specified in this Section to demonstrate aesthetic effects and to set quality standards for materials and execution.

1. Typical Removal Work: Remove typical wall area, plaster ceiling area, suspended ceiling assembly and other areas as shown on Drawings.

2. Typical Dismantling Work: Dismantle typical fluorescent lighting fixtures from ornamental plaster surfaces, historic light fixtures and other items as shown on Drawings.

3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

F. Regulatory Requirements: Comply with notification regulations of authorities having jurisdiction before beginning removal and dismantling work. Comply with hauling and disposal regulations of authorities having jurisdiction.

G. Standards: Comply with ANSI/ASSE A10.6.

H. Historic Treatment Preconstruction Conference: Conduct conference at Project site.

1. General: Review methods and procedures related to historic treatment including, but not limited to, the following:

a. Review manufacturer's written instructions for precautions and effects of historic treatment procedures on materials, components, and vegetation.
b. Review and finalize historic treatment construction schedule; verify availability of materials, equipment, and facilities needed to make progress and avoid delays.
c. Review qualifications of personnel assigned to the work and assign duties.
d. Review material application, work sequencing, tolerances, and required clearances.
e. Review areas where existing construction is to remain and requires protection.

2. Removal and Dismantling:

a. Inspect and discuss condition of construction to be removed or dismantled.
b. Review requirements of other work that relies on substrates exposed by removal and dismantling work.

1.7 STORAGE AND PROTECTION OF HISTORIC MATERIALS

A. Salvaged Historic Materials:

1. Clean only loose debris from salvaged historic items unless more extensive cleaning is indicated.
2. Pack or crate items after cleaning; cushion against damage during handling. Label contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

B. Historic Materials for Reinstallation:

1. Repair and clean historic items as indicated and to functional condition for reuse.
2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make item functional for use indicated.

C. Existing Historic Materials to Remain: Protect construction indicated to remain against damage and soiling from construction work. Where permitted by Architect, items may be dismantled and taken to a suitable, protected storage location during construction work and reinstalled in their original locations after historic treatment and construction work in the vicinity is complete.

D. Storage and Protection: When taken from their existing locations, catalog and store historic items within a weathertight enclosure where they are protected from wetting by rain, snow, condensation, or ground water, and from freezing temperatures.

1. Identify each item with a nonpermanent mark to document its original location. Indicate original locations on plans elevations, sections, or photographs by annotating the identifying marks.
2. Secure stored materials to protect from theft.

1.8 PROJECT CONDITIONS

A. General Size Limitation in Historic Spaces: Materials, products, and equipment used for performing the Work and for transporting debris, materials, and products shall be of sizes that clear surfaces within historic spaces, areas, rooms, and openings, including temporary protection, by 12 inches or more.

B. Owner will occupy portions of building immediately adjacent to removal and dismantling area. Conduct removal and dismantling work so Owner's operations will not be disrupted.

C. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

D. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with removal and dismantling work.

E. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. Hazardous materials will be removed by Owner before start of the Work.
2. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Owner will remove hazardous materials under a separate contract.

a. In the case of asbestos, stop work in the area of potential hazard, shut off fans and other airhandlers ventilating the area, and rope off area until the questionable material is identified. Re-assign workers to continue work in unaffected areas. Resume work in the area of concern after safe working conditions are verified.

F. Storage or sale of removed or dismantled items on-site is not permitted unless otherwise indicated.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 HISTORIC REMOVAL AND DISMANTLING EQUIPMENT

A. Removal Equipment: Use only hand-held tools except as follows or unless otherwise approved by Architect on a case-by-case basis:

1. Light jackhammers are allowed subject to Architect's approval.
2. Large air hammers are not permitted.

B. Dismantling Equipment: Use manual, hand-held tools, except as follows or otherwise approved by Architect on a case-by-case basis:

1. Hand-held power tools and cutting torches are permitted only as submitted in the historic treatment program. They must be adjustable so as to penetrate or cut only the thickness of material being removed.
2. Pry bars more than 18 inches (450 mm) long and hammers weighing more than 2 lb (0.9 kg) are not permitted for dismantling work.

3.2 EXAMINATION

A. Preparation for Removal and Dismantling: Examine construction to be removed or dismantled to determine best methods to safely and effectively perform removal and dismantling work. Examine adjacent work to determine what protective measures will be necessary. Make explorations, probes, and inquiries as necessary to determine condition of construction to be removed or dismantled and location of utilities and services to remain that may be hidden by construction that is to be removed or dismantled.

1. Verify that affected utilities have been disconnected and capped.
2. Inventory and record the condition of items to be removed and dismantled for reinstallation or salvage.
3. Before removal or dismantling of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.
4. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures as a result of removal and dismantling work.

B. Survey of Existing Conditions: Record existing conditions by use of measured drawings, preconstruction photographs, and/or preconstruction videotapes.

C. Perform surveys as the Work progresses to detect hazards resulting from historic treatment procedures.

3.3 PROTECTION, GENERAL

A. Comply with temporary barrier requirements in Division 01 Section "Temporary Facilities and Controls."

B. Ensure that supervisory personnel are on-site and on duty when historic treatment work begins and during its progress.

C. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from historic treatment procedures.

1. Use only proven protection methods, appropriate to each area and surface being protected.
2. Provide barricades, barriers, and temporary directional signage to exclude public from areas where historic treatment work is being performed.
3. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during course of historic treatment work.
4. Contain dust and debris generated by removal and dismantling work and prevent it from reaching the public or adjacent surfaces.
5. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
6. Protect floors and other surfaces along haul routes from damage, wear, and staining.
7. Provide supplemental sound-control treatment to isolate removal and dismantling work from other areas of the building.

D. Temporary Protection of Historic Materials:

1. Protect existing historic materials with temporary protections and construction. Do not deface or remove existing materials.
2. Do not attach temporary protection to historic surfaces except as indicated as part of the historic treatment program and approved by Architect.
3. Temporary protection of historic stairs: Install protective plywood over all treads, risers and railing systems. Secure protective materials in a manner that does not damage the historic stair.

E. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.

F. Utility and Communications Services:

1. Notify Owner, Architect, authorities having jurisdiction, and entities owning or controlling wires, conduits, pipes, and other services affected by the historic treatment work before commencing operations.
2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for the historic treatment work.
3. Maintain existing services unless otherwise indicated; keep in service, and protect against damage during operations. Provide temporary services during interruptions to existing utilities.

G. Existing Drains: Prior to the start of work in an area, test drainage system to ensure that it is functioning properly. Notify Architect immediately of inadequate drainage or blockage. Do not begin work in an area until the drainage system is in working order.

1. Prevent solids such as stone or mortar residue from entering the drainage system. Clean out drains and drain lines that become sluggish or blocked by sand or other materials resulting from historic treatment work.
2. Protect drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.

H. Existing Roofing: Prior to the start of work in an area, install roofing protection.

3.4 PROTECTION DURING APPLICATION OF CHEMICALS

A. Protect motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm or damage resulting from applications of chemical cleaners and paint removers.

B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in historic treatment program. Use covering materials and masking agents that are waterproof, UV resistant, and will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials staining.

C. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.

