SECTION 01 10 00

SUMMARY

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

A. Refer to other Divisions of these Specifications to determine the type and extent of work therein affecting the work of this trade, whether or not such work is specifically mentioned in this Section.

B. Provide a copy of all applicable Drawings including Surveys, Record Drawings, Shop Drawings, Architect's Supplemental Instruction, and Specifications at the site during all work.

1.02 SUMMARY

A. Project Information

1. Project Identification: Physical Education (PG) Building.

2. Project Location: Montgomery College Germantown Campus at 20200 Observation Drive, Germantown, MD 20876.

3. Owner: Board of Trustees, Montgomery Community College.

4. Engineer: Simpson Gumpertz & Heger Inc., 1828 L Street NW, Suite 950, Washington, DC 20036.

B. The Work contemplated by the Contract Documents includes the work of all trades required and all labor, equipment, materials, and supervision necessary and incidental to the Work indicated. The following is a brief summary of the description of Work outlined in the related Sections listed below, and is not all inclusive. For additional and more complete information, refer to the specific Specification Sections and the Contract Drawings.

C. Project Mobilization

1. This work shall include the General Contractor and Subcontractor mobilization costs. Include all necessary permits, temporary offices, bonding costs, etc.

2. Attend a preconstruction meeting to be held with the Owner, the Contractor, the Engineer, and all trades and Subcontractors involved in the project to discuss the Work.

D. Project General Conditions

1. This work shall include all miscellaneous costs associated with completion of the Work in accordance with the Construction Documents. This shall include,

but not be limited to, access to the building, barricades, work platforms and design thereof, temporary shoring of the roof structure, shoring and bracing, overhead protection, cleanup, dust control, noise control, layout, equipment, waste disposal, documentation, obstruction removal and replacement, etc.

2. Coordinate with the Owner to maintain access to the building at all times, including handicapped access. Maintain entry through the main entrance and side entrances, excluding entrances to maintenance rooms and other spaces not accessible to the public, at all times by permanent or sufficient temporary means.

3. Provide the Engineer and Owner with assistance and access to all areas of the building where the Work will be performed, including incidental labor and facilities.

4. All work is to be done in accordance with applicable codes and regulations.

5. Field verification of existing conditions:

   a. Field Measurements: Verify all site conditions and dimensions by field measurements before material fabrication or delivery and indicate measurements on Shop Drawings.

   b. Notify the Engineer immediately of any inconsistency between the conditions found and those shown in the Contract Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

   c. Consider the special conditions associated with repairs to existing construction when measuring for shop drawings.

E. Section 01 22 00 – Unit Prices

1. Section includes administrative and procedural requirements for unit prices outlined in the Specifications.

F. Section 01 33 00 – Submittals

1. Provide submittals for the Engineer's review as described in Section 01 33 00 – Submittals and other Specification Sections. These submittals include:

   a. Submit a detailed construction schedule and selective demolition plan showing the proposed phasing of the work, including means for temporary protection and maintaining emergency exits while the building is occupied.

   b. Submit shop drawings, engineered calculations, and narratives if shoring is required for steep-slope roof repairs.

G. Section 01 45 00 – Mockups

1. Provide an in situ mockup, as indicated in the Drawings and associated Technical Specifications, consisting of, but not limited to, the following items:

    a. Masonry wall mockup with air/water barrier and through-wall flashing

    b. Soffit framing mockup

    c. Steep-slope roof mockup

    d. Built in gutter mockup

    e. Low-slope roofing mockup with associated coping flashing

    f. Low-slope roofing tie-in to existing low-slope roofing membrane to remain.

    g. Curtain wall mockup, where shown on the Drawings

    h. EIFS mockup, including air/water barrier

H. Section 01 50 00 – Construction Facilities, Access and Site Use

1. Submit site logistical plan for Owner’s and Engineer’s review and approval prior to mobilization.

2. Staging and Access – Provide safe access at all times to the job site to conduct the work and for all workers, the Engineer, Owner, and any other personnel that may be permitted to access the job site. Provide overhead sidewalk protection at accessible sidewalks at the main entrance and over egress doors during the Work in or above those areas. Protect the general public at all times from the work at building elevations above.

3. Use of Site – Use and access to the building must be coordinated with the Owner.

    a. Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

    b. Driveways, Walkways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.

        (1) Schedule deliveries to minimize use of driveways and entrances by construction operations.

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

4. Hours of work – Proceed with Work during hours stipulated by the Owner and as required by the applicable Construction Noise regulations.

5. Noise control and vibration – Conduct the Work in a manner that minimizes disruption to building occupants and in accordance with Owner requirements.

6. Protection of Building – Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect existing building surfaces including, but not limited to, window frames and glazing installed under this scope of work, and roofing membranes remaining during all work.

7. Construct exterior staging and sidewalk protection to provide access to the building and to protect building entrances and publicly trafficked areas during the work.

8. Maintain access to the building for all emergency services, including but not limited to fire protection systems and standpipes, and emergency access/egress routes.

I. Section 01 53 00 – Barriers and Enclosures

1. Provide weathertight and insulated temporary enclosures for window openings.

2. Provide miscellaneous enclosures as required to maintain the watertight integrity of the building envelope during the Work.

J. Section 01 74 19 – Construction Waste Management and Disposal

1. Perform daily cleaning of existing building components where dust and debris has settled.

2. Remove all demolition debris promptly from site and clean off temporary on-site storage areas on a daily basis.

3. Provide facilities, equipment, and labor for cleaning and waste disposal during construction.

K. Section 02 41 19 – Selective Demolition

1. Provide all labor, materials, equipment services and accessories necessary to remove and dispose the work, complete and functional as indicated in the Contract Documents and as specified herein. This includes, but is not limited to, the following:

a. Excavation of exterior grade around building perimeter, except at west elevation within the mechanical screen walls, to expose footing.

b. Power wash and remove damaged, spalled, or delaminated stucco and CMU backup wall.

c. Remove EIFS cladding, sheathing, and metal wall framing at soffits, fascia, upper wall areas, and other locations where shown on the Drawings.

d. Remove existing low-slope roofing membrane and coping flashing around roof perimeters over the Gymnasium and Central Roof Area. The existing underlying insulation and associated roofing components can remain as shown in the documents.

e. Remove existing clay tile roofing assembly, including built-in metal gutter, flashings, underlayment, wood decking, and cold-formed metal framing. Remove damaged or corroded miscellaneous structural metal framing, joists, and rafters where required as shown on the documents (assume 20% of framing members around Natatorium).

f. Remove existing aluminum-framed windows.

g. For aluminum-framed entrances and hollow metal doors, remove existing doors and frames as shown on the Drawings. Salvage existing doors and frames where indicated on the Drawings.

h. Limit amount of interior removals and corresponding interior access required to complete the work.

i. Remove wood trellis.

j. Remove existing roof AC unit above weight room. Remove existing louvers and infill wall openings where shown on the Drawings.

k. Remove and dispose of abandoned exterior electrical conduit. Remove remaining exterior electrical conduit and relocate to the building interior.

l. Remove existing exterior plumbing pipes and components. Salvage and reinstall pipes as described in the documents.

2. Remove and dispose of existing sealants, backer materials, and silicone sheet seals at existing stucco cladding, and other miscellaneous locations to accommodate the Work described in related Sections and as shown on the Drawings.

3. Remove and dispose of metal flashings and miscellaneous sealants at soffits and window-to-wall intersections.

4. Perform additional removals described in related Sections listed below.

L. Section 04 20 00 – Unit Masonry

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. Provide brick masonry veneer around base of exterior wall at grade to match existing-to-remain brick masonry veneer around mechanical well and equipment yard at the northwest corner of the building.

M. Section 04 22 00 – Concrete Unit Masonry

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work. The work includes, but is not limited to the following:

   a. Concrete masonry units (CMU's) for new CMU curbs and new or repaired CMU at wing walls.

   b. Mortar and grout.

   c. Steel reinforcing bars and joint reinforcement.

   d. Ties and anchors.

2. Repair damaged existing CMU to remain at building exterior walls and wing walls, including repointing where the existing mortar is loose, missing, or cracked. Provide removal and replacement of individual concrete masonry units where the existing units are cracked or otherwise damaged.

3. Coordinate with removal and replacement of downleaders at CMU wing walls. Provide patching and repair procedures at locations where the CMU face shell is cut to remove and reinstall downleaders.

4. Participate in mockups as described in Section 01 45 00 – Mockups.

N. Section 04 72 00 – Cast Stone

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. Install cast stone band course along top of brick veneer knee wall around building perimeter. Size, color, and texture of cast stone as selected by Montgomery College to match existing cast stone/precast concrete band course at Equipment Yard walls.

3. Provide vertical control joints where shown in the Drawings.

O. Section 05 40 00 – Cold Formed Metal Framing

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. Remove and replace cold-form metal framing at low-slope roofs, steep-slope roofs, and soffits as shown on the Drawings.

a. Coordinate new soffit framing location to maintain current finished soffit elevation and accommodate increased soffit insulation thickness where shown on the Drawings.

3. Provide new cold-formed metal framing to support exterior wall sheathing at abandoned louver openings where shown on the Drawings.

P. Section 05 50 00 – Metal Fabrications

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. Section Includes:

a. Steel framing and supports for filling low-slope roof openings over the Natatorium.

b. Miscellaneous steel framing and supports for applications where framing and supports are not specified in other Sections.

c. Steel framing for supporting/anchoring wood frame construction.

d. Steel framing for supporting roof gutters.

Q. Section 06 10 00 – Rough Carpentry

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. Section Includes:

a. Remove and replace the wood trellis. Provide new treated wood trellis members with metal cap flashing.

b. Framing with dimension lumber.

c. Wood blocking.

R. Section 06 16 00 – Sheathing

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. The scope of work specified herein includes, but is not limited to, the following:

a. Remove and replace the exterior wall sheathing, including soffits as shown on the Drawings.

S. Section 07 13 26 – Self-Adhering Sheet Waterproofing

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work. The work includes, but is not limited to, the following:

a. Rubberized asphalt sheet membrane foundation wall waterproofing system (for over-excavated construction near grade). Refer to the demolition requirements for information regarding removal of the existing grade.

b. Prefabricated drainage composite.

c. Below-grade insulation.

d. Accessories.

T. Section 07 2100 – Thermal Insulation

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein. The work includes, but is not limited to, the following:

a. Provide 3 in. of extruded polystyrene (XPS) insulation in the exterior wall cavity behind the brick masonry. Note buildings less than 40 ft in height are exempt from the NFPA 285 requirements.

b. Provide one layer of 2 in. XPS insulation along the footing/foundation wall.

c. Replace unfaced fiberglass batt insulation between metal framing where removed at walls and roofs as shown on the Drawings.

d. Provide low-rise closed-cell spray foam insulation at top of first floor CMU walls around pool to form continuous air barrier between the top of the CMU wall and the underside of the steep-slope roofing assembly.

U. Section 07 24 19 – Drainable Exterior Insulation and Finish System (EIFS)

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. The scope of work specified herein includes, but is not limited to, the following:

a. Provide drainable EIFS cladding assembly, including insulation, base coat, reinforcing, lamina, and all attendant accessories, over an acceptable air/water barrier and the existing stucco coating applied to the CMU exterior walls where shown on the Drawings.

b. Provide drainable EIFS cladding assembly, including insulation, base coat, reinforcing, lamina, and all attendant accessories, over an

acceptable air/water barrier and new exterior sheathing and metal framing at areas where the existing system was removed under Section 02 41 19 – Selective Demolition, including the upper and lower soffits, exterior beams, Weight Room addition exterior walls, and other wall areas around the building as shown on the Drawings.

c. Provide drainable EIFS cladding assembly with reduced insulation thickness, including insulation, base coat, reinforcing, lamina, and all accessories, over an acceptable air/water barrier and new exterior sheathing and metal framing at ventilated soffit areas as shown on the Drawings.

d. Construct an in situ mockup of the work specified herein in coordination with mockups described in Section 01 45 00 – Mockups and related material Sections.