D. Neutralize and collect alkaline and acid wastes and legally dispose of off Owner's property.

E. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

3.5 PROTECTION FROM FIRE

A. General: Follow fire-prevention plan and the following.

1. Comply with NFPA 241 requirements unless otherwise indicated.
2. Remove and keep area free of combustibles including, rubbish, paper, waste, and chemicals, except to the degree necessary for the immediate work.

    a. If combustible material cannot be removed, provide fire blankets to cover such materials.

3. Prohibit smoking by all persons within Project work and staging areas.

B. Heat-Generating Equipment and Combustible Materials: Comply with the following procedures while performing work with heat-generating equipment or highly combustible materials, including welding, torch-cutting, soldering, brazing, paint removal with heat, or other operations where open flames or implements utilizing high heat or combustible solvents and chemicals are anticipated:

1. Obtain Owner's approval for operations involving use of welding or other high-heat equipment. Use of open-flame equipment is not permitted. Notify Owner at least 72 hours before each occurrence, indicating location of such work.
2. As far as practical, restrict heat-generating equipment to shop areas or outside the building.
3. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
4. Use fireproof baffles to prevent flames, sparks, hot gases, or other high-temperature material from reaching surrounding combustible material.

5. Prevent the spread of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.
6. Fire Watch: Before working with heat-generating equipment or highly combustible materials, station personnel to serve as a fire watch at each location where such work is performed. Fire-watch personnel shall have the authority to enforce fire safety. Station fire watch according to NFPA 51B, NFPA 241, and as follows.

    a. Train each fire watch in the proper operation of fire-control equipment and alarms.
    b. Prohibit fire-watch personnel from other work that would be a distraction from fire-watch duties.
    c. Cease work with heat-generating equipment whenever fire-watch personnel are not present.
    d. Have fire watch perform final fire-safety inspection each day beginning no sooner than 30 minutes after conclusion of work at each area of Project site to detect hidden or smoldering fires and to ensure that proper fire-prevention is maintained.
    e. Maintain fire-watch personnel at each area of Project site until 60 minutes after conclusion of daily work.

C. Fire Extinguishers, Fire Blankets, and Rag Buckets: Maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure that nearby personnel and the fire watch are trained in fire-extinguisher and blanket operation.

D. Sprinklers: Where sprinkler protection exists and is functional, maintain it without interruption while operations are being performed. If operations are performed close to sprinklers, shield them temporarily with guards.

1. Remove temporary guards at the end of work shifts, whenever operations are paused, and when nearby work is completed.

3.6 GENERAL HISTORIC TREATMENT

A. Ensure that supervisory personnel are present when historic treatment work begins and during its progress.

B. Halt the process of deterioration and stabilize conditions unless otherwise indicated. Perform work as indicated on Drawings. Follow the procedures in subparagraphs below and procedures approved in historic treatment program:

1. Retain as much existing material as possible; repair and consolidate rather than replace.
2. Use additional material or structure to reinforce, strengthen, prop, tie, and support existing material or structure.
3. Use reversible processes wherever possible.
4. Use historically accurate repair and replacement materials and techniques unless otherwise indicated.
5. Record existing work before each procedure (preconstruction) and progress during the work with digital preconstruction documentation. Comply with requirements in Division 01 Section "Photographic Documentation."

C. Notify Architect of visible changes in the integrity of material or components whether due to environmental causes including biological attack, UV degradation, freezing, or thawing; or due to structural defects including cracks, movement, or distortion.

1. Do not proceed with the work in question until directed by Architect.

D. Where missing features are indicated to be repaired or replaced, provide features whose designs are based on accurate duplications rather than on conjectural designs, subject to approval of Architect.

E. Where Work requires existing features to be removed or dismantled and reinstalled, perform these operations without damage to the material itself, to adjacent materials, or to the substrate.

F. Identify new and replacement materials and features with permanent marks hidden in the completed work to distinguish them from original materials. Record a legend of identification marks and the locations of the items on record Drawings.

3.7 HISTORIC REMOVAL AND DISMANTLING

A. General: Have removal and dismantling work performed by a qualified historic removal and dismantling specialist. Ensure that historic removal and dismantling specialist's field supervisors are present when removal and dismantling work begins and during its progress.

B. Perform work according to the historic treatment program and approved mockups.

1. Provide supports or reinforcement for existing construction that becomes temporarily weakened by the work, until the work is completed.
2. Perform cutting by hand or with small power tools wherever possible. Cut holes and slots neatly to size required, with minimum disturbance of adjacent work.
3. Do not operate air compressors inside building, unless approved by Architect in each case.
4. Do not drill or cut columns, beams, joints, girders, structural slabs, or other structural supporting elements, without having Contractor's professional engineer's written approval for each location before such work is begun.
5. Do not use explosives.

C. Water-Mist Sprinkling: Use water-mist sprinkling and other wet methods to control dust only with adequate, approved procedures and equipment that ensure that such water will not create a hazard or adversely affect other building areas or materials.

D. Unacceptable Equipment: Keep equipment that is not permitted for historic removal or dismantling work away from the vicinity where such work is being performed.

E. Removing and Dismantling Items on or near Historic Surfaces:

1. Use only dismantling tools and procedures within 12 inches of historic surface. Do not use pry bars. Protect historic surface from contact with or damage by tools.
2. Unfasten items to be removed, in the opposite order from which they were installed.
3. Support each item as it becomes loosened to prevent stress and damage to the historic surface.
4. Dismantle anchorages.

F. Masonry Walls:

1. Remove masonry carefully and erect temporary bracing and supports as needed to prevent collapse of materials being removed.
2. Dismantle top edge and sides before removing wall. Stop removal work and immediately inform Architect if any structural elements above or adjacent to the work show signs of distress or dislocation during any phase of removal work.
3. Remove wall in easily managed pieces.

4. During removal, Contractor is responsible for the stability of the partially remaining wall. Notify Architect of the condition of temporary bracing for wall if work is temporarily stopped during the wall's removal.

G. Steelwork:

1. Expose structural steel for examination by Architect and Contractor's professional engineer before proceeding with removal or dismantling.
2. If distress in structure is apparent during performance of the work, stop removal or dismantling and take immediate precautionary measures to ensure safety of the structure. Inform Architect of the problem, steps taken, and proposed corrective actions.
3. Brace and support structural steel being removed and remaining during removal and dismantling.
4. Concrete-Encased Steel: Where steel is known to be encased by concrete being removed, saw cut with blades that will cut no deeper than the thickness of the concrete cover with an adequate margin for error in the location of the steel. Isolate sections of concrete by saw cutting before beginning removal.

H. Loose Plaster: Identify loose, non-historic plaster and separate it from its substrate by tapping with a hammer and prying with a chisel or screwdriver. Do not use pry bars. Leave sound, firmly adhered plaster in place. Do not damage, remove, or dismantle historic plasterwork except where indicated or where it is an immediate hazard to personnel and as approved by Architect.

I. Concrete Floor Surface Removal: Remove floor surfaces, fill, and topping, to the indicated lower elevations or cleavage planes as indicated on Drawings. Use dismantling methods when removing floor surfaces 12 inches or less away from historic walls. Take away material to a uniform surface at the indicated level.

J. Anchorages:

1. Remove anchorages associated with removed items.
2. Dismantle anchorages associated with dismantled items.
3. In non-historic surfaces, patch holes created by anchorage removal or dismantling according to the requirements for new work.
4. In historic surfaces, patch or repair holes created by anchorage removal or dismantling according to Section specific to the historic surface being patched.

END OF SECTION 01 35 91

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01400 - QUALITY CONTROL SERVICES

I. GENERAL

A. STIPULATIONS

The "Special Requirements" and “General Conditions” to the contract form a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

1. This Section specifies administrative and procedural requirements for quality control services.

2. Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the Professional or the System.

3. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.

4. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.

   a. Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.

   b. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.

   c. Requirements for the Contractor to provide quality control services required by the Professional, System, or authorities having jurisdiction are not limited by provisions of this Section.

   d. Reference schedule of inspections and tests specified as the Professional's responsibility included in section "Submittals".

D. RESPONSIBILITIES

1. Contractor Responsibilities: The General Contractor shall provide inspections, tests and similar quality control services, specified in individual Specification Sections and required by governing authorities, except where they are specifically indicated to be the System's responsibility, or are provided by another identified entity or prime contractor; these services include those specified to be performed by an independent agency and not by the Contractor. Costs for these services shall be included in the Contract Sum.

   a. The Contractor shall employ and pay an independent agency, to perform specified quality control services.

   b. The System will engage and pay for the services of an independent agency to perform inspections and tests specified as the Professional's responsibility.

   c. Where the System has engaged a testing agency or other entity for testing and inspection of a part of the Work, and the Contractor is also required to engage an entity for the same or related element, the Contractor shall not employ the entity engaged by the System, unless otherwise agreed in writing with the System.

   d. Retesting: The Contractor is responsible for retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility.

      Cost of retesting construction revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original construction.

   e. Associated Services: The Contractor shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but are not limited to:

      (1) Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests.
      (2) Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
      (3) Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.
      (4) Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
      (5) Security and protection of samples and test equipment at the Project site.

2. Professional Responsibilities: The Professional will provide inspections, tests and similar quality control services specified to be performed by independent agencies and not by the Contractor, except where they are specifically indicated as the Contractor's responsibility or are provided by another identified entity. Costs for these services are not included in the Contract Sum.

   The System will employ and pay for the services of an independent agency, testing laboratory or other qualified firm to perform services which are the Professional's responsibility.

3. Coordination: The General Contractor and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition the General Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests. The General Contractor is responsible for scheduling times for inspections, tests, taking samples and similar activities.

E. SUBMITTALS

1. The independent testing agency shall submit a certified written report of each inspection, test or similar service, to the Professional, in duplicate, unless the Contractor is responsible for the service. If the Contractor is responsible for the service, submit a certified written report of each inspection, test or similar service through the Contractor, in duplicate.

   a. Submit additional copies of each written report directly to the governing authority, when the authority so directs.

   b. Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to:

      (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 the inspection or test
      (6) Designation of the Work and test method
      (7) Identification of product and Specification Section
      (8) Complete inspection or test data
      (9) Test results and an interpretations of test results
      (10) Ambient conditions at the time of sample-taking and testing
      (11) Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements
      (12) Name and signature of laboratory inspector
      (13) Recommendations on retesting

2. Tests listed herein shall be performed by an independent testing agency engaged by the System without expense to Contractor. The responsibilities and obligations of the Contractor and the Quality Control Agency are as described herein, in relevant specification sections, and General Provisions. The System reserves the right to change this list at any time. The testing results will be available to the contractor for his use. Testing paid for by the System is for the sole benefit of the System. If Contractor desires additional testing for his own quality control and monitoring to that deemed adequate by the System and the System, the Contractor will pay for these additional testing services.

A. GENERAL CONSTRUCTION

No. of Tests Requested	Material to be Tested	Type or Method of Test Required
	1. CONCRETE - PLAIN AND REINFORCED	
(Specify)	Cement	ASTM C150 Physical Test Only, Mill Certification for chemical analysis.
	Fine Aggregate	Type "A" P.D.H. gradation & deleterious tests ASTM C33.
	Lightweight Aggregates	Test for unit weight and deleterious substances. Concrete making properties ASTM C330.
	Water	See Specifications.
	Mix verification tests concrete cylinders tests 7 & 28-day compressive; four cylinders per test.	ASTM C192 ASTM C39
	Air Entrainment Project Site Concrete.	ASTM C231 Normal Weight ASTM C173 Lightweight
	Field-made concrete cylinder tests (7 & 28 days) four cylinders per test.	ASTM C39 Strength Test ASTM C31 Test Specimen

Concrete @ Project Site, 2 tests per ea. type of concrete.	Yield ASTM C138

No. of Tests Requested	Material to be Tested	Type or Method of Test Required
	2. STEEL (Hours listed are actual inspection time. Incidental costs such as travel, shall be included in the hourly rates).	
	Reinforcing Steel (2 each bar size 3 thru	Physical Tests ASTM A615 Grade 60 Provide certification for chemical test 1.
	Structural Steel Connections Field Welds	Visual & Ultrasonic ASTM E164.
	Field Bolted Connections	Calibrated/Wrench Tightening.
	34 Str. Bolts ASTM A325	ASTM F606 Product Hardness (Rockwell).
	from shop 34 Str. Bolts from field ASTM 325	ASTM F606 Proof of Load Method 2 (yield strength)
	3. MASONRY	
	Masonry Mortar	Compressive Strength ASTM C270 Type M,S,N,
	Portland Cement	ASTM C150-Type I,III Physical Test Only, Mill Certification for Chemical Analysis.
	Aggregates	ASTM C144 No soundness test if from PDM approv-ed source.

	Lime	ASTM C110 Type S.
	Face Brick	ASTM C67 -Grade SW -Efflorescence -Compression 8000 PSI -Absorption
	Hollow Concrete Masonry Units	ASTM C90, ASTM C140 Grade N, Type I

No. of Tests Requested	Material to be Tested	Type or Method of Test Required
	4. SITE WORK	
	Borrow Material & Backfill	(a) Classification of Soils ASTM D2487 GW, GP, GM, SM, SW. (b) Moisture Content ASTM D2216.
	Field Density Test for each lift of fill.	ASTM D1556 Sand Core Method or ASTM D2167 Rubber Ballon Method or ASTM D2922 Nuclear Method
	Optimum moisture maximum density for each type of soil encountered.	ASTM D1557 (modified proctor)
	5. SPRAYED-ON FIREPROOFING	
	Thickness & Density	ASTM E605
	Cohesion & Adhesion	ASTM E736

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6. JOINT SEALERS

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Elastomeric Sealants	ASTM C920, ASTM C719

F. QUALITY ASSURANCE

1. Qualification for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, which are prequalified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which specialize in the types of inspections and tests to be performed.

a. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the State in which the Project is located.

II. PRODUCTS (Not Applicable).

III. EXECUTION

A. REPAIR AND PROTECTION

1. General: Upon completion of inspection, testing, sample-taking and similar services, the General Contractor repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching."

2. Protect construction exposed by or for quality control service activities, and protect repaired construction.

3. Repair and protection is the General Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01500 - TEMPORARY FACILITIES

I. GENERAL

A. STIPULATIONS

The "Special Requirements" and “General Conditions” to the contract form a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

1. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection. All temporary utilities, construction and support facilities required to perform the work shall be provided by the Demolition Contractor.