V. Section 07 27 00 – Air and Water Barrier

1. All work is to be done in accordance with applicable codes and regulations. The work includes the work of all trades required and all labor, equipment, and materials and supervision necessary and incidental to the work indicated. The scope of work specified in this section includes, but is not limited to, the following:

a. Existing direct applied stucco cladding over CMU backup walls will remain. Remove and dispose of loose or damaged existing stucco cladding; patch and repair damaged or removed stucco as required, see referenced Sections.

b. Provide new self-adhered membrane air/water barrier membrane and membrane flashing, and all related accessories for proper installation over the exterior wall substrates, as shown on the Drawings.

c. Perform mockups of the work specified herein in coordination with mockups described in related Sections.

W. Section 07 31 26 – Slate Shingles

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. The scope of work specified herein includes, but is not limited to, the following:

a. Provide a new synthetic slate roofing system on all steep-sloped roofs shown in the Drawings to replace the existing clay tile roofing assembly. Provide the following slate roofing assembly, from interior to exterior:

b. Existing fiberglass batt insulation; repair as described in the Contract Documents.

c. Existing cold-formed metal framing beams; repair as described in the Contract Documents.

d. Remove and replace the existing plywood deck.

e. Install new self-adhered membrane vapor retarder.

f. Install new ventilated structural insulated panel (SIP).

g. Install new self-adhered roofing underlayment.

h. Install new asphalt-saturated felt.

i. Install new synthetic slate tiles.

3. Provide all flashings, sealants, and accessories required for a complete installation. Coordinate with the requirements of Section 07 62 00 for integrating the slate roofs with the built-in metal gutter along the bottom of the roofs.

4. Provide sufficient attic stock of synthetic slate to cover approximately 1.5% of the steep-sloped roof areas and store in a location designated by the Owner.

5. All work is to be done in accordance with applicable codes and regulations.

6. Document all existing conditions prior to start of construction. Prepare measured shop drawings of roofing and flashing systems to be replaced as indicated on the Drawings.

X. Section 07 52 16 – Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. The scope of work specified herein includes, but is not limited to, the following:

a. Natatorium and Weight Room Roofs: Remove the existing built-up membrane roofing assembly over the Natatorium and Weight Room roofs as shown on the Drawings. Provide the following roofing assembly, from interior to exterior:

(1) Existing tongue and grove wood deck; repair as described herein

(2) Self-adhered membrane vapor retarder

(3) Polyisocyanurate insulation with tapered insulation as required to provide slope to drain

(4) EFVM grid and accessories

(5) Mechanically-attached gypsum coverboard

(6) Three-ply modified-bitumen roofing membrane adhered with hot-applied asphalt

(7) Granular-surfaced cap sheet

b. Gymnasium and Central Lobby Roofs: These roofs are under warranty by Johns Manville (Warranty # ANB131030396). Remove the existing modified bitumen roofing membrane around the perimeter of the Gymnasium and Central Lobby roofs as shown on the Drawings. The underlying insulation and other roofing components can remain in place. Install the new Johns Manville modified bitumen roofing membrane over the existing insulation and integrate with the adjacent roofing membrane per Johns Manville standard installation instructions to maintain the current warranty.

c. Provide all flashings, copings, sealants, and accessories required for a complete installation.

d. Provide new roof drains over the Natatorium.

e. Provide new roof access ladders to the Natatorium and Gymnasium roofs as shown on the Drawings.

f. Perform an in situ mockup of the work specified herein in coordination with Section 01 45 00 – Mockups.

3. All work is to be done in accordance with applicable codes and regulations.

4. Document all existing conditions prior to start of construction. Prepare measured shop drawings of roofing and flashing systems to be replaced as indicated on the Drawings.

Y. Section 07 62 00 – Sheet Metal Flashing and Trim

1. Provide sheet metal flashings and all related accessories required for proper installation, as shown on the Drawings and as described in Section 07 62 00 – Sheet Metal Flashing and Trim.

2. Provide sheet metal trim where exposed at curtain wall perimeters as shown on the Drawings.

3. Provide stainless steel built-in gutter liners as shown on the Drawings.

Z. Section 07 92 00 – Joint Sealants

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. Provide exterior sealant joints where removed and as shown on the Drawings, including, but not limited to:

   a. EIFS-to-brick transitions.

   b. Door and window perimeters.

   c. Sealant joints in EIFS claddings.

   d. Sealant joints at metal flashings.

   e. Other miscellaneous locations shown on the Drawings.

3. Conduct sealant adhesion tests.

AA. Section 08 11 13 – Hollow Metal Doors and Frames

1. Provide all labor, materials, equipment services, and accessories necessary to furnish and install work of this Section complete and functional as indicated in the Contract Documents and as specified herein.

2. This Section includes the following:

   a. Standard hollow-metal steel doors.

   b. Standard hollow-metal steel frames.

3. Provide Special-Lite doors at Natatorium and where shown on the Drawings.

BB. Section 08 42 13 – Aluminum Framed Entrances

1. Provide all labor, materials, equipment services, and accessories necessary to furnish and install work of this Section. The Work of this Section includes, but is not limited to, the following:

   a. Provide new exterior manual-swing aluminum doors and aluminum door frames at the entrance on the north elevation.

   b. Remove and store the existing main entrance doors on the south elevation. Provide new aluminum-framed entrance and reinstall the existing main entrance doors as shown on the Drawings and specified herein.

      (1) Provide an add alternate price to remove the two existing double manual-swing aluminum doors and aluminum door frames at the main Lobby entrance and replace with new materials described herein. Refer to Section 01 22 00 – Unit Prices.

   c. Coordinate with door hardware requirements in Section 08 71 00 to provide required panic hardware at exit doors or exit paths.

d. Incorporate security system components into the door and frame openings of all new and existing aluminum-framed entrances, as described in Section 28 05 00 – Common Work Results for Electronic Safety and Security.

CC. Section 08 44 13 – Glazed Aluminum Curtain Walls

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. The work of this section includes, but is not limited to, the following:

a. Outside-glazed aluminum-framed curtain walls with integral awning operable vents and expressed mullion caps to replace existing windows.

b. Outside-glazed aluminum-framed curtain wall with fixed lites and expressed mullion caps at the main entrance to replace existing storefront assembly.

DD. Section 08 71 00 – Door Hardware

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. Provide door hardware, including ADA compliant door thresholds and gaskets at door sills, and corrosion resistant primer where indicated around the Natatorium, as indicated on the Drawings.

EE. Section 08 80 00 – Glazing

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. This Section includes glazing for the following products and applications:

a. Glazed Curtain Walls

b. Glazed Entrances

FF. Section 09 20 00 – Interior Finishes

1. Provide all labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. Disposal of materials removed from the building in preparation for flashing or other trades, is performed under this section. The following paragraphs summarize the general extent of that work, itemized by trade.

3. Section includes, but is not limited to, replacement of interior finishes removed, disturbed or damaged during the installation of steep-slope roofing, aluminum framed entrances and curtain wall units, and interior door security components including, but not limited to, the following components. Color of exposed interior components to be selected and approved by the Owner.

    a. Interior sheathing

    b. Fenestration trim and mullion partitions

    c. Acoustic ceiling tiles

    d. Paint

GG. Section 22 05 00 – Common Work Results for Plumbing

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. The scope of work specified herein includes, but is not limited to, the following:

    a. Perform renovation, relocation, and remediation of selective plumbing and piping components where shown on the Drawings.

    b. Removal and replacement or reinstallation of exterior piping materials. Extend existing piping penetration through new exterior wall and cladding, to accommodate insulation thickness, and reconnect piping assemblies.

    c. Repair or replace downleaders where shown on the Drawings; coordinate with Sections 07 31 26 and 07 62 00. Connect new or repaired downleaders to the existing perimeter drainage assembly as shown on the Drawings.

    d. Plumbing fittings.

    e. Painting and finishing.

    f. Supports and anchorages.

HH. Section 22 05 53 – Identification for Plumbing Piping and Equipment

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. This Section Includes:

    a. Equipment labels.

    b. Pipe labels.

c. Valve tags.

d. Warning tags.

II. Section 23 05 00 – Common Work Results for HVAC Systems

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. This Section Includes:

a. Perform renovation and replacement of selective mechanical equipment and components where shown on the Drawings.

b. HVAC equipment coordination and installation.

c. Mechanical equipment replacement unit for the Weight Room roof.

d. Common HVAC installation requirements.

JJ. Section 23 31 13 – Metal Ducts

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. Provide ducts, supports, fitting and all necessary accessories to replace removed materials included in the Work or extend existing ducts to accommodate the increased exterior wall thickness.

KK. Section 26 05 00 – Common Work Results for Electrical

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. This Section Includes:

a. Perform renovation and relocation of selective electrical components where shown on the Drawings. Relocate exterior electrical equipment and conduits to building interior where shown on the Drawings. Remove abandoned exterior electrical conduits. Coordinate this work with the Building Maintenance personnel.

b. Common electrical installation components and requirements.

LL. Section 26 05 19 – Low Voltage Electrical Power Conductors

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. This Section includes the following:

    a. Building wires and cables rated 600 V and less.

    b. Connectors, splices, and terminations rated 600 V and less.

    c. Sleeves and sleeve seals for cables.

MM. Section 26 05 29 – Hangers and Supports For Electrical Systems

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. This Section includes the following:

    a. Hangers and supports for electrical equipment and systems.

    b. Construction requirements for concrete bases.

NN. Section 26 05 33 – Raceway and Boxes for Electrical Systems

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

OO. Section 26 05 53 – Identification for Electrical Systems

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. This Section includes identification for all electrical systems provided or replaced under this scope of Work, including the following components:

    a. Identification for raceways.

    b. Identification of power and control cables.

    c. Identification for conductors.

    d. Warning labels and signs.

    e. Instruction signs.

    f. Equipment identification labels.

    g. Miscellaneous identification products.

PP. Section 28 05 00 – Common Work Results for Electronic Security

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. This Section includes:

a. Description of Work for Electronic Security Systems.

b. Electronic security equipment coordination with relating Divisions.

c. Submittal requirements for Electronic Security.

d. Miscellaneous supporting equipment and materials for Electronic Security.

e. Electronic security installation requirements.

QQ. Section 28 05 13 – Conductors and Cables for Electronic Safety and Security

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. This Section Includes:

a. UTP cabling.

b. Cat6 data cabling

c. RS-485 cabling.

d. Low-voltage control cabling.

e. Control-circuit conductors.

f. Identification products.

RR. Section 28 13 00 – Access Control

1. Provide labor, materials, equipment services and accessories necessary to furnish and install work on this Section, complete and functional as indicated in the Contract Documents and as specified herein.

2. This Section includes access control devices to be connected to the Security Management System (SMS).

a. Access Control.

b. Regulating access through doors, as specified in drawing documents.

c. Anti-passback where required.

d. Surge and tamper protection.

e. Secondary alarm annunciator.

f. Card readers.

g. Push-button switches.

h. RS-232 ASCII interface.

i. Reporting.

SS. Section 32 13 13 – Concrete Paving

1. Provide labor, materials, equipment services and accessories necessary to furnish and install new sidewalk around the building perimeter where existing sidewalk is removed to accommodate the foundation wall waterproofing, complete and functional as indicated in the Contract Documents and as specified herein.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

A. Schedule

1. Begin date: 23 May 2015

2. General Phasing Plan

a. Work will generally proceed from west to east, starting at the Natatorium and working toward the Gymnasium.

b. All interior work and corresponding interior access at the following locations must be completed by the dates listed below:

(1) Natatorium: 19 August 2016

(2) Classrooms/Offices: 19 August 2016

(3) Gymnasium: 19 August 2016, and between 19 December 2016 through 9 January 2017

(4) Miscellaneous interior work and interior access required beyond these dates must be coordinated with the Owner and completed after hours or during weekends.

c. Interior work that must be completed by the dates provided above includes, but is not limited, to the following:

(1) Mockups of the typical work components, including the exterior walls, fenestration, steep-slope roofs, and other components requiring interior access.