2. Temporary utilities, if required by the Contractor, include but are not limited to:

   a. Water service and distribution
   b. Temporary electric power and light
   c. Temporary heat

3. Temporary construction and support facilities required include but are not limited to:

   a. Field offices and storage sheds, if required by the Contractor
   b. Sanitary facilities, including drinking water
   c. Waste disposal services
   d. Construction aids and miscellaneous services and facilities

4. Security and protection facilities required include but are not limited to:

   a. Barricades, warning signs, lights
   b. Enclosure fence for the site
   c. Environmental protection

D. QUALITY ASSURANCE

1. Regulations: Comply with industry standards and applicable laws and regulations if authorities having jurisdiction, including but not limited to:

   a. Building Code requirements
   b. Health and safety regulations

c. Utility company regulations
d. Police, Fire Department and Rescue Squad rules
e. Environmental protection regulations

2. Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations", ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition", and NECA Electrical Design Library "Temporary Electrical Facilities." Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", prepared jointly by AGC and ASC, for industry recommendations.

3. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

E. EQUIPMENT

1. Temporary Offices: Contractor shall provide, if so desired, their own prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows and serviceable finishes.

2. Temporary Toilet Units: The General Contractor shall provide self-contained single-occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with a glass fiber reinforced polyester shell or similar nonabsorbent material.

3. First Aid Supplies: Comply with governing regulations.

4. Fire Extinguisher: Provide hand-carried, portable UL-rated, class "A" fire extinguisher for temporary offices and similar spaces. In other locations provide hand-carried, portable, UL-rated, class "ABC" dry chemical extinguisher, or a combination of extinguisher of NFPA recommended classes for the exposures.

II. EXECUTION

A. INSTALLATION

Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

B. TEMPORARY UTILITY INSTALLATION

1. General: The Contractor shall, at his own cost and expense, install, operate, protect, and maintain the respective temporary services as hereinafter specified, during the construction period of the entire project. These temporary services shall include water supply, electric, light and power, temporary heat, and any other services as may be stipulated in the General Conditions, Special Requirements, and/or Specifications.

2. The Contractor shall pay all costs for the operation of temporary services except that the institution will pay all fuel costs for steam and water which are taken from their utility systems.

3. Any part or parts of permanent service lines, grounds, and buildings, disturbed or damaged by the installation and/or removal of the temporary service lines shall be restored to their original condition.

4. The Contractor who fails to carry out his responsibility in supplying temporary services, as set forth in his contract, shall be held responsible for such failure, and the System shall have the right to take such action as it deems proper for the protection and conduct of the work and shall deduct the cost involved from the amount due the Contractor.

5. Arrange with the System and existing users for a time when service can be interrupted, where necessary, to make connections for temporary services.

6. Temporary Water Supply:

   The System, within its facilities, will furnish water for construction purposes, free of charge to the contractors.

7. Temporary Construction Light and Power:

   a. The Electrical Contractor shall, at its own expense, install, operate, protect and maintain the temporary service for construction light and power. This service shall be taken from the closest available primary or secondary source. The Electrical Contractor shall extend the temporary wiring throughout the building, properly insulated and installed in a safe manner. The institution will not provide electric power used as a source of heat for the temporary heating herein before specified.

   b. Complete installation of temporary lighting and power should be in strict accordance with the latest edition of the National Electrical Code.

   c. **The General Contractor shall be responsible for payment of all electric usage charges associated with site operation, except each prime contractor shall be responsible for payment of their own field office consumption.**

8. Temporary Heat (Permanent Heat by HVAC Contractor)

   a. The temporary heat requirements on this project are divided into two (2) categories, i.e., (1) Temporary heat required prior to the enclosure of the structure or portions thereof; (2) Temporary heat required subsequent to the enclosure of the structure.

   b. A structure shall be considered to be enclosed when (1) The roof is

on and tight; (2) The exterior walls have been complete; and (3) When openings, doors and windows are closed with permanent closures, or with substantial temporary closures which will affect the retention of heat within the structure.

c. Prior to enclosure of structure(s) or portions thereof, and when official local weather predictions indicate below freezing temperatures, each prime contractor shall provide, maintain, operate and pay all costs, including fuel to supply temporary heat to protect its own portion of the project.

d. Self-contained oil-fired portable heaters, if used, shall be vented to outside of the structure. These types of heaters shall be used only in areas where finished work has been started.

e. Temporary heat in the enclosed structures will be required on a 24-hour basis when the ambient temperature is officially predicted or is actually at 35 degrees F. or lower. Heating Contractor shall advise the System of each 24-hour period that heat will be furnished prior to furnishing same, in order to coordinate accurate field records.

f. The System may authorize temporary heat at times other than above required in order to effect job progress.

g. After the structure is enclosed and temporary heat is required for proper construction as determined by the System, the Heating Contractor at his own cost and expense shall provide the equipment and heating personnel for the temporary heat. The Heating Contractor may install gas or oil-fired portable heating units provided the products of combustion are totally vented outside the building(s). The Heating Contractor may utilize the permanent system or portions thereof or may install temporary steam or hot water radiation or convection or a combination of both.

h. Temporary heating system shall be of sufficient capacity to heat the interior of the structure to 50 degrees F. when the outside temperature is 0 degrees F. Temperature at all times must be 50 degrees F. or above. This service shall be continued until the entire project is completed.

i. Where electricians or plumbers are required to install, operate, supervise or maintain equipment used in the provision of temporary heat, the payment for the services of such personnel shall be the responsibility of the Electrical or Plumbing Contractors, respectively. It will be the responsibility of the Electrical and/or Plumbing Contractors to coordinate with the Heating Contractor to meet temporary heat requirements.

j. The General Contractor shall pay for all fuel or gas for the temporary heat equipment. Electric power from institution sources shall not be

used for temporary heat.

k. The General Contractor, at his own cost and expense, shall remove all soot, smudge and other deposits from walls, ceilings and exposed surfaces which are the result of the use of any temporary heating equipment, including the use of the permanent heating system for temporary heating purposes. He shall not do any finish work until all such surfaces are properly cleaned.

l. All permanent heating equipment used to supply temporary heat shall be completely cleaned and reconditioned by the Heating Contractor prior to final acceptance in the presence of the System personnel. All permanent heating equipment or any other equipment found to be damaged due to being used for temporary heat shall be replaced. All replacements must be checked and approved by System personnel.

m. The responsibility of the several Contractors herein mentioned for the provisions of temporary heat subsequent to the enclosure of the building(s), or portions thereof within their contract price, is limited to the number of calendar days as indicated in Section 01010, the total cost of which must be included and made a part of the lump sum bid submitted by each bidder. This is also to be shown as the last item on the Contract Breakdown Sheet, to include the number of calendar days, cost per twenty-four (24) hour day and extended price. The cost per twenty-four (24) hour day will be used as an add or deduct amount should the number of days of temporary heat furnished exceed or be less than the number of calendar days stated previously in this paragraph. This price is subject to acceptance or rejection by the System. If accepted, it is to be used in the form of an addition to or deduct from the contract price for furnishing temporary heat for a longer or lesser period than the number of days herein before stipulated. If rejected, a unit price for this purpose shall be agreed to by the parties prior to the approval of the Contract Breakdown Sheet. If no agreement can be reached, the price for temporary heat shall be determined by arbitration, as provided in Paragraph 63.83 of the General Conditions. The Contractor must fully document the cost involved for supplying temporary heat with substantiating data.

C. TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION

1. Sanitary Facilities:

a. The Contractor shall, at his own cost and expense, provide and maintain in a clean and sanitary condition, adequate and approved sanitary facilities as specified below. Portable chemical toilets approved by Pennsylvania Department of Health are acceptable.

Sanitary facilities include temporary toilets, wash facilities and drinking water fixtures. Comply with regulations and health codes for

the type, number, location, operation and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.

Provide toilet tissue, paper towels, paper cups and similar disposable materials for each facility. Provide covered waste containers for used material.

b. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition. Dispose of drainage properly. Supply cleaning compounds appropriate for each condition. Provide safety showers, eye-wash fountains and similar facilities for convenience, safety and sanitation of personnel.

c. Drinking Water Facilities: Provide containerized tap-dispenser bottled-water type drinking water units, including paper supply. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55 degrees (7 to 13 degrees C).

2. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 degree F. (27 degrees C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

D. SECURITY AND PROTECTION FACILITIES INSTALLATION

1. Barricades, Warning Signs and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.

2. Site Enclosure Fence: The General Contractor shall maintain a fence on the perimeter of the site to meet requirements of the local authorities having jurisdiction and as specified.

3. Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01501 - SAFETY

I. GENERAL

A. STIPULATIONS

The "Special Requirements" and “General Conditions” form a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

This section emphasizes certain safety condition that must be maintained during construction.

II. PRODUCTS (NOT APPLICABLE)

III. EXECUTION

A. Regarding safety requirements during construction, the following apply:

1. Open ditches must be fenced; where walks cross such ditches, bridged walkways must be provided with rails on both sides. Bridged walkways must be adequately lighted at night.

2. Temporary walks and roads should be surfaced by number 2 crushed stone if they are to be in public use.

3. Walks and roadways used by both Contractor and the public shall be kept in repair and cleared by the Contractor at least once each day and more often as conditions require.

4. No obstructions are to be placed on or within 15 feet of fire hydrants. Hydrants must be accessible for fire fighting purposes.

5. Any type of temporary heating units used must be adequately protected and attended.

6. Where walkways, roadways, or entrances used by the public are adjacent to or pass under construction scaffolding or near building edge, the Contractor shall provide an adequate covering for such area to project passersby from falling objects.

7. All temporary construction sheds, trailers, and flammable liquid storage areas belonging to Contractors shall be so placed on the construction site to minimize any danger to University property and the public.

8. The System is available for consultation regarding the above items and any other safety matter.

B. BLASTING: It will be necessary for the Contractor doing blasting to conform to an established procedure which is in effect on the Campus and is as follows:

1. No blasting may be done without prior approval of the System project manager.

2. When a Contractor proposes to set off a blast, he shall advise the System of his intention to do so not less than seventy two hours in advance of the time of the blast.

3. Upon notification of an intended blast, the System will be notified to dismantle or protect appropriate equipment.

4. Any Contractor, after having notified the System of his intention to blast, will not be permitted to blast until he receives an all-clear notification.

5. All of the requirements of the "General Provisions" will apply.

6. All blasting required in the removal of rock shall be performed by qualified power men. All requirements of local, state or other laws and regulations relating to this type of work must be fully complied with; all permits required must be obtained and paid for by the said Contractor prior to the commencement of any blasting.

7. The utmost care is to be exercised in the performance of blasting work and the size of the blasting charge must be kept to a minimum. No charge is to be set off until proper blasting mats have been placed over the affected area and every reasonable precaution taken to protect life, the building structure, and all property in the vicinity. The said Contractor will be held responsible for any damage resulting from blasting performed by his men. Should said Contractor do any blasting, he must take out and maintain blasting insurance in the "General Conditions" under the heading of contractor's insurance to the same levels as specified.

8. All blasting must be accomplished by the use of electrically energized charges; open fuses will not be permitted. The Contractor shall not bring to the site more blasting power, sticks or caps than will be required for one day's operation. The storing of any such material on the site, after normal working hours, is absolutely prohibited.

9. All Contractors blasting will be required to use a clearly distinguishable, audible horn or whistle capable of being heard above other normal background noises at least 200 feet from the blasting site.

10. A specific blasting Signal Code must be established on the following basis; with appropriate signs designating the code conspicuously posted at points along the perimeter of the job site:

    Warning - Blasting Operations

    1 Whistle Blast -- Warning

    2 Whistle Blasts -- Clear the Area

    3 Whistle Blasts -- Explosion

    The licensed blaster shall be responsible for the sequence of whistle blasts with an appropriate delay between each, in the interest of safety to all persons in the area.

11. At the Warning Signal, flagmen shall be posted at least 200 feet from the blast site on all sides, with additional flagmen posted at intermediate building exits, where required. These flagmen shall stop all pedestrian and vehicular traffic from entering within the 200 feet limit of the blasting area.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01600 - MATERIALS AND EQUIPMENT

I. GENERAL

A. STIPULATIONS

The section "Special Requirements" forms a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

1. This Section specifies administrative and procedural requirements governing the Contractor's selection of products for use in the Project.

2. The Contractor's Construction Schedule and the Schedule of Submittals are included under Section "Submittals."

3. Refer to Section 01095 - Standards for applicability of industry standards to products specified.

4. Administrative procedures for handling requests for substitutions made after the award of the Contract are included under Section 01631 - Product Substitutions.

D. DEFINITIONS

1. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.

a. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

(1) "Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature, that is current as of the date of the Contract Documents.

(2) "Foreign Products", as distinguished from "domestic products," except where defined in the General Conditions.

b. "Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.

c. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

E. SUBMITTALS

1. Product List Schedule: Prepare a schedule showing products specified in a tabular form acceptable to the Professional. Include generic names of products required. Include the manufacturer's name and proprietary product names for each item listed. Coordinate the product list schedule with the Contractor's Construction Schedule and the Schedule of Submittals.

2. Form: Prepare the product listing schedule with information on each item tabulated under the following column headings:

   a. Related Specification Section number.
   b. Generic name used in Contract Documents.
   c. Proprietary name, model number and similar designations.
   d. Manufacturer's and name and address.
   e. Supplier's name and address.
   f. Installer's name and address.
   g. Projected delivery date, or time span of delivery period.

3. Initial Submittal: Within 30 days after the Notice to Proceed, submit 3 copies of an initial product list schedule. Provide a written explanation for omissions of data, and for known variations from Contract requirements. At the Contractor's option, the initial submittal may be limited to product selections and designations that must be established early in the Contract period.

4. Completed Schedule: Within 60 days after Notice to Proceed, submit 3 copies of the completed product list schedule. Provide a written explanation for omissions of data, and for known variations from Contract requirements.

5. Professional's Action: The Professional will respond in writing to the Contractor within 2 weeks of receipt of the completed product list schedule. No response within this time period constitutes no objection to listed manufacturers or products, but does not constitute a waiver of the requirement that products comply with Contract Documents. The Professional's response will include a list of unacceptable product selections, containing a brief explanation of reasons for this action.