(2) The steep sloped Natatorium roofs that must be accessed from the interior. This includes work at the lower soffits around the Natatorium. All low-slope roofing work must be completed from the exterior. Similarly, steep-slope roofs around the Gymnasium should be completed from the exterior.

(3) Fenestration systems.

(4) Hollow-metal doors and frames, including door hardware, and low-voltage security. Entrances and exit doors/paths not completed by 19 August 2016 must be properly protected to maintain egress paths and emergency exits at all times while the building is occupied. Construct temporary enclosures and overhead protection where required.

(5) Interior finishes, including exterior wall infill at abandoned louvers.

(6) Miscellaneous MEP work associated with the exterior conduit relocation, exterior piping repair and relocation, and new rooftop mechanical equipment over the Weight Room.

3. Substantial completion: As determined by the Owner.

END OF SECTION

SECTION 01 12 00

CONTRACT CONSIDERATIONS AND SPECIAL CONDITIONS

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Contract Execution.

B. Building Permits.

C. Time and Materials Work Records.

D. Work Requirements.

E. Tests and Inspections.

F. Owner.

G. Engineer

H. Project Coordination.

I. Use of Site.

J. Supplemental Safety Instructions.

K. General Workmanship.

L. Product Delivery, Storage, and Handling.

M. Project Conditions.

N. Protection.

O. Governing Law.

P. Standard Forms.

Q. Conduct and Supervision.

R. Access.

S. Permits and Licenses.

T. Project Record Documents.

1.02 CONTRACT EXECUTION

A. Distribution: Unless directed otherwise by the Owner, supply three signed sets of the executed contract, two to the Owner, and one to the Engineer.

1.03 PERMITS AND LICENSES

A. The Contractor shall submit and maintain a copy of licenses to do business in the State of Maryland, to the Owner, prior to the start of work.

B. The Owner shall obtain and pay for the following building permits from Montgomery County relating to the building design and site work, prior to the beginning of the project:

1. Commercial Building Permit

2. Use and Occupancy Certificate

3. Public Right of Way Permit

4. Sediment Control Permit

C. Contractor is responsible for obtaining and paying for all remaining permits required to execute the Work. Owner will reimburse contractor for permit fees. Unless demonstrated otherwise, permits obtained by the Contractor shall include, but are not limited to:

1. Mechanical Permit

2. Electrical Permit

3. Plumbing Permit

4. All permits relating to Contractor means and methods

D. Other assessments and fees: Obtain and pay for all other assessments, fees, bonds, and other charges as necessary to perform and complete the Work of the Contract. Owner will reimburse contractor for these costs.

1.04 TIME AND MATERIALS WORK AND UNIT PRICE RECORDS

A. Maintain detailed records of all work done on a Time and Material or Unit Price basis. Provide full and timely information required for the evaluation of any proposed change, and substantiate costs associated with changes in the Work.

1.05 WORK REQUIREMENTS

A. Prior to bidding, the General Contractor and each of the Filed Subcontractors shall carefully examine the site and the Contract Documents to ensure their knowledge of conditions and requirements affecting the work. No claim for extra compensation or extension of time will be allowed for General Contractor's or Filed Subcontractor's

failure to comply with this requirement nor will any condition at the site, whether or not in agreement with conditions shown or called for on the Contract Documents, be allowed as a basis of such claims, except as otherwise specifically provided for.

B. Verify all site conditions and dimensions with field measurements in consideration of the special conditions associated with alteration of existing construction and reconstruction.

C. Notify the Engineer immediately of any inconsistency between field conditions found during demolition and those shown in the Drawings or described in the Specifications. The Engineer will determine what modifications or additional work may be necessary.

D. All work shall be done in compliance with all Federal, State, County, and Local standards and ordinances.

1.06 TESTS AND INSPECTIONS

A. Coordinate necessary tests and inspections as required, including, but not limited to:

1. Inspections by the Building Official if required.

2. Independent testing by an approved third party as provided in the Specifications.

3. Engineer's observation: The Engineer will observe the work, and will interpret the Contract Documents. Provide the Engineer three workdays advance notice before starting the work or portions thereof. Do not conceal or allow to be concealed any portion of work subject to observation and not yet approved by the Engineer. The Contractor shall bear all costs incurred to open and reinstall any such work. The Engineer will perform tests and inspections as provided in the Specifications.

4. Notify the Owner and Engineer when the retro-commissioning of the various mechanical, plumbing, and electrical systems, and other applicable components and systems, will be performed and provide access so the Owner and Engineer can observe the retro-commissioning.

5. The Engineer will perform tests and other site observations as provided in the Specifications.

B. Allow the Building Official and Engineer full access to all portions of the work; temporarily stop work in specific areas when the work interferes with tests and / or observations at no additional cost to the Owner.

1.07 OWNER

A. Montgomery College is the Owner for this Project. Coordinate Owner notification, permission for site use, office access, invoicing and other required documents and activities through the Owner:

Mr. Eric Koh – College Architect

Montgomery College
40 West Gude Drive
Rockville, MD 20850
Phone: 240.567.7364
E-mail: eric.koh@montgomerycollege.edu

1.08 ENGINEER

A. Simpson Gumpertz & Heger Inc. (SGH), will serve as the Engineer for this project. Coordinate submittals, mockups, and review of work performed in accordance with the Contract Documents with the Engineer:

Mr. Philip K. Frederick
Simpson Gumpertz & Heger Inc.
1828 L Street NW, Suite 950
Washington, DC 20036
Phone: 202.239.4199
E-mail: PFrederick@sgh.com

1.09 PROJECT COORDINATION

A. Prior to the start of the Work, submit to the Owner and Engineer for approval, a project schedule for the entire scope of Work, per the General Conditions of the Contract for Construction and Section 01 33 00 – Submittals.

B. Schedule the work to minimize disruption to the occupants to the extent practical. Schedule interior work, and corresponding exterior work that requires access to the interior, to be complete by 19 August 2016.

C. Notify the Owner no less than 48 hrs in advance of proposed changes to the schedule and location of work.

D. Arrange the work sequence to avoid interior access between 19 August 2016 and 22 December 2016, and avoid use of or travel on or over newly installed Work or existing building components to remain.

E. Submit a detailed site logistics plan for approval by Owner prior to mobilization, including ingress and egress plan to the site.

F. Normal work hours are 7 a.m. to 6 p.m., Monday through Friday. To limit disruption of Owners, demolition and other noise-generating work may be restricted by the Owner at their discretion. Comply with the Noise Control provisions of the Montgomery County Code at all times. Do not perform any work outside normal work hours unless approved in writing by the Owner. Give at least 48 hrs advance notice for requests to perform work outside normal hours.

1.10 USE OF SITE

A. Portions of the building will be occupied throughout the work. The Contractor shall provide adequate and safe means of egress for workers and others at all times in accordance with the Maryland Building Code and the local Montgomery County

Building Department. "Means of Egress" also includes safe and adequate paths on the site to provide for normal and fire egress from the building.

B. Prior to beginning work of the Contract, the General Contractor shall meet with the Owner and the Engineer to determine procedures regarding access to and use of site, exterior staging, parking, and storage areas, special site conditions, and any other restrictions regarding the use of the site areas surrounding the construction.

1. Coordinate use of premises under direction of the Owner and the Engineer.

2. Assume full responsibility for the protection, cleanliness and safekeeping of products under this Contract, stored on the site.

3. Obtain and pay for the use of additional offsite storage or work areas needed for operations.

4. Move any stored Products, under Contractor's control, which interfere with operations of the Owner or separate contractor.

C. The intent of the specifications is that required Work shall be performed with a minimum of interference with the public and the Owner's operations. To achieve this end, the Contractor shall conduct the work to its completion as soon as possible with full crews of workers during regular working hours, with multiple shift work or overtime hours as indicated in the Contractor's Progress Schedule and as approved.

D. Work only in areas permitted by Owner-approved schedule.

E. Clean work areas to leave the premises in a neat, clean, and safe condition at the end of each day's work. Protect the public, building, and site, and take all necessary precautions to ensure the public's safety at all times.

F. Perform all work without interfering with the scheduled normal operation of the building and coordinate the work properly with the building's function. Do not interfere with or disrupt activities without the specific approval of the Owner in coordination with the Owner's Agent. Notify the Owner 48 hrs in advance of any construction work that will disrupt any building system or operation.

G. Interior access: Interior access is available from 15 May 2016 through 19 August 2016. Provide the Owner's Agent 48 hrs advance written notice of any operations that are expected to create excessive noise to interior areas; operations that involve the use of hazardous or noxious chemicals. After 19 August 2016, provide the Owner's Agent 72 hrs advance written notice of any operations that require interior access or any other exterior operation(s) that will potentially affect the building occupants.

1.11 SUPPLEMENTAL SAFETY INSTRUCTIONS

A. Do not block any building entrances or exits. Use a safe method to lower debris directly to trucks or approved containers. Do not leave operating equipment unattended on the ground or where accessible to the public at any time. Provide suitable fencing, barricades, and warning signs near and below all work areas to protect the public.

A. Compliance with OSHA and all other safety laws and regulations is the exclusive responsibility of the Contractor, his Subcontractors, suppliers, consultants, and servants. All equipment used on the job shall comply with all applicable health and safety regulations including OSHA guidelines.

B. Use appropriate safety harnesses, temporary guardrails, scaffolding, or other measures to ensure the safety of workers, in accordance with OSHA and other applicable safety regulations.

C. Submit project safety plans and procedures to the Owner for information only.

1.12 GENERAL WORKMANSHIP

A. Do not work in rain, snow, or temperatures below 10°F, unless temporary protection measures, approved in advance by the Engineer, are installed prior to beginning the work. Maintain the temporary protection until the work may be exposed to the weather, per the manufacturers written instructions and the Engineer's approval. Comply with all applicable recommendations by the manufacturers of all equipment and materials for workmanship and handling, except as modified in these Specifications.

B. Do not dilute materials unless required by the manufacturer’s installation instructions. Keep containers closed, except when removing materials from them. Stir all liquid components before each use to disperse solids as recommended by the manufacturer. Use pump cans to dispense cleaning fluids or stripping agents; do not dip rags into solvents. Use only clean containers for dispensing or transporting. Protect materials from heat, sparks, and flame. Volatile solvents can produce explosive and poisonous mixtures; provide adequate ventilation and protection. Follow all manufacturer's safety recommendations, cautions and warnings.

C. Use clean gloves and tools free of dirt, grease, and asphaltic materials. Remove all tools, buckets, and materials from the work area at the end of each workday. Do not allow any debris, construction or wind blown, to become collected in any completed areas.

D. Notify the Engineer and halt all work promptly if an unusual or unsafe condition is discovered.

E. Workmanship shall comply with all applicable manufacturer’s instructions, referenced and industry standards, and Codes except as modified herein.

1.13 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. On-site storage is limited. Obtain the Owner's permission before storing any materials on site.

B. All materials shall be free of defects, new and of recent manufacture; do not use any materials with an expired shelf life. Deliver materials to the jobsite in their original, unopened containers with the manufacturer's name, product name and description, color, texture, quantity, batch identification code and date of production and place of production on the individual container or packaging. Remove cured or aged materials from the site.

C. Store all materials as recommended by the material manufacturer or supplier and as modified below:

1. Store materials out of the elements in climate-controlled surroundings. Cover materials stored outdoors with waterproof canvas tarpaulins. Do not use polyethylene or similar unreinforced plastic sheet materials for covering stored materials. Store volatile products and flammable materials in secure, fire and leak-proof containers off-site.

2. Store all materials on pallets to prevent wetting and other damage. Store rolled products on their ends only unless otherwise recommended by the manufacturer. Discard any rolled product, which has been flattened, creased or otherwise damaged.

3. Keep all containers and packaging closed when materials are not in use. When in use, dispense only the amount required and cover promptly.

4. Protect all materials during storage from exposure to moisture, excess heat, sparks, flame, and other damage.

5. Provide adequate ventilation and store all materials between 50°F and 70°F. If exposed to lower temperatures, restore to proper application temperatures before use. Discard any product adversely affected by excessively cold or hot temperatures.

D. Promptly remove from the site all moisture sensitive materials exposed to any moisture or damaged during transport, storage, handling, and installation, or if rejected by the Engineer. Protect Portland cement-based materials and other dry, bag products from moisture and humidity.

E. Salvaged materials: The Contractor is responsible for proper handling and storage of materials removed from the work, which are to be built back into the project later. The Contractor shall bear the cost of damage to, or loss of, such materials.

F. The Contractor shall confine his apparatus, storage of materials, and operations of his workers to areas as required by the Owner, and shall not unreasonably encumber the premises with his materials. The premises shall be maintained in a safe, orderly condition at all times. The Contractor shall remove all temporarily stored material and Contractor equipment prior to an event in the areas being occupied.

1.14 PROJECT CONDITIONS

A. The building will be partially occupied during the repairs. Coordinate all construction activities with the Owner prior to starting work. Schedule and conduct the work to minimize disruption to the building occupants.

1. Execute the Work in phases to maintain contiguous work areas from one building elevation to an adjacent elevation. Coordinate with the Owner's Agent to maintain access to the building at all times, including entrances and exits, all required ADA access, and loading dock access. Maintain all entrances at all times by permanent or sufficient temporary means. Maintain all vehicular

access as required by the Owner or City; coordinate with the Owner for short duration shut down of access as needed.

B. Coordination requirements: Coordinate the various trades by the timely performance of work. Coordinate the various trades to maximize efficient use of scaffolding and to ensure work is performed in proper sequence.

C. Provide the Engineer, or any other testing or regulatory authority, with all labor, materials and access equipment necessary to perform tests or inspections.

D. Verify all site conditions and dimensions by field measurements. Provide special consideration to the special conditions associated with the alteration of existing construction and reconstruction. Immediately notify the Engineer of any inconsistencies between existing field conditions and those shown on the Contract Drawings. The Engineer will determine what modifications or additional repairs are necessary.

E. If any material(s) contain volatile organic compounds (VOCs) or if the demolition involves any release of debris, dust or fumes into the atmosphere, then the Contractor must take all necessary precautions to limit exposure of occupants and the general public to these materials and debris and their fumes. Ventilate the work area properly, dispose all contaminated debris (i.e., rags, towels, brushes, etc.), and avoid, protect, or shut down appropriate air intakes. Promptly and thoroughly clean all spillage and contamination. Keep all containers and packaging sealed completely when not in use.

F. Dispose all material waste and associated debris in a legal manner, off the site, as required by State and local ordinances. Conduct waste and debris in an acceptable manner without disrupting building operations or exposing the general public to danger. Use covered carts to move debris from work areas to the collection area and remove from the site. Dispose of no construction debris in the building trash chutes or dumpsters.

G. Environmental requirements: Do not work in rain, snow, or temperatures below 40°F or above 95°F, except observe more stringent restrictions from the manufacturer that may apply. Use and maintain an approved temporary, protective enclosure if work is to be performed in adverse conditions. Use special application procedures recommended by the manufacturer when working in high humidity and wind.

H. Field measurements: Verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work. Consider the special conditions associated with repairs to existing construction during field measuring.

I. Ensure that building components, adjacent persons, property, and plant life are protected from all construction activities, including cleaning and wind drift.

1.15 PROTECTION

A. Schedule and execute all work without exposing the building interior to the effects of inclement weather. Protect the building and its interior during the work from all weather risks associated with the Work.

B. Construct temporary partitions, completely sealed from the interior space, to protect the building interior and its occupants from dust and fumes generated by the Work where windows are removed. Provide protection for all floors, walls, finishes and personal property in all areas that are accessed during the course of the project and all areas affected by the work. Any and all damage to any part or portion of the building or its contents caused by the work shall be promptly and completely repaired and/or replaced by the Contractor, at no cost to the Owner.

C. Coordinate work activities with the Owner and Engineer prior to entry to conduct work.

D. Provide temporary measures of protection if part of the work is not completed in a working day or if inclement weather disrupts the work schedule.

E. During the work period, a representative of the Contractor shall be available by phone 24 hrs a day for emergencies. Provide to the Owner and Engineer, in writing, the names, addresses and telephone numbers of responsible members of the Contractor's organization to be contacted in the event of after-hours emergencies, 24 hrs a day, 7 days a week.

F. Obtain the advice and recommendations of installers for procedures to protect their work. Installers are responsible for protecting their work and that of other trades while working at the job site or in an area thereof. When the installer is no longer working in the area or at the job site, the Contractor shall provide protective measures and materials to assure that each element will be without damage or deterioration, other than normal weathering for exterior exposed materials, throughout the remainder of the construction period up to the date of substantial completion. Remove protective coverings and materials at the appropriate time, but no later than final cleaning operations.

G. The Contractor shall furnish his own access to the work areas for all trades, including scaffolds, staging, and ladders. Equipment shall comply with all applicable municipal, state, and national safety regulations, including OSHA guidelines. The Owner and Engineer shall have free access to the work via the Contractor's equipment. Provide separate safety ropes and connections for the Owner and Engineer in work areas as reasonably requested by him. The Contractor shall provide for the safety of the general public in the vicinity of all work areas.

H. Dispose of debris in a legal manner, off the site, as required by State and local ordinances. Coordinate with the Owner's requirements for recycling reusable materials where appropriate. Conduct debris to trucks in an approved manner without disrupting building operations or exposing pedestrians to danger. Do not leave operating equipment unattended on the ground at any time.

I. Provide suitable barricades and warning signs near all work areas to protect the public and to prevent access to all work areas during and after normal working hours.

J. Protect all site work, landscaping, windows, roofing surfaces, adjacent building roofs, and building walls and at the conclusion of work, restore the site to the conditions that existed prior to the start of work to the satisfaction of the Owner. The premises,

including access drives and parking areas, shall be left in a neat, clean, and safe condition at the end of each day's work.

1. In addition, provide containment to prevent the dispersion of concrete dust, water and cleaning product runoff, coating splatter and wind drift, and other potentially wind-dispersed debris at the worksite and areas surrounding the worksite. The Contractor shall be responsible for cleaning neighboring properties, vehicles, and public spaces of all debris from the project site at no expense to the Owner.

1.16 GOVERNING LAW

A. All applicable provisions of the governing Federal, State, and local laws of the geographic division in which the construction is located shall prevail over any conflicting provisions of the Contract Documents. Immediately notify the Engineer of any discovered discrepancies before proceeding with any related work.

B. All the equipment and methods of application of materials used on the project shall comply with all applicable Federal, State and local safety regulations, including Occupational Safety and Health Administration (OSHA). The Contractor shall provide for the safety of workers on the project.

C. The Contractor is responsible for scheduling and providing access to the work for authorized public officials. Do not conceal or allow to be concealed any portion of work subject to inspection and not yet approved by authorized public officials. The Contractor shall bear all costs incurred to expose and reinstall any such work.

1.17 CONDUCT AND SUPERVISION

A. The Contractor shall supervise his own and subcontractors' forces on a full-time basis.

B. The Contractor shall be subject to such rules and regulations for the conduct of the work as the Owner may establish. Such rules include, but are not limited to, the following:

1. All employees shall be properly and completely clothed while working.

2. Employees shall not create unnecessary noise, engage in horseplay or otherwise offensive behavior that may disturb or disrupt the occupants.

3. There shall be no smoking on the premises or within the building.

C. Restrict all work activities associated with an area to within the contract boundaries indicated on the construction documents. Any means of access or egress from the stipulated contract boundaries shall be coordinated with, and approved by, the Owner.

1.18 ACCESS

A. For this project, the Owner will escort the Contractor into interior areas of the buildings where access is deemed necessary, unless otherwise agreed upon during the course of the Work.

B. No exterior door shall be propped open unless it is continuously supervised.

C. The Contractor is responsible to supervise the use of keys issued to them to assure that the building's security is maintained.

D. Site access: The Contractor shall use only authorized access to existing building areas, and shall not block, nor interfere with, traffic or parking facilities, except as authorized in writing by the Owner.

E. Safe work access: The Contractor shall provide safe access, including ladders and staging, to the work for his own personnel, authorized public officials, the Owner and the Engineer. The provided access must be in compliance with all applicable Federal, State, and Local regulations.

F. Provide the Engineer with access and assistance to all areas of the building where the work will be performed, including incidental labor and facilities.

1.19 PROJECT RECORD DOCUMENTS

A. Maintain on site, two sets of the following record documents; record actual revisions to the Work:

1. Contract Drawings.

2. Survey Drawings.

3. Project Manual.

4. Addenda.

5. Change Orders and other modifications to the Contract.

6. Revised Shop Drawings, product data and samples.

B. Store record documents separate from documents used for construction.

C. Record information concurrent with construction progress.

D. Maintain documents in clean, dry, legible condition and do not use record documents for construction purposes. Store documents in files and on racks in temporary field office. Keep separate from those used for construction.

E. Record documents shall be available at all times for inspection by the Engineer and Owner.

F. Keep documents current; do not permanently conceal any work until required information has been recorded on the documents.

G. The Engineer may not approve Applications for progress payments if the record documents are not kept current.

H. The Engineer will not approve Application for final payment until the record documents, in a form acceptable to the Owner, are submitted to the Engineer with transmittal letter containing date, Project title, Contractor's name and address, list of documents, and signature of Contractor.

I. Contract Drawings:

1. During progress of work maintain two sets of contract Drawings, including addenda, Shop Drawings, and any special drawings with mark up of actual installation that vary substantially from the work as originally shown.

2. When Shop Drawings are marked-up, mark cross-reference on contract Drawings at corresponding location.

3. Mark with erasable color pencil, using separate colors where feasible to distinguish between changes for different categories of work at same general location.

4. Mark up important additional information which was either shown schematically or omitted from original drawings, including concealed work which would be difficult to identify or measure and record at a later date.

5. Note alternative numbers, change order numbers and similar identification.

6. Require each person preparing markups to initial and date the markups.

J. Project Manual:

1. During progress of the work, maintain two copies of the Specifications, including addenda, change orders and during construction and variations (of substance) in actual work in comparison with Specifications and modifications as issued. Include substitutions, selection of options, and similar information on concealed work. Note related record drawing information and product data, where applicable.

2. Legibly mark and record in Part 2 of each Section of the Specifications, a description of the actual products installed, including the following:

a. Manufacturer's name, and product model and number.

b. Product substitutions or alternates used.

c. Changes made by addenda and modifications.

K. Manufacturer's data:

1. During progress of the work, maintain one copy of product data submittals, and mark up significant variations in the actual work comparison with submitted information. Include both variations in product as delivered to site, and variations from manufacturers' instructions and recommendations for

installation. Note concealed products and portions of the work, which cannot otherwise be readily discerned at a later date by direct observations.

2. Note related change orders and mark up of record drawings and specifications.

L. Samples:

1. Immediately prior to Substantial Completion, the Engineer will meet with Contractor at site, and will determine which (if any) of submitted samples maintained by Contractor during progress of the work are to be transmitted to the Engineer or Owner for record purposes.

2. Comply with Engineer's instructions for packaging, identification marking, and delivery to Engineer's sample storage space.

3. Dispose of the samples in manner specified for disposal of surplus and waste materials, unless otherwise indicated or directed by the Engineer or Owner.

M. Upon completion of the Work, turn over the Project Record documents to the Engineer and the Owner.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

SECTION 01 22 00

UNIT PRICES

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the Division 1 Specifications Sections, apply to this Section.

B. Refer to other Divisions of these Specifications to determine the type and extent of work therein affecting the work of this trade, whether or not such work is specifically mentioned in this Section.

1.02 SUMMARY

A. Section includes administrative and procedural requirements for unit prices outlined in the Specifications.

B. Related Sections include the following:

1. Section 01 40 00 – Quality Control

1.03 DEFINITIONS

A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the allowances in the Base Scope of Work (estimated quantities) required by the Contract Documents are increased or decreased.