F. QUALITY ASSURANCE

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

2. Compatibility of Options: When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

   a. Each prime Contractor is responsible for providing products and construction methods that are compatible with products and construction methods of other prime or separate Contractors.

b. If a dispute arises between prime Contractors over concurrently selected, but incompatible products, the Professional will determine which products shall be retained and which are incompatible and must be replaced.

3. Foreign Product Limitations: Reference the Special Requirements for Foreign Product Limitations.

4. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view in occupied spaces or on the exterior.

a. Labels: Locate required product labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface that is not conspicuous.

b. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface which is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:
(1) Name of product and manufacturer.
(2) Model and serial number.
(3) Capacity.
(4) Speed.
(5) Ratings.

G. PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.

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

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

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

4. Inspect products upon delivery to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected.

5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.

6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.

7. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

II. PRODUCTS

A. PRODUCT SELECTION

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

   a. Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.

   b. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.

2. Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include the following:

   a. Proprietary Specification Requirements:
   Where only a single product or manufacturer , and applicable model number, is listed, the Contractor shall only provide that product. In this case, the System has approved the product, system, or manufacturer as a proprietary source in the best interest of the System and no substitution will be permitted.

   b. Non-Proprietary Specifications:
   Where the contract documents name two (2) or more products, listing the manufacturers and, as applicable, model numbers, the Contractor shall provide one (1) of those products named to be incorporated into the work unless a product substitution has been approved and issued as an addendum during the bidding period, or a product substitution has been approved under the procedures listed in Section 01631-Product Substitutions.

   c. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.

   d. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.

   Manufacturer's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.

   e. Compliance with Standards, Codes and Regulations: Where the Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.

f. Visual Matching: Where Specifications require matching an established Sample, the Professional's decision will be final on whether a proposed product matches satisfactorily.

Where no product available within the specified category matches satisfactorily and also complies with other specified requirements, comply with provisions of the Contract Documents concerning "substitutions" for selection of a matching product in another product category, or for noncompliance with specified requirements.

g. Visual Selection: Where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Professional will select the color, pattern and texture from the product line selected.

III. EXECUTION

A. INSTALLATION OF PRODUCTS:

Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01631 - PRODUCT SUBSTITUTIONS

I. GENERAL

A. STIPULATIONS

The section "Special Requirements" forms a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

1. This Section specifies administrative and procedural requirements for handling requests for substitutions after the award of the Contract.

2. The Contractor's Construction Schedule and the Schedule of Submittals are included under Section "Submittals."

3. Refer to Section 01095 - Reference Standards for applicability of industry standards to products specified.

4. Procedural requirements governing the Contractor's selection of products and product options are included under Section 01600 - Materials and Equipment.

D. DEFINITIONS

1. Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.

2. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after the award of the Contract are considered “requests for substitutions." The following are not considered substitutions:

a. Substitutions requested by Bidders during the bidding period, submitted to the design professional a minimum of 10 calendar days prior to the date set for receipt of bid proposals. Those product substitutions that are accepted will be published in an addendum and accepted prior to the award of the Contract, and therefore are considered to be included in the Contract Documents and are not subject to requirements specified in this Section.

b. Revisions to Contract Documents requested by the System or Professional after the Notice to Proceed.

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

d. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

II. PRODUCTS

A. SUBSTITUTIONS

Conditions: The Contractor's "request for substitution" will be received and considered by the Professional when one or more of the following conditions are satisfied, as determined by the Professional; otherwise, requests will be returned without action except to record noncompliance with these requirements.

1. Extensive revisions to Contract Documents are not required.

2. Proposed changes are in keeping with the general intent of Contract Documents.

3. The request is timely, fully documented and properly submitted.

4. In addition, at least one of the following conditions must be satisfied:

   a. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.

   b. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.

   c. A substantial advantage is offered the System, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the System may be required to bear. Additional responsibilities for the System may include additional compensation to the Professional for redesign and evaluation services, increased cost of other construction by the System or separate Contractors, and similar considerations.

   d. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.

   e. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.

   f. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provide the required warranty.

   g. Where a proposed substitution involves more than one prime Contractor, each Contractor shall cooperate with the other Contractors involved to coordinate the Work, provide uniformity and consistency, and to assure compatibility of products.

5. The Contractor's submittal and Professional's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents, does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

B. SUBMITTALS

1. Substitution Request Submittal: In all cases, the Contractor must provide a product substitution that meets any stated salient features or performance criteria listed in the technical specifications.

a. Submit 3 copies of each request for substitution for consideration. Submit requests in the form and in accordance with procedures required for Change Order proposals.

b. Identify the product, or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:

(1) Product Data, including Drawings and descriptions of products, fabrication and installation procedures.

(2) Samples, where applicable or requested.

(3) A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.

(4) Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Professional and separate Contractors, that will become necessary to accommodate the proposed substitution.

(5) A statement indicating the substitutions effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.

(6) Cost information, including a proposal of the net change, if any in the Contract Sum.

(7) Certification by the Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time, that may subsequently become necessary because of the failure of the substitution to perform adequately.

(8). If a decision on use of a proposed substitute cannot be made in a timely manner, the Contractor shall use the product specified. Acceptance of any substitution will be in the form of a Change Order.

III. EXECUTION (Not Applicable)

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01700 - PROJECT CLOSEOUT

I. GENERAL

A. STIPULATIONS

The section "Special Requirements" forms a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

This Section specifies administrative and procedural requirements for project closeout, including but not limited to:

1. Substantial Completion inspection procedures.
2. Final Completion inspection procedures.
3. Record document submittals.
4. Operating and Maintenance Instructions
5. Final cleaning.

D. SUBSTANTIAL COMPLETION INSPECTION

1. Substantial Completion Checklist:

   Before requesting an inspection for substantial completion, the following items must be completed and/or submitted to the design professional. Any exceptions shall be listed in the contractor's request:

   a. Occupancy permits and similar approvals (L&I, Boiler Inspection, Elevator Inspection, Fire Chief, local, etc.)
   b. Testing/adjust/balance records
   c. Record Documents Submittals-(see part F).
   d. Deliver tools, spare parts, extra stock, and similar required items.
   e. Make final change of permanent locks and transmit keys to the System.
   f. Complete start-up testing of systems and submit start-up performance reports.
   g. Complete Operating and Maintenance Instructions with University personnel. (see Part III-Execution)
   h. Discontinue and remove temporary protection and facilities from the site, along with construction tools, mock-ups, and similar elements. Remove surplus materials, rubbish and similar elements.
   i. Provide final meter readings (if any)
   j. Final progress photographs
   k. Complete Final Cleaning (see Part III-Execution).

2. Request, in writing, for the design professional to perform a substantial completion inspection, and stating therein that all the items in the substantial inspection checklist have been completed, or it is explained in the request the reason they are not.

3. Within 30 days of receipt of a request for inspection for substantial completion, the Professional will either proceed with the inspection or advise the contractor of requirements that must be met before the project can be considered ready for inspection for substantial completion. Upon inspection, the Professional will either prepare the Certificate of Substantial Completion, or advise the contractor of work items that must be completed or corrected before the certificate will be issued.

E. FINAL COMPLETION INSPECTION

1. Before requesting an inspection, in writing, for final completion, submit the following:
   a. A copy of the punch list of uncompleted work items to the Professional, indicating that each item has been completed or otherwise resolved for acceptance or delay because of circumstances acceptable to the Professional.

   b. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion, or when the System took possession of and responsibility for corresponding elements of the work (if applicable).