1.04 PROCEDURES

A. Coordinate Unit Price work with Base Bid Allowances specified in this section.

B. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

C. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

D. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor. A schedule of unit prices is included in Part 3.

1. Provide unit prices to establish a fixed basis for costs for adding or changing specified quantities of Work from those indicated in the contract Drawings and Specifications, when directed in writing by the Owner to make such changes.

2. Where the unit price schedule designates an estimated quantity for the Work, Contractor shall indicate in the appropriate place on the Bid Form a total price for the Work and a unit price for, with the total price equal to the unit price times the estimated quantity stated.

3. This total price shall be included in the Total Bid Price for the Work.

4. The Contract sum will be adjusted by Change Order by applying the bid unit price to the actual quantity of work in excess of, or less than, the quantity stated in the Bid.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 SCHEDULE OF UNIT PRICES

A. Concrete Masonry Unit Repairs: Provide a price for removing and patching loose CMU that is dislodged from the building during surface preparation of the existing backup walls or can be removed by hand, as shown on the Drawings. Refer to Section 04 22 00 – Concrete Unit Masonry.

1. Estimated Quantity: Assume 100 sq ft of the “fin walls” (double-sided stucco-clad walls that extend out from the main facade) CMU will require repair.

2. Unit price measurement: square foot of wall area.

B. Stucco Repairs: Provide unit price for patching existing stucco that is damaged and dislodged during or following power washing of the existing stucco walls. Patch to provide a smooth continuous substrate for the air barrier membrane.

1. Estimated Quantity: Assume 100 sq ft of wall area.

2. Unit price measurement: square foot of wall area.

C. Steep-Slope Cold-Formed Metal-Framing Repairs: Provide a price for shoring, removing, and replacing corroded rolled steel members supporting the lower soffit cladding system at areas included in the Work, as shown on the Drawings. Refer to Sections 05 40 00 – Cold-Formed Metal Framing and 05 50 00 – Metal Fabrications.

1. Estimated Quantity: Assume 20% of the steel framing at the Natatorium will need to be replaced. Assume the steel framing elsewhere will not require replacement.

2. Unit price measurement: lineal foot of framing.

3. To develop a unit price, assume all members are L3x3x1/2. Material prices shall be adjusted on a case-by-case basis.

D. Low-Sloped Roof Deck: Provide a price for removing and replacing the existing 1 in. tongue and groove wood deck supporting the low-sloped roofing systems included in the Work. Refer to Section 07 52 00 – Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing.

1. Estimated Quantity: Assume 500 sq ft of the roofing deck will need replaced.

2. Unit price measurement: square foot of deck.

3.02 ALLOWANCES

A. Allowance for Leaf Guards at Built-In Gutters

1. Include on Bid Form an allowance for perforated metal screen leaf guards over the built in metal gutters along the bottom of the steep-slope roofs. The leaf guard screens will require soldered clips at approximately 24 in. on center along the front and back of the gutter liner to retain the screens.

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

A. Contractor shall follow all procedures described in this Section to propose a substitution of a specified product in these Specifications.

1.02 PROCEDURES

A. Whenever the proposal of substitute material, equipment, or process is permitted by the Specifications, the proposed substitute material, equipment or process shall be submitted in accordance with the General Conditions, and subject to the requirements contained herein.

B. After the start of construction, the proposal of substitute material, equipment, or process will be considered only for one of the following reasons:

1. The manufacturer or production of the specified material, equipment, or process has been discontinued.

2. The specified material, equipment, or process is not available in sufficient quantity or quantities to complete the Work. Failure of the Contractor to award subcontracts in sufficient time, or failure of the Contractor and/or the Subcontractor involved to place orders for material, equipment, or process so as to insure delivery or execution without delaying the Work shall not establish cause for approval of substitutions.

3. Delays beyond the control of the Contractor such as, but not limited to, strikes, lockouts, storms, fires, or earthquakes, preclude the procurement and delivery of material or equipment for the Project as included in Contractor's proposal.

4. The delivery date is advanced, provided this advances the overall progress of the Work.

5. The substitute improves the quality or function of the material, equipment, or process.

C. If, after the start of construction, the Contractor proposes a substitute to the project, the Contractor must submit a separate request for each product, supported with complete data with drawings and samples as appropriate, including:

1. Comparison of the qualities of the proposed substitution with that specified.

2. Changes required in other elements of the work because of substitution.

3. Effect on the construction schedule.

4. Cost data comparing the proposed substitution with the product specified.

5. Any required license fees or royalties.

6. Availability of maintenance service and source of replacement materials.

D. After the start of the construction, any proposed substitute material, equipment, or process shall be subject to the following conditions:

1. Submittal of the proposed substitute material, equipment, or process per the General Conditions.

2. Submittal of the request for a substitution early enough to allow ample lead time for the Engineer's review, preparation of the submittals, fabrication, and delivery without delaying the Work.

3. Approval of substitutions by the Engineer and the Owner.

E. The Engineer shall be the judge of the acceptability of the proposed substitute.

F. A request for substitution constitutes a representation that the Contractor has investigated the proposed product and determines that it is equal to or superior in all respects to that specified.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

SECTION 01 33 00

SUBMITTALS

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Procedures.

B. Construction Progress Schedules.

C. Schedule of Values.

D. Schedule of Unit Prices.

E. Warranties and Guarantees.

F. Shop Drawings.

G. Product Data.

H. Samples.

I. Contents of Submittals.

J. Resubmittals.

K. Engineer Review.

L. Distribution.

1.02 PROCEDURES

A. Review submittals, then sign and date each sheet before submission to the Engineer. Verify field measurements, catalog numbers, and other information critical to construction or installation. Coordinate each submittal with requirements of work and of the Contract Documents.

B. Notify the Engineer in writing at the time of submission of deviations in submittals from the requirements of the Contract Documents. The Engineer's review of submittals does not relieve the Contractor of responsibility for deviations from the requirements of the Contract Documents, except when given written acceptance of specific deviation by the Engineer.

C. Comply with the progress schedule for submittals related to work progress. Coordinate submittal of related items.

D. Begin no work that requires submittals until return of the submittals with the Engineer's review stamp and initials or signature indicating review and approval.

E. Make submittals promptly in accordance with the approved schedule and in such sequence to cause no delay in the work.

1.03 SUBMITTALS, PERMITS, LICENSES, AND CERTIFICATES

A. For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payment, judgments, and similar documents, correspondence, and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

1.04 CONSTRUCTION PROGRESS SCHEDULES

A. Submit a horizontal bar, critical path method (CPM) schedule covering the work of this project. Submit the schedule in hardcopy and electronic format, if available. The paper format chart shall include the entire project schedule; each work item shall be legible.

1. Show proposed phasing plan to meet the interior access requirements and limitations.

2. Identify critical path activities in red or highlight them so they are distinct from non-critical path activities.

3. Identify the first workday of each week.

4. Show the complete sequence of construction by activity, identifying work of separate stages and other logically grouped activities. Provide a summary bar for each major work activity; break down each major activity into component activities in increments of no more than 4 weeks.

5. For each trade, show submittal dates required for Shop Drawings, product data, samples, and product delivery dates, including those furnished by the Owner and those under Allowances.

6. Revise the chart on the 30th day of each month to reflect actual progress. Show schedule changes and recalculate the critical path. Submit the updated schedule to the Owner and Engineer within seven days of each update.

1.05 WARRANTIES AND GUARANTEES

A. Certain products, components, and systems are required to carry warranties or guarantees, which will survive the initial Project Warranty. Submit a list with specimen guarantee or warranty forms noting action, if any, required by the manufacturer to validate installation.

1.06 DELEGATED DESIGNS/SHOP DRAWINGS

A. Delegated designs and shop drawings include specially-prepared technical data for this project, including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, test reports, calculations, instructions, measurements,

and similar information not in standard printed form for general application to several projects.

1. Allow 10 business days for the review of shop drawings. This time shall be allotted into the Contractor's schedule.

2. Indicate the firm name and preparer's name on the drawings.

3. The maximum sheet size is 30 in. x 42 in. Show dimensions and note those that are based on field measurement.

4. Identify materials and products in the work shown. Indicate compliance with standards and special coordination requirements.

5. Identify details by reference to sheet numbers shown on the Drawings and by division and section in the Specifications.

6. Indicate on the Shop Drawing whether it is a full or partial submittal.

7. Provide associated calculations as required indicating the design meets the project requirements.

8. Draw all drawings to scale. Elevations shall be at 1/4 in. = 1 ft scale, minimum; details at 3 in. = 1 ft scale, minimum. Include all pertinent parts of the work in the Shop Drawings, including but not limited to: metal thicknesses, methods of joining, details of all field connections and anchorage, fastening and sealing methods, metal finishes and other pertinent information. Clearly indicate relationship to other work.

9. Pre-check the shop drawings prior to submission to the Engineer for conformity to the Contract Documents; coordinate the drawings with other work. The Contractor's representative shall sign all Shop Drawings, verifying that they have been pre-checked. The Contractor is wholly responsible for the conformity of dimensions and details of the Shop Drawings with the Contract Documents. Note all deviations from the Contract Documents.

10. Circle revisions made to the shop drawings. If approved drawings are subsequently revised, they must be resubmitted to the Engineer with all revisions clearly identified. Indicate the latest revisions in a manner that distinguishes them clearly from the original Shop Drawings and other previous revisions.

11. Provide newly prepared information on reproducible sheets with accurately scaled graphic information (except as otherwise indicated). Submit three copies of the newly prepared Shop Drawings as work sheets for the Engineer's review. One marked up set of the shop drawings will be returned to the Contract. Where design calculations are required or drawings require a seal, submit five original, sealed copies. Furnish three sets of approved Shop Drawings photocopied on quality, reproducible bond paper to the Engineer:

B. Do not use Shop Drawing copies without appropriate final "Action" markings by the Engineer in connection with the work.

C. Do not fabricate or install components requiring Shop Drawings until the Engineer has approved the Shop Drawings or has directed otherwise in writing.

D. Shop drawings for all components shown on the Contract Documents are required to be submitted by the Contractor and reviewed by the Engineer.

1.07 PRODUCT DATA

A. Product data include standard printed information provided by the manufacturer describing materials, products, and systems. Submit three copies of Product data to the Engineer:

1. Collect required data into one submittal for each unit of work or system and clearly mark each copy to show the choices and options that are applicable to the project.

2. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements that have been checked, special coordination requirements, and instructions for delivery, storage, assembly, application, installation, adjusting, and finishing. Include load capacity ratings, if applicable.

3. Provide a written explanation to decipher date codes used on material containers to record manufacturing dates and expiration dates.

1.08 SAMPLES

A. Samples include both fabricated and unfabricated physical material assemblies, products, and units of work, both as complete units and as smaller portions of units of work, either for visual evaluation or for testing and analysis. Unless otherwise stated in individual sections, submit at least three units of each sample, one to the Owner and two to the Engineer:

1. Provide samples identical to the actual materials that will be used in the work. For items (e.g., sealants) where a wide range of colors is available, provide a full set of specimen colors for selection. Submit samples for review and confirmation of color, pattern, and texture by the Engineer.

2. Include information with each sample to show a generic description of the material, source or product name, manufacturers, limitations, and compliance with standards.

B. The Engineer has the option, but is not required, to test samples for compliance with the Contract Documents, which is the exclusive responsibility of the Contractor.

1.09 CONTENTS OF SUBMITTALS

A. Clearly identify each submittal (documentation or product/sample) with the following information:

1. The submittal date and the dates of previous submittals.

2. The Contractor's name and telephone number.

3. The name and telephone number of the Contractor's employee in charge of the submittal.

4. The names of the subcontractor, supplier, and manufacturer or fabricator.

5. Product identification and the Project Manual section and paragraph number where it is specified.

6. Field dimensions, clearly identified as such.

7. Applicable standards, such as ASTM or Federal Specification numbers.

8. Identification of deviations from the Contract Documents.

B. Clearly mark all changes made due to previous submittals.

C. Leave one 3 in. x 4 in. blank space for the Engineer review stamp; on drawings, leave a blank space on each sheet.

D. Stamp with the Contractor's stamp, initialed or signed, to certify the review of submittals, verification of products, field measurements, field construction criteria, and coordination of the information within the submittals with requirements of the work and the Contract Documents.

1.10 RESUBMITTALS

A. Make resubmittals under procedures specified for initial submittals and identify changes made since the previous submittal.

B. Shop Drawings and Product Data: Revise initial drawings or data and resubmit as specified for the initial submittal.

C. Samples: Submit new samples as required for initial submittal.

1.11 ENGINEER REVIEW

A. The Engineer will review shop drawings, product data, and other documentation submitted for approval, stamp, and return. The Contractor will be notified in writing of the status of material samples. The Engineer’s stamp will read as follows:

1. “**Approved**” means that fabrication, manufacture, or construction may proceed if the submittal complies with the Contract Documents. The Contractor

assumes sole responsibility for all dimensions and for the required compliance. No response is required of the Contractor.

2. "**Approved as Corrected**" means that fabrication, manufacture, or construction may proceed, provided the submittal is amended to comply with the Engineer's notations and the Contract Documents. Resubmit submittal or confirm in writing the intention to amend the Shop Drawings if so marked on the Shop Drawing Review Stamp. If, for any reason, the Contractor cannot confirm compliance with notations, the Contractor shall resubmit as described for submittals stamped "Rejected."

3. "**Revise and Resubmit**" means that fabrication shall not proceed until questions, issues, or revisions noted by the Engineer have been resolved, and revised copies of the shop drawings have been stamped "Approved" or "Approved as Corrected."

4. "**Not Approved**" means that the submittal does not comply with the Contract Documents, and that fabrication, manufacture, or construction as submitted shall not proceed. Submittals stamped "Not Approved" are not permitted on the job site.

5. "**Resubmit for Record Copy**" means that minor corrections are made to the submittal, however, fabrication may begin in conformance to the corrections. Corrected record copy must be submitted.

6. "**Reviewed**" means that the Engineer has reviewed the submittal for impact on the base building structure or for compliance with the design intent. Unless otherwise noted in the review comments on the submittal, no further action is required. The Contractor assumes sole responsibility for the contents of the submittal and it's compliance with the contract drawings. This comment is common with engineered submittals.

1.12 DISTRIBUTION

A. Distribute copies of submittals returned "Approved" or "Approved as Corrected" to the following parties. Instruct recipients to promptly report any inability to comply with provisions.

1. Owner

2. Contractor's jobsite file.

3. Subcontractors directly affected by the Work.

4. Supplier and/or fabricator (as required).

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

SECTION 01 40 00

QUALITY CONTROL

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Quality assurance and control of installation.

B. Field samples.

C. Inspection and testing laboratory services.

D. Manufacturers' field services and reports.

1.02 QUALITY ASSURANCE AND CONTROL OF INSTALLATION

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

B. Comply fully with manufacturers' installation instructions.

C. Should manufacturers' instructions conflict with Contract Documents; request clarification from Engineer before proceeding with Work.

D. Perform work by persons qualified to produce workmanship of specified quality, and ensure such persons use their talents to do so.

1.03 FIELD SAMPLES AND MOCKUPS

A. Accepted samples and mockups represent the quality level for the Work.

B. Refer to Section 01 45 00 – Mockups for mockup provisions and procedures.

1.04 INSPECTION AND TESTING LABORATORY SERVICES

A. Owner will have the option to employ and pay for services of an independent firm to perform inspection testing and other work as specified.

B. If required, cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage and assistance as requested. Notify Engineer 48 hrs prior to operations requiring independent testing services.

C. Retesting required components because of non-conformance to specifications shall be paid for by the Contractor.

1.05 MANUFACTURERS' FIELD SERVICES AND REPORTS

A. When specified, require suppliers or manufacturers to provide qualified staff personnel to inspect and test the work, record data as applicable, and to instruct Contractor when necessary. Submit qualifications of observer to Engineer 30 days in advance of required observations. Observer subject to approval of Engineer and Owner.

B. Submit report within 10 days of observation to Engineer for review. Provide reports to Engineer for review prior to removal of access means from any single work area or installation of materials that will conceal or obstruct the work.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

SECTION 01 45 00

MOCKUPS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the Division 1 Specification Sections, apply to this Section.

B. Refer to other Divisions of these Specifications to determine the type and extent of work therein affecting the work of this trade, whether or not such work is specifically mentioned in this Section.

1.02 SUMMARY

A. Provide all labor, materials, equipment services and accessories necessary to furnish and install work of this Section, complete and functional as indicated in the Contract Documents and as specified herein.

B. This Section includes the following:

1. Comprehensive mockups of each major construction process, material, and assembly that will be part of this project.

C. Related Sections include the following:

1. Section 02 41 19 – Selective Demolition
2. Section 04 20 00 – Unit Masonry
3. Section 04 22 00 – Concrete Unit Masonry
4. Section 04 72 00 – Cast Stone
5. Section 06 16 00 – Sheathing
6. Section 07 13 26 – Self-Adhered Sheet Waterproofing
7. Section 07 24 19 – Drainable Exterior Insulation and Finish System (EIFS)
8. Section 07 27 00 – Air and Water Barrier
9. Section 07 31 26 – Slate Shingles
10. Section 07 52 00 – Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing
11. Section 07 62 00 – Sheet Metal Flashing and Trim

12. Section 07 90 00 – Joint Sealants

13. Section 08 11 13 – Hollow Metal Doors and Frames

14. Section 08 44 10 – Glazed Aluminum Curtain Walls

15. Section 08 80 00 – Glazing

16. Section 09 20 00 – Interior Finishes

17. Section 32 13 13 – Concrete Paving

1.03 GENERAL

1. Notify the Engineer and Owner at least 48 hrs before starting work on the mockup. Make provisions for the Engineer to be present during construction and to observe each step of the mockups.

2. Do not begin work on the mockup until applicable submittals have been approved. See Specification Sections listed herein for required submittals.

3. The mockups will be used to establish both technical and aesthetic standards for the project. Reconstruct the mockups as many times as necessary to meet the Owner's approval, without additional cost to the Owner or delay in the project schedule. Do not start Work until the Engineer has approved the mockups.

4. Protect the mockups for the remainder of the project. Reproduce mockups accurately in construction using identical materials and quality of workmanship. The approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

5. Coordinate mockup construction with the sequence of work and phasing requirements to complete the interior mockups, and exterior mockups requiring interior access (at the windows, steep-slope roofs, doors, etc.) by 1 July 2016.

1.04 MOCKUPS

A. Working in conjunction with the related Sections, construct the full-scale in-situ mockups as noted below and where shown in the Drawings. Coordinate Mockup location(s) with the Engineer and Owner prior to commencing Work. This Section includes a brief description of the mockup scope.

1. Refer to the Drawings and applicable specification sections for details. Include all required temporary protection. Perform all necessary work to complete all required mockups as listed below.

2. The Mockup shall serve as an educational tool for demonstrating, in part, the installation methods, sequencing, and material integration. The Contractor and all relevant Trades shall review the approved Mockup, including work by other inter-related Trades.

3. Where feasible, construct materials such that the perimeter of concealed materials and the detailing of material transitions remain visible until the Owner, Engineer, and all relevant Trades have reviewed and approved the mockup.

B. The Mockup Shall include the following components and all necessary integration between components and adjacent systems:

1. Below-grade Waterproofing Mockup: Excavate the soil at the base of the exterior wall, prepare the existing substrate, and provide the self-adhered sheet waterproofing system, including all necessary accessory components, as shown in the Drawings and described in Section 07 13 26 – Self-Adhered Sheet Waterproofing.

2. Brick Masonry Wainscot Mockup: Provide a CMU knee wall supported on the existing footings, air/water barrier membrane, brick unit masonry cladding, and cast stone water table, including all necessary anchorage, insulation, control joints, and accessory components, as shown in the Drawings and described in Section 04 20 00 – Unit Masonry, Section 04 22 00 – Concrete Unit Masonry, and Section 07 27 00 – Air and Water Barrier.

3. Typical EIFS Mockup: Provide air/water barrier membrane and the typical EIFS assembly, including all necessary anchorage, insulation, control joints, and accessory components, as shown in the Drawings and described in Section 07 24 19 – Drainable Exterior Insulation and Finish System (EIFS) and Section 07 27 00 – Air and Water Barrier.

4. EIFS Upper/Lower Soffit Mockup: Provide air/water barrier membrane and the soffit EIFS assembly, including all necessary anchorage, spray foam insulation, board insulation, control joints, soffit vents, and accessory components, as shown in the Drawings and described in Section 07 24 19 – Drainable Exterior Insulation and Finish System (EIFS) and Section 07 27 00 – Air and Water Barrier.

5. Structural Steel Repairs Mockup: Remove and replace in-kind all corroded structural steel framing, miscellaneous metals members, and cold-formed metal framing supporting the steep-sloped roof and/or soffits, as determined by the Engineer upon review of the existing conditions once exposed, as shown in the Drawings, and as described in Section 02 41 19 – Selective Demolition, Section 05 40 00 – Cold-Formed Metal Framing, and Section 05 50 00 – Metal Fabrications.

6. Steep-Sloped Roof and Gutter Mockup: Replace the existing sloped roof deck and provide membrane roofing underlayment, SIP panel, synthetic slate tiles, and metal gutter system, including all necessary anchorage, storm water management systems, flashings, and accessory components, as shown in the Drawings and described in Section 07 31 26 – Slate Shingles and Section 07 62 00 – Sheet Metal Flashing and Trim. Gutter mockup must include typical solder joints, expansion joints, and integration with downleader, as well as leaf guards if this allowance is executed.

7. Low-Sloped Roof Mockup: Replace the existing roof deck as necessary and provide vapor retarder membrane, insulation, EFVM grid, cover board, and modified-bitumen roofing membrane, including all necessary anchorage, flashings, and accessory components, as shown in the Drawings and described in Section 07 52 00 – Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing and Section 07 62 00 – Sheet Metal Flashing and Trim. Provide mockups at the following locations:

    a. New roofing assembly over the Natatorium

    b. Tie-in between the new and existing modified bitumen roofing assemblies

8. Curtain Wall Mockup: Provide glazed aluminum curtain walls system, operable vents, glazing, and affected interior finishes, including all necessary anchorage, flashing, sealant joints, and accessory components, as shown in the Drawings and described in Section 07 27 00 – Air and Water Barrier, Section 07 92 00 – Joint Sealants, Section 08 44 10 – Glazed Aluminum Curtain Walls, and Section 09 20 00 – Interior Finishes.

    a. Notify Engineer within 48 hours after the curtain wall rough opening has been flashed and prepared for the curtain wall frame to be installed. The mockup flashing system shall be approved prior to installing the curtain wall frame.

    b. Contractor shall not install the interior air seal and exterior rainscreen seal until the mockup has be successfully tested, unless otherwise approved in writing by the Engineer.

    c. Coordinate all Work at the curtain wall mockup with the Owner and sequence Work as to not interrupt the office occupants.

9. Hollow Metal Door Mockup: Provide hollow metal door system, door hardware, security systems, and affected interior finishes, including all necessary anchorage, flashing, sealant joints, wiring, and accessory components, as shown in the Drawings and described in Section 07 27 00 – Air and Water Barrier, Section 07 92 00 – Joint Sealants, Section 08 11 13 – Hollow Metal Doors, and Section 08 71 00 – Door Hardware.

10. Concrete Paving: Provide a mockup of the concrete sidewalk paving around the building. Place and finish concrete to match existing sidewalk thickness and finish, unless otherwise specified in Section 32 13 13 – Concrete Paving, or determined by the Owner.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

3.01 FIELD QUALITY CONTROL

A. Perform the following field quality control testing on the mockup components:

1. Self-adhered Sheet Waterproofing Adhesion Testing: Refer to Section 07 13 26 – Self-Adhered Sheet Waterproofing.

2. Air/Water Barrier Membrane Adhesion Testing: Refer to Section 07 27 00 – Air and Water Barrier.

3. Curtain Wall Testing: Refer to Section 08 44 10 – Glazed Aluminum Curtain Walls. Test the mockup curtain wall system for the following performance requirements:

a. Weatherseal Sealant Adhesion

b. Air Infiltration

c. Water Penetration

END OF SECTION

SECTION 01 50 00

CONSTRUCTION FACILITIES, ACCESS, AND SITE USE

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Electric Service.