2. Upon receipt of the above submittals, the Professional will inspect the punch list of uncompleted work items. The Professional will either issue a certificate of final completion, or advise the contractor of items that are incomplete or of obligations that have not been fulfilled and are required for final completion. If necessary, another inspection will be conducted.

F. RECORD DOCUMENT SUBMITTALS

1. General:
   Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Professional's reference during normal working hours.

2. Record Drawings:
   All prime contractors shall maintain a clean, undamaged set of prints of contract drawings and shop drawings. Mark the set to show the actual installation where the installation varies from the work as originally shown. Record a cross-reference at the corresponding location on the contract drawings where shop drawings are used. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
   a. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
   b. Note related Change Order numbers where applicable.
   c. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
   d. Upon completion of the work, submit record drawings to the Professional for the System's records.

3. Record Specifications:
   All prime contractor's shall maintain one complete copy of the Project Manual, including addenda, change orders and modifications. Mark these documents to show variations in actual Work performed. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation.

4. Record Sample Submitted:
   Immediately prior to the date or dates of Substantial Completion, the Contractor will meet at the site with the Professional and the System's personnel to determine which of the submitted samples that have been maintained during progress of the Work are to be transmitted to the System for record purposes. Comply with delivery to the System's storage area.

5. Miscellaneous Record Submittals:
Refer to other specification sections for requirements of record-keeping and submittals in connection with actual performance of the work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Professional for the System's records.

6. Operating and Maintenance Instructions Manuals

a. Submittal Schedule

Prior to the substantial completion inspection, the contractor shall submit two draft copies of each operating and maintenance instructions manual to the Professional for review.

After the substantial completion inspection, make corrections or modifications to comply with the Professional's comments. Submit the required copies of each corrected manual to the Professional within fifteen days of receipt of the Professional's comments. Additionally, provide one copy of each manual on a CD in ".pdf" format.

b. Each prime Contractor shall prepare operating and maintenance instructions manuals for its own installations.

Where operating and maintenance instructions manuals include information on installations by the contractor for general construction and another contractor, the contractor for general construction shall prepare the manuals, including collection, collation and binding of the material and submittal of data as specified.

Where operating and maintenance instructions manuals include information on installations by more than one prime contractor, other than the contractor for general construction, the contractor who is the principal source of information, as determined by the Professional, shall receive information furnished by other contractors and bind the material into unified manuals, and submit the manuals as specified.

c. In preparation of the Operating and Maintenance Instructions Manuals, use personnel thoroughly trained and experienced in operating and maintenance of the equipment or system involved. Where written instructions are required, use personnel skilled in technical writing to the extent necessary for communication of essential data. Where drawings or diagrams are required, use draftsman capable of preparing drawings clearly in an understandable format.

d. Manual Organization

Prepare the operating and maintenance instructions manuals in the form of an instructional manual for use by University operating and maintenance personnel. Organize into suitable sets of manageable size. Where possible, assemble instructions for similar equipment into a single binder.

(1) Binders: For each manual, provide heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, in thickness necessary to accommodate contents, sized to receive 8 ½ by 11" paper. Provide a clear plastic sleeve on the spine, to hold labels describing the contents. Provide pockets in the covers to receive folded sheets.

Where two or more binders are necessary to accommodate data, correlate data in each binder into related groupings in accordance with the Project Manual table of contents. Cross-reference other binders where necessary to provide essential information for proper operation or maintenance of the piece of equipment or system.

Identify each binder on the front and spine, with the typed or printed title "OPERATION AND MAINTENANCE INSTRUCTIONS MANUAL," Project title or name, and subject matter covered. Indicate the volume number for multiple volume sets of manuals.

(2) Dividers: Provide heavy paper dividers with celluloid covers for each separate Section. Mark each tab to indicate contents. Provide a typed description of the product and major parts of equipment included in the Section on each divider.

(3) Protective Plastic Jackets: Provide protective transparent plastic jackets designed to enclose diagnostic software for computerized electronic equipment.

e. Manual Content

Organize each manual into separate sections for each piece of related equipment. As a minimum each manual shall contain a title page, a table of contents, copies of product data, drawings and written text, and copies of each warranty, bond and service contract issued (as applicable).

(1) Title Page: Provide a title page in a transparent plastic envelope as the first sheet of each manual. Provide the following information:

Subject matter covered by the manual:
Name and address of the Project, Date of submittal
Name, address, telephone number of the Contractor.
Name and address of the Architect
Cross reference to related systems in other operating and maintenance manuals

(2) Table of Contents: After the Title Page, include a typewritten table of contents for each volume, arranged systematically according to the Project Manual format. Include a list of each product included, identified by product name or other appropriate identifying symbol and indexed to the content of the volume. Where more than one volume is required to accommodate data for a particular system, provide a comprehensive table of contents for all volumes in each volume of the set.

(3) General Information: Provide a general information section immediately following the Table of Contents, listing each product included in the manual, identified by product name. Under each product, list the name, address, and telephone number of the subcontractor or installer, and the maintenance contractor. Clearly delineate the extent of responsibility of each of these entities. In addition, list a local source for replacement parts and equipment.

(4) Shop Drawings and Product Data: Where manufacturer's standard printed data is included in the manuals, include only sheets that are pertinent to the part or product installed. Mark each sheet to identify each part or product included in the installation. Where more than one item in a tabular format is included, identify each item using appropriate references from the contract documents. Identify data that is applicable to the installation and delete references to information that is not applicable.

(5) Written Text: Where manufacturer's standard printed data is not available, and information is necessary for proper operation and maintenance of equipment or systems, or it is necessary to provide additional information to supplement data included in the manual, prepare written text to provide necessary information. Organize the text to provide necessary information. Organize the text in a consistent format under separate headings for different procedures. Where necessary, provide a logical sequence of instruction for each operating or maintenance procedure.

(6) Drawings:
Where drawings or diagrams are required as part of the manual, provide reinforced punched binder tabs on the drawings and bind in with the text. Where oversize drawings are necessary, fold the drawings to the same size as the text pages and use as a fold-out. If drawings are too large to be used practically as a fold-out, place the drawing, neatly folded, in the front or rear pocket of the binder. Insert a typewritten page indicating the drawing title, description of contents and drawing location at the appropriate location in the manual.

Provide specially prepared drawings where necessary to supplement manufacturer's printed data to illustrate the relationship component parts of equipment or systems, or to provide control or flow diagrams. Coordinate these drawings with information contained in Project Record Drawings to assure correct illustration of the completed installation.

Do not use original Project Record Documents as part of the Operating and Maintenance Instructions Manuals.

(7) Warranties, Bonds and Service Contracts: Provide a copy of each warranty, bond or service contract in the appropriate manual for the information of the Owner's operating personnel. Provide written data outlining procedures to be followed in the event of product failure. List circumstances and conditions that would affect validity of the warranty or bond.

f. Types of Operating and Maintenance Instructions Manuals

(1) General Products Manual

Submit three copies of manufacturer's data and maintenance instructions for those products that are not assigned to one of the other manuals defined in this section. Those materials could include specifications sections 02000, 03000, 05000, etc.

(2) Architectural Products Manual

Submit three copies manufacturer's data and instructions on care and maintenance of architectural products, including applied materials and finishes. Refer to individual Specification Sections for additional requirements on care and maintenance of materials and finishes.