B. Water.

C. Temporary Sanitary Facilities.

D. Fire Protection.

E. First Aid.

F. Use of Parking Areas.

G. Security.

H. Dust and Fume Control.

I. Water Pollution Control.

J. Debris Control.

K. Noise Control.

L. Thermometer.

M. Hoists and Scaffolding.

1.02 ELECTRIC SERVICE

A. Electrical power service is available at no charge to the Contractor. Contractor may obtain 110V AC power from the building at locations authorized by the Owner's Agent, or he may use his own generator. Temporary power service shall comply with OSHA Standards. The Contractor shall maintain these temporary services in good order throughout the project until Project is complete. The Contractor or subcontractor using the power shall provide all extension cords.

1.03 WATER

A. The Owner will provide water for on-site construction purposes at no charge to the Contractor as follows:

1. Coordinate with the Owner for access to hose bibs.

1.04 TEMPORARY SANITARY FACILITIES

A. Do not use restrooms in the building. Provide portable toilets, serviced at a regular interval, on-site as required for convenience. Coordinate staging area with Owner.

B. Make available potable drinking water for construction personnel at all times.

1.05 FIRE PROTECTION

A. Provide adequate fire protection and fire prevention for the Project and in no case less than that required by applicable City, State, and Federal Laws.

B. The existing fire protection system is to remain operational for the duration of the work as required per NFPA 1, 16.4.4.1. No sprinkler head, system drainage, or monitoring device shall be modified without prior written approval of the Owner and the governing Authority Having Jurisdiction (AHJ). Where a portion of the system requires modification, the remainder of the system will be kept in service and the fire department shall be notified per NFPA 1, 16.4.4.2 and NFPA 1, 16.4.4.4. When it is necessary to shut down the system, the AHJ shall have the authority to require alternative measures of protection until the system is returned to service as required in NFPA 1, 16.4.4.3. All required exit components shall be maintained as deemed necessary by the AHJ and as required per NFPA 1, 16.4.4.5. Fire resistive assemblies and construction shall be maintained as required per NFPA 1, 16.4.4.6.

C. Protect the existing system from damage due to dust, impact, water, etc. Damage to fire protection system or smoke detectors caused by the Contractor's failure to protect during the work will be repaired or replaced promptly by the Contractor at the Contractor’s expense.

D. Protect smoke detectors when performing dust or smoke-generating work. Remove protection immediately after fumes dissipate upon stopping the operation, and at the end of each workday. Contractor shall pay any fees or fines for emergency response to false alarms caused by failure to adequately protect smoke detectors.

E. Maintain accessibility to all exterior fire department connections.

1.06 FIRST AID

A. Provide sufficient first aid kits with adequate provisions for the materials being used on-site. Maintain an envelope to hang above the first aid kit, which will contain all of the Material Safety Data Sheets (MSDS) for materials being used on this Project.

1.07 USE OF PARKING AREAS

A. Coordinate with the Owner for vehicle parking. Assume no parking will be available on campus for the Contractor.

1.08 SECURITY

A. The Contractor is responsible for the security of his work area, equipment, tools, materials, and temporary facilities.

B. Maintain a log-in sheet at the site, which will include information such as the subcontractor's name, pieces of equipment brought on site, number of men, time in, and time out.

1.09 DUST AND FUME CONTROL

A. Protect interior building spaces and contents from water, dust and fumes created by the work with approved enclosures or barriers where roof decking, windows, or doors are removed. The Contractor shall be responsible for any damage caused by water, dust and fumes created during the Work. Provide sufficient notice to the Owner before operations commence to coordinate access to affected interior spaces to allow protective measures to be installed at locations where roof decking, windows, or doors are removed.

B. Use water during concrete and masonry removal, scarifying, saw cutting, etc. to reduce dust exposure.

1.10 WATER POLLUTION CONTROL

A. Undertake all precautions necessary to prevent discharge of unacceptable pollutants used in and resulting from the Work into the storm or sanitary sewers, harbor, or other waterways.

1.11 DEBRIS CONTROL

A. Remove all debris from areas affected by the Work on a daily basis, or more often as required to maintain a neat, clean site, and dispose of same at authorized dump sites.

1.12 NOISE CONTROL

A. All demolition and construction work that creates excessive noise (air hammer operations, hydro-demolition, scarifying, etc.) shall be reviewed with the Engineer and Owner as to the types of equipment proposed for use. Sequence all work with excessive noise to be completed by 19 August 2016. See Specification Section 01 12 00 – Contract Considerations and Special Conditions. Work that causes noise that is deemed unacceptable by Owner must be performed at a mutually agreeable time.

1.13 THERMOMETER

A. Install an official project outdoor thermometer in a shaded, conveniently readable location, which will give accurate readings of the ambient temperature, and which can be reached easily for resetting. Thermometer shall not contain mercury and be a re-settable type indicating daily maximum and minimum temperature. Keep a permanent daily log of maximum and minimum temperature readings.

1.14 HOISTS AND SCAFFOLDING

A. Provide hoists and scaffolding as required to complete the work. All hoists and scaffolding must be designed to ensure the safety of building guests, staff, and workmen, general public, and to protect the building. Any personnel using the hoists and scaffolding must have and use the appropriate Personal Protection Equipment

(PPE) and fall restraint systems necessary for the work per OSHA requirements. Loads imparted by hoists and scaffolding must not overload any building components. Plans for all hoists and scaffolding, including capacity of existing building components, must be reviewed and signed by a qualified Structural Engineer, licensed in the State of Maryland, on the Contractor's behalf, and submitted to the Owner for his review and approval. Coordinate the design of the scaffolding with the sidewalk protection specified in Section 01 53 00 – Barriers and Enclosures. The design of scaffolding must include provisions such as toe plates and netting, which reduce the risk of falling materials and/or debris.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

SECTION 01 53 00

BARRIERS AND ENCLOSURES

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Barricades.

B. Temporary Enclosures.

C. Construction and Maintenance.

D. Sidewalk Protection.

E. Materials.

F. General Procedures.

1.02 BARRICADES

A. Provide and maintain suitable barriers as required to prevent public entry, and to protect the Work, existing facilities, sidewalks, trees, and plants from construction operations; remove when no longer needed, or at completion of Work. Barriers must allow for temporary fire egress. Barriers shall conform to local and state laws, ordinances, and permit requirements.

B. Provide and maintain all necessary temporary barricades for safe conduct of this work, or as required by federal, state, or local laws or ordinances and in accordance with OSHA requirements and other requirements of this Specification.

C. Construct and maintain barrier-free, pedestrian walkways, railings, and fence at building entrances in strict accordance with all applicable codes for protection of pedestrians where required. Protect pedestrian and automobile traffic at all times.

1.03 TEMPORARY ENCLOSURES

A. Provide adequate ventilation and protection to provide construction personnel with safe working environment.

B. Enclosures shall not be placed at locations, which cut off access to emergency exits or stairways without prior approval of the Engineer and Owner; enclosures at these locations shall maintain emergency egress and exit paths. The enclosure erected by the Contractor shall prevent unauthorized persons from entering the work area.

C. It is the Contractor's responsibility to ventilate the work area. Exhaust air from the work area and equipment exhaust must be vented to the outside of the structure in a manner that does not violate air quality standards.

D. Opening enclosures: Provide insulated, weathertight and dustproof opening enclosures to protect the interior where building enclosure components are removed for more than one working day.

1. Openings that require temporary enclosures include, but are not limited to, the following components removed as part of the Work:

a. Windows.

b. Exterior doors and entrances.

c. Louvers.

d. Demolished portions of the opaque walls at metal framing.

e. Demolished portions of the upper and lower soffits, and steep-slope roof and beam repairs.

2. At a minimum, provide enclosures consisting of 5/8 in. thick plywood, intermediate full-height 2x wood studs, and 2x wood blocking frame around the entire perimeter of the opening. Provide 1 in. minimum rigid extruded polystyrene insulation attached to plywood blocking. Provide weather and dust protection with a suitable sheet membrane.

3. Attach enclosure to perimeter construction from the interior. Do not leave screw heads or other readily accessible hardware exposed to the exterior.

4. Enclosure must be capable of withstanding 50 psf wind pressure or suction, and a 300 lb concentrated force anywhere on the enclosure.

1.04 TEMPORARY ROOF PROTECTION

A. Provide and maintain suitable construction barriers and protection platforms to limit the extent of construction operations and to protect the existing roofing assembly to remain from construction operations. Provide temporary protection at the perimeter and walkways over the low-sloped Central Roof area and the Gymnasium Roof area.

1. At a minimum, provide temporary protection platform consisting of 1/2 in. thick exterior-grade plywood, intermediate full-height 2x wood studs, and 2x wood blocking frame around the entire perimeter of the opening. Provide 2 in. minimum rigid extruded polystyrene insulation attached to plywood blocking. Protection platform shall extend a minimum of 5 ft. beyond all scaffolding and equipment required to perform Work above.

2. Construct guardrails from 2x wood stud attached to the protection platform and designed to meet all applicable construction barrier requirements.

3. Do not penetrate through the existing roofing membrane scheduled to remain.

B. Sequence the construction of the roofing repairs to occur after the Work above is complete and the protection platform is removed.

1.05 SUBMITTALS

A. General: Refer to Section 01 33 00 – Submittals for provisions and procedures.

1.06 CONSTRUCTION AND MAINTENANCE

A. Contractor shall be responsible for design, construction, and maintenance of all barricades, barriers, and enclosures.

1.07 SIDEWALK PROTECTION

A. Construct a fully enclosed walkway to provide overhead protection along the sidewalk over all means of egress to the building and over accessible sidewalks using pipe scaffolding with a planked top and plywood sidewall enclosures to protect pedestrian traffic where overhead work is to be completed. Design and construct enclosure to conform to all local, county, city, and state ordinances and following all OSHA recommended guidelines, including all lighting and public access requirements. Engage a qualified structural engineer licensed in the State of Maryland to design the overhead protection. Coordinate this work with required scaffolding specified in Section 01 50 00 – Construction Facilities, Access, and Site Use.

B. Anchor the scaffold to the existing building structure or to the ground to accommodate lateral windloads. Patch and restore all substrates to their original condition at the conclusion of the work.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Materials may be new or used, and shall be suitable for intended purpose.

PART 3 – EXECUTION

3.01 GENERAL PROCEDURES

A. Install facilities of a neat and reasonable uniform appearance, structurally adequate for the required purposes.

B. Maintain barriers and sidewalk protection during entire construction period. Relocate barriers as required by progress of construction.

C. Completely remove barricades when construction has progressed to the point that they are no longer needed.

D. Clean and repair damage caused by the installation and removal of the barricades.

END OF SECTION

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Providing facilities, equipment, and labor for cleaning and waste disposal during construction.

2. Salvaging nonhazardous demolition and construction waste.

3. Recycling nonhazardous demolition and construction waste.

4. Disposing of nonhazardous demolition and construction waste.

1.02 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction. Construction waste includes packaging.

B. Demolition Waste: Site improvement materials resulting from demolition or selective demolition operations.

C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.03 PERFORMANCE REQUIREMENTS

A. General: Achieve end-of-Project rates for salvage/recycling of 75 percent by weight of total non-hazardous solid waste generated by the Work. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction waste from landfills and incinerators. Facilitate recycling and salvage of materials, including the following:

1. Demolition Waste:

a. Concrete and Asphalt paving.

b. Concrete.

c. Concrete reinforcing steel.

d. Concrete masonry units.

e. Structural and miscellaneous steel.

f. Metal studs.

g. Cement Plaster.

h. Insulation.

i. Roofing Materials.

j. Doors and frames.

k. Glazing.

l. Gypsum board.

m. Acoustical tile and panels.

n. Carpet.

o. Piping.

p. Electrical conduit.

q. Copper wiring.