(a) Manufacturer's Data:

Manufacturer's catalog number
Size
Material composition
Color
Texture
Reordering information for specially manufactured products

(b) Care and Maintenance Instructions:

Provide information on care and maintenance, including manufacturer's recommendations for types of cleaning agents to be used and methods of cleaning. Provide information regarding cleaning agents and methods that could prove detrimental to the product. Include manufacturer's recommended schedule for cleaning and maintenance.

(3) Moisture-Protection and Weather-Exposed Products Manual

Provide 3 copies of complete manufacturer's data with instructions on inspection, maintenance and repair of products exposed to the weather or designed for moisture-protection purposes.

(a) Manufacturer's Data:

Applicable standards
Chemical composition
Installation details
Inspection procedures
Maintenance information
Repair procedures

(4) Equipment and Systems Manuals

(a) Submit six copies of each completed manual on equipment and systems, in final form, to the Professional for distribution. Provide separate manuals for:

Plumbing Equipment
HVAC Equipment
Building Operating/Mechanical Systems
Electrical Equipment
Electrical Operating Systems

Refer to Specification Sections for additional requirements on operating and maintenance of the various pieces of equipment and operating systems.

(b) Provide the following information for each piece of equipment, each building operating system, and each electrical operating system.

Description: Provide a complete description of each unit and related component parts:

- Manufacturer's Name, Model #, Serial Numbers
- Equipment or system function
- Operating characteristics
- Limiting conditions
- Performance curves
- Engineering data and tests
- Complete nomenclature and number of replacement parts (spare parts list)

Manufacturer's Information: For each manufacturer of a component part or piece of equipment, provide printed operating and maintenance instructions, assembly drawings and wiring diagrams required for maintenance, and a list of items recommended to be stocked as spare parts.

Maintenance Procedures: Provide information detailing essential maintenance procedures, including routine operations, trouble-shooting guide, disassembly, repair and reassembly, alignment, adjusting and checking.

Operating Procedures: Provide information and equipment and system operating procedures, including the following:

- Start-up procedures
- Equipment or system break-in
- Routine and normal operating instructions
- Regulations and control procedures
- Instructions on stopping
- Shut-down and emergency instructions
- Summer and winter operating instructions
- Required sequences for electric or electronic systems
- Special operating instructions, including testing procedures

Servicing Schedule: Provide a schedule of routine servicing and lubrication requirements, including a list of required lubricants for equipment with moving parts.

Controls: Provide a description of the sequence of operation and as-installed control diagrams by the control manufacturer for systems requiring controls.

Coordination Drawings: Provide all Coordination Drawings.

Valve Tags: Provide charts of valve tag numbers, with the location and function of each valve.

Circuit Directories: For electrical and electronic systems, provide complete circuit directories of panel boards, including electric service, controls, and communication.

II. PRODUCTS (Not Applicable)

III. EXECUTION

A. OPERATING AND MAINTENANCE INSTRUCTIONS

1. For instruction of the System's operating and maintenance personnel, use experienced instructors thoroughly trained and experienced in the operation and maintenance of the building equipment or system involved. Instruct University personnel at mutually agreed upon times in the operation, adjustment, and maintenance of products, equipment and systems. For equipment that requires seasonal operation, arrange for similar instructions during appropriate times. Use operation and maintenance instruction manuals for each piece of equipment or system as the basis of instruction.

   Where instruction in operating and maintenance procedures on equipment and systems involves participation of more than one contractor, the contractor who is designated by the Professional as the principal instructor shall coordinate with the other contractors for a mutually agreeable time to provide instruction to the System's operating and maintenance personnel.

2. Each prime contractor shall arrange for each installer of equipment that requires regular maintenance to meet with the System's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:
   a. Operating and Maintenance Instructions manuals
   b. Record documents
   c. Spare parts and materials
   d. Tools
   e. Lubricants
   f. Fuels
   g. Identification systems
   h. Control sequences
   i. Hazards
   j. Cleaning
   k. Warranties and bonds
   l. Service agreements and similar continuing commitments

3. As part of the instructions for operating equipment, demonstrate the following procedures:
   a. Start-up
   b. Shutdown
   c. Emergency operations
   d. Noise and vibration adjustments
   e. Safety procedures
   f. Economy and efficiency adjustments
   g. Effective energy utilization

B. FINAL CLEANING

1. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
   a. Remove labels that are not permanent labels.
   b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
   c. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave finished floors in clean, wet-mopped condition. Vacuum carpeted surfaces. Unfinished concrete floors may be left in broom-swept condition.
   d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
   e. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.

2. Pest Control: Engage an experienced exterminator to make a final inspection, and rid the Project of rodents, insects and other pests.

3. Removal of Protection: Remove temporary protection and facilities installed for protection of the work during construction.

4. Compliance:
   a. Comply with regulations of authorities having jurisdiction and safety standards for cleaning.
   b. Do not burn waste materials but remove waste materials from the site and dispose of in a lawful manner.
   c. Do not bury debris or excess materials on the System's property.
   d. Do not discharge volatile, harmful or dangerous materials into drainage systems.
   e. Arrange with the System for disposition of extra materials of value that remain after completion of associated work, when they become the System's property,

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01740 - WARRANTIES AND BONDS

I. GENERAL

A. STIPULATIONS

The "Special Requirements" and “General Conditions” to the contract form a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

B. RELATED DOCUMENTS

The Contract Drawings and the Standard Form of Agreement apply to this Section.

C. SUMMARY

1. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers standard warranties on products and special warranties.

   a. Refer to the General Provisions for terms of the Contractor's special warranty of workmanship and materials.

   b. General closeout requirements are included in Section 01700 - "Project Closeout."

   c. Specific requirements for warranties for the Work and products and installations that are specified to be warranted, are included in the individual Sections of Divisions-2 through -16.

   d. Certifications and other commitments and agreements for continuing services to System are specified elsewhere in the Contract Documents.

2. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

3. Separate Prime Contracts: Each prime Contractor is responsible for warranties related to its own Contract.

D. WARRANTY REQUIREMENTS

1. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

2. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

3. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the System has benefited from use of the Work through a portion of its anticipated useful service life.

4. System's Recourse: Written warranties made to the System are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the System can enforce such other duties, obligations, rights, or remedies as established by the Uniform Commercial Code (UCC).

5. Rejection of Warranties: The System reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

   The System reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

E. SUBMITTALS

1. Submit written warranties to the Professional prior to the date certified for Substantial Completion. If the Professional's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Professional.

   When a designated portion of the Work is completed and occupied or used by the System, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Professional within fifteen days of completion of that designated portion of the Work.

2. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the System through the Professional for acceptance prior to final execution.

3. Forms for special warranties are included at the end of this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or the Contractor and subcontractor, supplier or manufacturer. Submit a draft to the System through the Professional for approval prior to final execution.

   Refer to individual Sections of Divisions-2 through -16 for specific content requirements, and particular requirements for submittal of special warranties.

4. Form of Submittal: At Final Completion compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

5. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8 1/2" by 11" paper.

   a. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.

   b. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS", the Project title or name, and the name of the Contractor.

   c. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

II. PRODUCTS (not applicable).

III. EXECUTION (not applicable).