2. Construction Waste:

a. Masonry and CMU.

b. Lumber.

c. Wood sheet materials.

d. Metals.

e. Roofing.

f. Insulation.

g. EIFS.

h. Glass.

i. Carpet.

j. Gypsum board.

k. Piping.

l. Electrical conduit.

m. Packaging: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100% of the following uncontaminated packaging materials:

(1) Paper, including office paper and newsprint.

(2) Cardboard.

(3) Boxes.

(4) Plastic sheet and film.

(5) Polystyrene packaging.

(6) Wood crates.

(7) Plastic pails.

(8) Beverage containers.

1.04 SUBMITTALS

A. Action Submittals:

1. Waste Management Plan: Submit plan within 30 days of date established for the Notice to Proceed.

B. Informational Submittals:

1. Waste Reduction Progress Reports: Concurrent with each Application for Payment, or as requested by Owner, submit report. Include the following information:

a. Material category.

b. Generation point of waste.

c. Total quantity of waste in tons.

d. Quantity of waste salvaged, both estimated and actual in tons.

e. Quantity of waste recycled, both estimated and actual in tons.

f. Total quantity of waste recovered (salvaged plus recycled) in tons.

g. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.

2. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.

   a. Submit reports to the Montgomery College Germantown Campus Director of Facilities who is responsible for reporting this information to Montgomery County.

3. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

4. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

5. Qualification Data: For waste management coordinator.

1.05 QUALITY ASSURANCE

A. Waste Management Coordinator Qualifications: Experienced firm, with a record of successful waste management coordination of projects with similar requirements.

1. Firm employs a LEED-Accredited Professional, certified by the USGBC, as waste management coordinator.

2. Waste management coordinator may also serve as LEED coordinator.

B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Waste Management Conference: Conduct conference at Project site. Review methods and procedures related to waste management including, but not limited to, the following:

1. Review and discuss waste management plan including responsibilities of waste management coordinator.

2. Review requirements for documenting quantities of each type of waste and its disposition.

3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.

4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.

5. Review waste management requirements for each trade.

1.06 WASTE MANAGEMENT PLAN

A. General: Develop a waste management plan according to ASTM E1609 and requirements in this Section. Plan shall consist of waste identification, waste

reduction work plan, and cost/revenue analysis. Distinguish between demolition and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

B. Waste Identification: Indicate anticipated types and quantities of demolition and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.

2. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.

3. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

D. Forms: Prepare waste management plan on forms available from the LEED coordinator on the project.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

3.01 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

1. Comply with operation, termination, and removal requirements in Section 01 50 00 – Construction Facilities, Access, and Site Use.

B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.

C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.

1. Distribute waste management plan to everyone concerned within 3 days of submittal return.

2. Provide on-site instruction on appropriate separation, handling, recycling, and salvaging methods to be used by all parties at the appropriate stages of the work.

3. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

4. Include discussion of waste management and recycling in regular job meetings and job safety meetings conducted during the course of work.

D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.

2. Comply with Section 01 50 00 – Construction Facilities, Access, and Site Use for controlling dust and dirt, environmental protection, and noise control.

3.02 DAILY CLEANUP

A. Minimize waste and debris in building spaces. Do not place, store, or leave any debris or construction materials of any kind within office spaces beyond the Contractor's temporary work barrier.

B. Thoroughly vacuum the carpet and sweep floors of interior spaces at the end of each workday and more frequently as required to remove excessive dirt. Remove and dispose of all debris generated during the day.

C. Thoroughly sweep and remove all debris and trash from the building roof surfaces at the end of each workday and more frequently as required to maintain a clean work area. Remove and dispose of all debris generated during the day.

D. Thoroughly wash down glass and metal building surfaces exposed to dust from concrete demolition operations.

3.03 AREA CLEANUP

A. At the time each unit of work or element of the construction is substantially completed in each area of the project, clean the unit or element to a condition suitable for occupancy and use as intended and restore minor damage. Replace units and elements that are damaged beyond successful restoration.

B. Where subsequent construction activities could result in damage to other work in place, provide appropriate protective covering or other provisions.

C. Repeat cleaning and protection operations during the remainder of the construction period wherever sustained soiling or exposure might otherwise damage work.

D. During construction:

1. Oversee cleaning and ensure that the building, grounds, and public properties are maintained free from accumulation of waste materials and rubbish.

2. Take appropriate measures to prevent the spread of trash, debris, cartons, packaging, and other waste materials on or off the project site by wind.

3. Sprinkle dusty debris with water.

4. At reasonable intervals during the progress of the work, clean up the site and access and dispose of waste materials, rubbish, and debris.

5. Clean adjacent and nearby properties of dirt from construction operations, frequency and methods as required by governing authority and Owner.

3.04 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

a. Inspect containers and bins for contamination and remove contaminated materials if found.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.

4. Store components off the ground and protect from the weather.

5. Remove recyclable waste from Owner's property and transport to recycling receiver or processor.

3.05 RECYCLING DEMOLITION WASTE

A. Asphalt Paving: Break up and transport paving to asphalt-recycling facility.

B. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.

C. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.

D. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.

E. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.

F. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.

G. Carpet: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.

H. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.

I. Conduit: Reduce conduit to straight lengths and store by type and size.

3.06 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.

2. Polystyrene Packaging: Separate and bag materials.

3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.

4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.

2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

C. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.07 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction. Provide suitable trash containers at a central collection point on the site. Provide chutes/hoists or other suitable means for removing trash safely and cleanly from the scaffolding. Comply with Federal, State and local regulations for removal of combustible waste material and debris.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.

2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Remove waste materials from Owner's property and legally dispose of them.

END OF SECTION

SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Substantial Completion.

B. List of Incomplete Items (Punch List).

C. Final Completion.

D. Prerequisites to Final Acceptance.

E. Final Acceptance.

F. Final Cleaning.

G. Project Record Documents.

H. Operation and Maintenance Data.

I. Warranties.

J. Spare Parts and Maintenance Materials.

K. Evidence of Payments and Release of Liens.

1.02 SUBSTANTIAL COMPLETION

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

1. Prepare a list of items to be completed and corrected (Punch List), the value of items on the list, and reasons why the Work is not complete.

2. Advise Owner of pending insurance changeover requirements.

3. Submit the Building Permit with final inspection approval by Montgomery County.

4. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.

5. Obtain and submit releases permitting the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.

6. Prepare and submit Project Record Documents, Operation and Maintenance Manuals, damage or settlement surveys, property surveys, and similar final record information.

7. Deliver tools, spare parts, extra materials, and similar items to the location(s) designated by the Owner. Label each with the manufacturer's name, model number and contact information.

8. Complete startup testing of systems and issue a report attesting to the proper operation of each system.

9. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.

10. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

11. Complete final cleaning requirements, including touchup painting.

12. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Substantial Completion Inspection: Submit a written request to the Engineer to conduct the Substantial Completion Inspection. On receipt of the request, the Engineer will either proceed with the inspection and/or notify Contractor of unfulfilled requirements. The Engineer will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Engineer, which must be completed or corrected before the certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected. The Contractor is responsible for costs associated with the Engineer's reinspections to establish substantial completion.

2. Results of completed inspection will form the basis of requirements for Final Completion.

1.03 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit two copies of Punch List, one to the Owner and one to the Engineer. Include the name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize the list of spaces in sequential order, starting with exterior areas first.

2. Organize items applying to each space by major element, including categories for walls, floors, roof, equipment, and building systems.

3. Provide the date on which each item in the Punch List was originally identified and the date when each item is corrected and accepted by the Engineer.

1.04 FINAL COMPLETION

A. Preliminary procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to the Contract.

2. Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (Punch List), endorsed and dated by the Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.

3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

4. Instruct the Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Final Completion Inspection: Submit a written request to the Engineer for final inspection. On receipt of request, the Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. The Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected. The Contractor is responsible for costs associated with the Engineer's second and subsequent reinspections to establish final completion.

2. Results of completed inspection will form the basis of requirements for Final Acceptance.

1.05 PREREQUISITES TO FINAL ACCEPTANCE

A. Preliminary procedures: Before requesting final inspection for certification of final acceptance and final payment, as required by General Conditions, complete the following and list known exceptions (if any) in the request:

1. Submit a copy of the Engineer's final punch list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.

2. Submit record drawings, final project photographs, specific guarantees, and other record documents.

3. Complete final clean-up requirements, including touch-up of marred surfaces.

4. Deliver spare parts, extra stocks of materials, and similar physical items to the Owner.

1.06 FINAL ACCEPTANCE

A. Within 10 days following receipt of Contractor's notice that the work has been completed, including Punch List items from earlier inspections, the Engineer will reinspect the work. Upon completion of reinspection Engineer will either notify Contractor in writing of work not completed or obligations not fulfilled as required for final acceptance or request Contractor submit evidence of payments, release of liens and final application for payment as an indication of final acceptance.

B. Contractor shall take immediate steps to remedy the stated deficiencies, and send second written notice to Engineer certifying that work is complete and Engineer will reinspect work.

C. Should the Engineer be required to perform second inspections because of failure to work to comply with original certifications of Contractor, Owner will compensate the Engineer for additional services, and deduct amount paid from final payment to Contractor.

1.07 FINAL CLEANING

A. Perform final cleaning prior to the Final Inspection. Employ experienced workmen, or professional cleaners, for final cleaning of the work, at time indicated, consisting of cleaning each surface or unit of work to normal "clean" condition expected for a first-class building cleaning and maintenance program. Comply with manufacturer's instructions for cleaning operations.

1. Remove all labels, which are not required as permanent labels.

2. Clean transparent materials, including window/door glass, to a polished condition, removing substances, which are noticeable as vision-obscuring materials. Replace broken glass.

3. Clean exposed exterior and interior hard-surfaced finishes, to a dirt free condition, free of dust, stains, films, and similar noticeable distracting substances. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.

4. Remove debris and surface dust from limited access spaces including roofs, terraces, attics, plenums, shafts, trenches, equipment vaults, manholes, and similar spaces.

5. Clean concrete floors in non-occupied spaces broom clean.

6. Vacuum clean carpeted surfaces and similar soft surfaces.

7. Clean project site of litter and foreign substances. Sweep paved areas to a broom clean condition; remove stains, petrochemical spills and other foreign deposits.

B. No burning or disposal of rubbish at the jobsite is permitted.

C. Remove tools, equipment, waste and surplus materials, rubbish, and construction facilities from the premises as soon as possible upon completion of the work.

1.08 PROJECT RECORD DOCUMENTS

A. Develop and maintain Project Record Documents.

B. Submit one copy of completed Project Record Documents in final form 15 days prior to final inspection. This copy will be returned after final inspection, with the Engineer's comments. Revise content of documents as required prior to final submittal.

C. Submit two copies of the Project Record Documents prior to final Application for Payment.

1.09 WARRANTIES

A. Furnish warranty certification and copies of warranties, which extend beyond the 2-yr period required in the Specifications. Warranties submitted without warranty certification will not be accepted.

1. Warranty Certification: Written certification from the warrantor that invoices for installation, service, supplies, and warranty fees have been paid in full to persons or firms due payment, and that the warranty is in effect and non-retractable due to any of the specified conditions.

B. Prepare a printed Table of Contents and assemble warranty certifications and warranty copies in a binder with a durable plastic cover.

C. Submit one copy of completed warranties in final form 15 days prior to final inspection. This copy will be returned after final inspection, with the Engineer's comments. Revise content of documents as required prior to final submittal.

D. Submit two volumes of final executed warranties, one to the Owner and one to the Engineer, prior to final Application for Payment. Applications for final payment will not be approved until the warranty certification and warranty documents are submitted.

E. For items of Work delayed beyond date of Substantial Completion, provide updated submittals within 10 days after acceptance, indicating date of acceptance as start of warranty period.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION