

PROJECT SPECIFICATION

SELECT REPLACEMENT OF THE FLOOR TILES IN THE MAIN HALL AND WEST HALL – Phase 2 AT WASHINGTON UNION STATION Washington, D.C.



View looking Main Hall, looking west, March 2021 (by D. Traini)

For the:

**UNION STATION
REDEVELOPMENT CORPORATION**
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By:

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May 16, 2023

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DIVISION 00 – PROPOSAL REQUIREMENTS

SECTION 00850 – LIST OF DRAWINGS

The List of Drawings includes the following; they are dated the same as these Specifications:

- Drawing CS Cover Sheet
- Drawing A1 Summary of Work
- Drawing A2 Floor Plan Showing Space Allocations
- Drawing A3 Overall Floor Plan – Main Hall and West Hall
- Drawing A4 Tile Details
- Drawing A5 Floor Plan – Main Hall, Bay 1 North
- Drawing A6 Floor Plan – Main Hall, Bay 2 North
- Drawing A7 Floor Plan – Main Hall, Bay 3 North
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- Drawing A26 Construction Details – 1
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- Drawing A28 Construction Details – 3
- Drawing A29 Construction Details – 4

(30 drawings total)

END OF SECTION 00850

SECTION 01001--ADDITIONAL CONDITIONS

PART 1 - GENERAL

- 1.01 The scope of the Project shall be the Select Replacement of the Floor Tiles in the Main Hall and West Hall (Phase 2) at Washington Union Station (WUS), as shown on the Drawings and as defined in Section 01010 of these Specifications.
- 1.02 Applicable provisions of these Additional Conditions, plus the other contract documents govern this Specification as a whole. The work in this Project includes the furnishing of all labor, materials, equipment, appliances, cartage, and performing all operations necessary to complete this Project in its entirety in accordance with the drawings and specifications.
- 1.03 Labor, material and equipment not specified or shown, but properly inferable from the Contract Documents shall be performed and supplied in conformity with the standards established herein.
- 1.04 Historical Architect Contact:
- A. John R. Bowie, F.A.I.A., Historical Architect
John Bowie Associates
204 West Rose Valley Road
Wallingford, Pennsylvania 19086
Phone: (610) 565-1268
Email: john.bowie@johnbowieassociates.com
 - B. Throughout the documents of these Specifications, the term “Architect” and “Historical Architect” shall be used interchangeably and shall both refer to John Bowie Associates, Historical Architects.
- 1.05 Contractor Contact:
- A. Throughout the documents of these Specifications, the term “Contractor” and “Consultant” shall be used interchangeably and shall both refer to the Consultant identified in the Contract.
- 1.06 Owner Contact:
- A. Throughout the documents of these Specifications, the term “Owner” and “Union Station Redevelopment Corporation” (hereinafter “USRC”) shall be used interchangeably and shall refer to USRC.

1.07 Tenant Contact:

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- A. Throughout the documents of these Specifications, the term “Tenant” and “Union Station Investco” (hereinafter “USI”) shall be used interchangeably and shall refer to USI.
 - B. USI is a tenant to USRC; USI holds a 99-year lease for the entire historic portion of the Station. USI also subleases many of said spaces, especially in the Main Hall, West Hall and East Hall, to various commercial enterprises, including food service establishments and retail shops.
 - C. USI also holds a long-term sublease with Special Events at Union Station (hereinafter “SEUS”), a company that hosts receptions, parties, conferences, product exhibits, displays and miscellaneous entertainment activities in the Main Hall, East Hall, West Hall, Columbus Club (on the second floor adjacent to the East Hall) and other areas within WUS.
- 1.08 In addition to the indemnification stated in the Contract, the Contractor protects, defends, indemnifies, and holds completely harmless John Bowie Associates, its principals, officers, employees, and agents from and against any and all liens, claims, demands, suits, and judgments, and their associated legal and court costs, and interest of any kind or character incurred by the Contractor in defense of same arising in favor of taxes, claims, liens, debts, personal injuries (including people associated with the Contractor), death or damage to property (including property of the Contractor) and without limitation by enumeration all other claims or demands of every character occurring and caused in whole or in part by any negligent act or omission of the Contractor, or anyone for whose acts the Contractor may be liable.

PART 2 - WORK IN AND AROUND HISTORICALLY SENSITIVE ENVIRONMENTS

- 2.01 WUS is recognized as a highly visible, significant historic building. It is one of the most culturally and historically significant landmarks in the nation and it gains part of its cultural importance from the integrity of its architectural components, materials and surfaces, and from the character of its interior spaces throughout the building – particularly its most important spaces – the Main Hall, West Hall and East Hall. The Contractor shall be expected to exercise a special degree of care and skill and he/she must be sensitive to the problems associated with culturally and historically significant buildings. The Contractor is entrusted with an irreplaceable historic resource whose value is highly regarded by the entire nation. In addition, the building is also an active transportation hub and commercial resource that is open to the public 24 hours a day, seven days a week. The Contractor shall ensure that his/her operations and the conduct of his/her employees and subcontractors are appropriate to the type of work done in a culturally sensitive and unique environment.
- A. No audible, sound-emitting devices (i.e. radios, electronic music devices, etc.) shall be permitted during times while work is taking place.
 - B. Contractor’s employees and subcontractors shall conduct themselves in a

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respectable, decent manner, and shall refrain from any profanity.

- C. Contractor's employees and subcontractors shall be fully attired throughout the work day, and maintain a proper appearance, with no suggestive or profane writing on articles of clothing.
- D. Contractor's employees shall at all times wear clothing that identifies their firm.
- E. Contractor's personnel shall not engage in any conversations or interactions with Main Hall, West Hall or East Hall businesses or their customers or create any distractions that could adversely affect any business's operation or business activity.
- F. No alcohol, drugs, or smoking at any time on the property.
- G. No firearms or weapons at any time on the property.

The Owner reserves the right to immediately and permanently bar from the Site any person or persons who, in the judgment of the Owner, violate any of these provisions. The Contractor shall be responsible to replace said individual(s) with new individual(s) of comparable levels of skills and experience, at Contractor's own expense without change in the Contract Schedule.

- 2.02 The floor tiles in the Main Hall and West Hall are not historic. However, the floor tiles in the East Hall are historic and original to the Station.
- A. The floor tiles in the Main Hall and West Hall were installed in the 1986-1988 Station Restoration Project.
 - B. The color, texture, mottling, veining, size and geometry of the Main Hall and West Hall floor tiles exactly match the original layout, as noted in various historic photographs and the original Daniel Burnham drawings from 1903.
 - C. Phase 1 of the Main Hall and West Hall Floor Tile Replacement Project was undertaken in 2019-20. Approximately 460 tiles throughout the Main Hall and West Hall were replaced, with the greatest concentration being in the center of the Main Hall (where the former Center Café was located) and the flanking areas in Bay 1 South and Bay 5 South (where the former circular fountain/planters were located).
 - D. Phase 1 of the Main Hall and West Hall Floor Tile Replacement Project was performed together by Promacs, L.L.C. (Laytonsville, MD) and R. Bratti Associates, Inc. (Alexandria, VA). Both firms are assisting with the architectural design and administration of this Phase 2 Project, and are NOT competing on it.

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- 2.03 All of the freestanding columns, wall materials, wall surfaces, drinking fountains, vestibule doors and frames, corner doors and stone frame surrounds are historic and original to the Station.
- 2.04 The bronze grilles, electrical outlets, air distribution towers and directories located in the floor throughout the Main Hall and West Hall were installed in the 1986-1988 Station Restoration Project.
- A. They are not historic; however, they are critical to the proper functioning, operation and ongoing maintenance of the Station.
- B. They shall be treated with the same degree of care as the historic materials described herein.
- 2.05 No existing material shall be disposed of without the approval of the Owner or the Historical Architect. All new materials shall be stored in a safe place, as approved by the Owner or the Historical Architect.
- 2.06 Archaeological Investigation: Not applicable

PART 3 – CODES AND STANDARDS

- 3.01 International Existing Building Code (IEBC), 2018 edition
- 3.02 International Building Code (IBC), 2018 edition
- 3.03 The *Secretary of the Interior's Standards for the Treatment of Historic Properties*, 2017 edition, and in particular the “Standards for Preservation & Guidelines for Preserving Historic Buildings”
- 3.04 The *Dimension Stone Design Manual (DSDM)*, 2022 edition, of the Natural Stone Institute (formerly the Marble Institute of America and the Building Stone Institute).

PART 4 - CONTRACTOR USE OF PREMISES/ACCESS/WORKING HOURS

- 4.01 Coordinate access to the site, delivery and storage of materials, parking and working hours directly with the Owner.
- A. Contractor may deliver materials and equipment to the East Loading Dock (accessed from the H Street overpass). Notify the Owner at least 24 hours in advance so Owner can advise security guards of vehicle license number, date and approximate time of arrival.
- B. Contractor will receive a parking voucher for one (1) vehicle to be parked, without charge, in the Union Station Parking Garage each day for the duration of the

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Project.

- C. There is no place available for storage of materials and equipment in the building. However, the Contractor shall be permitted to bring his/her own gang box for overnight storage of tools at the job site. Provide protection to the flooring and wall surfaces beneath and adjacent to the gang box.
 - 1. Do not store flammable or combustible materials or products anywhere on site while work is not taking place.
- 4.02 The station is open 24 hours a day, 7 days a week throughout the year. Due to the high level of noise generated by the work, and due to the high amount of sound reverberation throughout the building, work may only take place during the hours and days noted herein. Likewise, there are numerous coordination concerns that affect the Contractor's schedule throughout the year – these are mandated: 1) by USI's existing subleases with various food service establishments and retail shops adjacent to, and/or accessed through the Main Hall and West Hall, 2) by USI's existing sublease with SEUS and 3) by the fact that WUS is a federally-owned building located in a prominent location subject to occasional unanticipated high-security events and activities. During these times, all work by the Contractor shall cease and all Contractor personnel immediately vacate the premises. Also, during certain specific times (noted below), it will be necessary for the Contractor to remove all materials and equipment from the premises altogether.
- A. Throughout the course of the Project, the Main Hall and West Hall will remain fully open for visitors and groups who rent the space for events (such as receptions, parties, lectures, and so on) from SEUS.
 - B. Also, throughout the course of the Project, spaces immediately adjacent to the Main Hall and West Hall (i.e. to the north of Bays 2 and 4 of the Main Hall, to the south of Bays 1 and 5 of the Main Hall, to the north and south of the West Hall, and along the edges of the east and west walls of the Main Hall), may be open and under sublease to tenants of USI who will require access through the Main Hall and West Hall.
 - 1. The Contractor may not block or impede access into or out of any of these establishments at any time they are open for business.
 - C. The Work of this Project shall be conducted as a single phase – it shall not be broken into separate phases.
 - 1. The Contractor is requested to keep his/her work environment as compact as reasonably practical so as not to disturb too large an area of the Main Hall and/or West Hall at one time.
 - D. During the course of this Project, it is possible SEUS may schedule events to take place in the Main Hall, East Hall, and/or West Hall that will affect the progress of the Work of this Project.
 - 1. Activities in the Main Hall, East Hall or West Hall may impact the Work of

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this Project due to noise, dust and general distraction caused by the Work.

- E. During the following short-term (one evening only) SEUS events in the Main Hall, East Hall, or West Hall, or any combination of the three, no work may take place, although equipment and materials may remain in place at the job site, provided they are within the location designated by the Owner adjacent to the work area and not accessible to the public. Sequencing of operations are part of the Contractor's means & methods.
1. Unspecified date #1, [TBD]
 2. Unspecified date #2, [TBD]
 3. Events more than the quantity listed herein will be treated in accordance with the Change Order requirements noted in Article 4 of the Contract.
 4. Events requiring the removal of equipment and/or materials from the building and into an off-site location will be treated in accordance with the Change Order requirements noted in Article 4 of the Contract.
- F. During the following long-term (multi-day) SEUS events in the Main Hall, East Hall, or West Hall, or any combination of the three, no work may take place, although equipment and materials may remain in place at the job site, provided they are within the location designated by the Owner adjacent to the work area and not accessible to the public. Sequencing of operations are part of the Contractor's means & methods.
1. Unspecified dates #1, [Day 1 thru Day 3 TBD]
 2. Unspecified dates #2, [Day 1 thru Day 3 TBD]
 3. Events more than the quantity listed herein or of a duration longer than noted herein will be treated in accordance with the Change Order requirements noted in Article 4 of the Contract.
 4. Events requiring the removal of equipment and/or materials from the building and into an off-site location will be treated in accordance with the Change Order requirements noted in Article 4 of the Contract.
- G. All other unanticipated, unscheduled events that adversely affect the progress of the Work shall be considered beyond the scope of this Contract and shall be treated in accordance with the Change Order requirements noted in Article 4 of the Contract.
- H. The Drawings define locations throughout the Main Hall and West Hall where the spaces are subleased by USI to various establishments. Their hours of operation are:
1. Space 1 (Chipotle): [days, hours]
 2. Space 2 (Potbelly): [days, hours]
 3. Space 3 (Chop't): [days, hours]
 4. Space 5 (Blue Bottle Café): [days, hours]
 5. Space 6 (vacant)
 6. Space 10 (vacant)

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7. Space 15 (vacant)
8. Space 16 (Shake Shack) [days, hours]
9. Space 17 (Shake Shack) [days, hours]
10. Space 18 (Roti) [days, hours]
11. Space 19 (Cava) [days, hours]

For the purposes of this project, assume no additional businesses will open in these locations during the duration of work and that hours of operation for existing businesses will remain as noted herein. Should new businesses open, or should the hours of existing businesses change, and should said changes affect the Work, the situation shall be addressed in accordance with the Change Order requirements noted in Article 4 of the Contract.

The Contractor may not block or impede access into or out of any of these establishments at any time they are open for business.

The Contractor may not work in the Main Hall or West Hall areas in front of these establishments while they are open for business.

- I. The Drawings also define locations throughout the Main Hall and West Hall where smaller, movable spaces are subleased by USI to various establishments which can be relocated elsewhere in the Main Hall or West Hall by USI, provided minimum 14 calendar days advance notice is provided by the Contractor to the Owner.
 1. Space 4 (vacant)
 2. Space 7 (vacant)
 3. Space 8 (vacant)
 4. Space 9 (vacant)
 5. Space 11 (vacant)
 6. Space 12 (vacant)
 7. Space 13 (vacant)
 8. Space 14 (vacant)

For the purposes of this project, assume no additional businesses will open in these locations during the duration of work and that hours of operation for existing businesses will remain as noted herein. Should new businesses open, or should the hours of existing businesses change, and should said changes affect the Work, the situation shall be addressed in accordance with the Change Order requirements noted in Article 4 of the Contract.

4.03 Allowable work-days and hours:

- A. Due to the high level of noise generated by the work, and due to the high amount of sound reverberation throughout the building, work may only take place during the following hours and dates:
 1. Work on site shall commence no earlier than 10:00 p.m. and shall be

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- completed before 6:00 a.m. the following morning,
 2. The work week shall be defined as Sunday nights into Monday mornings through Thursday night into Friday mornings.
 3. Regularly scheduled job meetings shall take place on site (and not remote unless required by Health Department regulations) once every week, and shall take place during the daytime hours.
 4. No work shall be permitted on Saturdays, Sundays or Holidays.
- B. The following are observed federal holidays during the year. No work may take place on site during these days:
1. New Years Day (January 1 or the first Monday thereafter if on a weekend)
 2. Martin Luther King Day (the third Monday in January)
 3. Presidents Day (the third Monday in February)
 4. Memorial Day (the fourth Monday in May)
 5. Independence Day (July 4 or the first Monday thereafter if on a weekend)
 6. Labor Day (the first Monday in September)
 7. Columbus Day (October 12 or the first Monday thereafter if on a weekend)
 8. Thanksgiving Day (the fourth Thursday in November)
 9. Christmas (December 25, or the first Monday thereafter if on a weekend)

4.04 Obstruction to entrances into and out of the Main Hall and West Hall:

- A. Prior to the start of any work, submit for approval by the Authority Having Jurisdiction (AHJ) an Emergency Evacuation Plan that clearly identifies paths of travel for persons occupying the Main Hall, East Hall and West Hall in case of emergency.

PART 5 - WORKER AND COMMUNITY RIGHT TO KNOW

- 5.01 Contractor shall make available to employees, subcontractors, suppliers (as appropriate), and the general public (as appropriate) written information regarding hazardous substances introduced into the workplace and the general environment. Inform workers of said written information. Supply the Owner with a list of all hazardous substances to be used in the course of the contract. Erect and maintain physical barriers, signs, or other devices as required by Federal, State, or Local laws and ordinances, and/or as directed by the Historical Architect or the Owner.

PART 6 - PROTECTION OF THE ENVIRONMENT

- 6.01 Contractor shall provide for the prevention, control and abatement of land, water and air pollution, which shall include but not be limited to:
- A. No refuse may be burned.

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- B. Remove all refuse from site of work for disposal in accordance with rules and regulations of the AHJ over the disposal area.
- C. Dispose of all lead-based painted materials, if any are found, in accordance with the regulations of OSHA, and the United States Environmental Protection Agency.
- D. A station-wide asbestos survey and abatement project was systematically conducted throughout the 1990s. No asbestos is believed to remain on site, However, in the event materials that resemble asbestos or asbestos-containing materials (ACMs) are discovered, stop work in that area and notify the Owner.
 - 1. Abatement of ACMs is not part of this Contract. If any ACMs are discovered during the Work, they shall be treated separately.

PART 7 - PROJECT SIGN

- 7.01 Except as noted below, no project sign shall be required by the Owner.
- 7.02 Except as noted below, post no other signs (including advertisement signs for contractors, subcontractors and suppliers), unless approved in writing in advance by the Owner.
 - A. Construct and install a sign at least 4' (vertical) x 6' (horizontal) in size in a prominent location (agreed to by the Owner) for the Contractor to post such documents as may be required by the granting agency (the District of Columbia Department of Transportation, hereinafter “DDOT”) or other federal or local agencies relating to wages, nondiscrimination and other important topics. Said sign shall be dignified in appearance and complimentary to the character of the Station and spaces therein. Include a fixed acrylic cover to protect the displayed documents from damage or vandalism, and provide hinges for the cover in order for updates to periodically be installed onto the sign. The base of said sign shall be 24" above the floor, and the top of said sign shall be 72" above floor. Said sign does not need to be illuminated. Remove said sign upon completion of the project.

PART 8 - PERMITS, LICENSES AND CERTIFICATES

- 8.01 No building permits are required for the Project.
 - A. Except as noted herein, the Owner will be responsible for obtaining approvals to conduct the Project from DDOT and the District of Columbia State Historic Preservation Office (hereinafter “DCSHPO”).
 - B. Except as noted herein, the Owner will be responsible for obtaining approvals to conduct the Project from the AHJ – the Federal Railroad Administration (hereinafter “FRA”).

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1. The Contractor shall be responsible for obtaining approval for the Emergency Evacuation Plan, and for adjusting and/or correcting any portions of said Emergency Evacuation Plan determined by FRA to be unacceptable, at no additional cost to the Owner.

PART 9 - COORDINATION AND SCHEDULING

- 9.01 Contractor shall coordinate scheduling, submittals and work of the Drawings and Specifications for efficient and orderly sequence of installation of all construction materials.

PART 10 - FIELD ENGINEERING

- 10.01 Contractor shall verify all dimensions and conditions in the field.
- A. No additional compensation will be provided for inaccuracies in the dimensions or conditions shown on the drawings.
- 10.02 Contractor shall verify all existing conditions, dimensions, clearances, and other considerations which may affect the proper execution of the work. Notify the Historical Architect of any deviations in actual conditions and dimensions from those shown on the Drawings. Be responsible for the correct fit and proper connection of all work with respect to actual conditions.
- 10.03 Drawings are diagrammatic in nature and require field verification for actual field conditions and dimensional discrepancies found after project start-up shall not be justification to a claim for additional costs.
- 10.04 Location and protection of utilities:
- A. Be responsible to confirm the locations of embedded utilities (within the floor slab) with USI station engineering personnel in advance of any cutting, drilling, or patching of the floor tiles.
 - B. Confirm with USI station engineering personnel the locations of known and possible downspouts, fire suppression piping, domestic water supply/drain/vent piping, possible natural gas piping and ducts for supply/return/exhaust air within the vicinity of the floor in the Main Hall and West Hall in advance of any cutting, drilling, or patching.

PART 11 - CUTTING AND PATCHING – Not applicable

PART 12 - CONFERENCES

- 12.01 The Historical Architect will convene an Initial Job Conference at project start-up; all

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people associated with the Project shall attend.

- 12.02 The Historical Architect will convene weekly progress meetings during the course of the work.
- A. Contractor shall ensure attendance at said meetings by all job-related persons and subcontractors involved in the work at that time and in the upcoming weeks.
- 12.03 The Historical Architect will convene a Substantial Completion Job Conference for each phase of the Project when the work of said phase is roughly 97% complete, and ready for a punch list to be developed.
- 12.04 The Historical Architect will convene a Final Completion Job Conference for each phase of the Project when the work of said phase is complete.

PART 13 - SUBMITTAL PROCEDURES

- 13.01 Contractor shall submit the items listed in each of the technical sections before beginning any work.
- 13.02 Provide three copies of all shop drawings, data sheets, certifications, and other materials. Submit only one sample.

PART 14 - SUBSTITUTIONS

- 14.01 At the Initial Job Conference, Contractor shall submit to the Historical Architect a complete Listing of Anticipated Substitutions:
- A. The Historical Architect and Owner will judge the equivalency of any proposed substitutions.
- B. Any proposed substitutions shall be listed in writing, with appropriate samples, manufacturers' literature, and technical performance data attached. The burden of proof that a proposed substitution is indeed acceptable will be on the Contractor.
- C. Acceptance of a substitution will not be grounds for relief from the responsibility for compliance with all the requirements of the Contract Documents. If changes in other parts of the work, including work being done by other contractors for the Owner, are required because of a substitution, be responsible for any such changes, including the cost of any additional design services borne by the Historical Architect and/or other consultants to the Owner.
- D. Verify in writing, that any proposed substitution meets or exceeds the requirements of the Specification. Submit supporting reference information and certifications as appropriate.

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PART 15 - CONSTRUCTION PHOTOGRAPHS

15.01 No construction photographs required, except as specifically noted in individual sections of this Specification.

PART 16 - CONSTRUCTION DRAWINGS

16.01 Contractor shall maintain one clean xerox set of construction drawings and specifications on site at all times during the project. Changes made and conditions found that are different than those shown shall be clearly marked and dated in red ink. These shall become the project “as-built” documents.

16.02 Contractor shall submit the clean set of the “as-built” documents to the Owner at project completion.

PART 17 - QUALITY ASSURANCE/CONTROL OF INSTALLATION

17.01 Contractor shall monitor quality of products, services, site conditions, and workmanship, to produce work of specified quality.

17.02 Contractor shall comply fully with manufacturers' instructions. If manufacturers' instructions do not agree with drawings and specifications, ask direction from the Historical Architect before proceeding.

17.03 Contractor shall comply with specified standards as a minimum quality for the work except when tolerances, codes, or specifications require higher standards or more quality workmanship.

17.04 Contractor shall meet specified standards, current as of project start date. Should specified standard conflict with drawings and specifications, ask direction from the Historical Architect before proceeding.

17.05 Contractor shall use only craftsmen who are highly skilled in their respective trade. Execute all work with the highest quality to meet or exceed the description and/or standard as specified for the work. The Owner retains the right to remove from the project any employee of the Contractor or subcontractor that does not show conformance to the standard of the work.

PART 18 - TEMPORARY SANITARY FACILITIES

18.01 The Contractor’s employees may use the existing public toilet facilities: 1) in the Amtrak Concourse (first floor), 2) in the Food Court (Lower level), or 3) in the parking garage (bus deck level).

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A. It is not necessary to bring portable toilets to the job site.

PART 19 - TEMPORARY SERVICES DURING CONSTRUCTION

19.01 Water usage by Contractor:

- A. For small amounts, it shall be acceptable to draw water from any of the four (4) historic drinking fountains in the Main Hall.
- B. For larger amounts, USI will provide access to the janitor's sink in one of the utility closets adjoining the Main Hall. Provide 24 hours' notice to the Owner in advance of needing the water.
- C. Hoses may not be used anywhere in the Main Hall, West Hall or adjoining spaces.

19.02 It shall be acceptable for Contractor to use USI's electric outlets found throughout the Main Hall, West Hall and vacant adjacent spaces (but not occupied adjacent spaces). Take care to conserve electricity. Leave nothing plugged in when not physically working in the adjacent location.

- A. Do not place any extension cords in the path of egress travel near exits.
- B. Provide protection to all extension cords placed anywhere on the floor.

19.03 Bring all necessary telephones to the Site for the duration of the project. Use of Contractor's cell phones shall be acceptable.

19.04 Job trailers are not required for the Project.

19.05 It is not necessary to provide the Owner with any temporary office facilities or temporary office equipment.

PART 20 - PROTECTION

20.01 Contractor shall erect barriers, barricades, signs, red plastic construction fencing and other protective devices to prevent unauthorized entry to construction areas and to protect existing facilities, historic building materials, and all persons in or at the building from damage or injury.

- A. Provide protection for all persons who may be entering/exiting the site during all hours of the day and night. Erect such barricades and covered walkways as are necessary to fully protect people using the building.
- B. Be solely responsible for the safety of all persons in the Work Area (Job Site), whether they are there legally or illegally.

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- C. Do not drive any equipment or vehicles onto the exterior sidewalks and paved areas of the site.
- 20.02 Contractor shall repair, at no cost to the Owner, any areas of existing buildings, contents, landscaping, paving or other site features damaged during the work to the satisfaction of the Historical Architect and the Owner. If damage occurs to these finishes as a result of the work, hire a Conservator, from a list supplied by the Owner, to perform an assessment of the damage and recommend conservation measures required, at no expense to the Owner. Upon acceptance by the Owner of the Conservator's Assessment Report, arrange for and have the Conservator perform those conservation measures on the damaged objects and/or finishes at no cost to the Owner.
- 20.03 Provide a UL listed fire extinguisher at all areas of work during the work, suitable for all types of fires.

PART 21 - PROGRESS CLEANING

- 21.01 Contractor shall keep Job Site clean and orderly, free of waste materials, construction-related debris, and rubbish. Provide thorough cleaning of the Job Site daily. Remove all nails and sharp objects from the floor daily.
- 21.02 Use of chutes and dumpsters are not permitted. Contractor shall haul away all trash, construction debris, and other unrequired materials as they accumulate, and do not permit them to clutter the site or create a fire hazard or safety threat.

PART 22 - PRODUCTS AND MATERIALS

- 22.01 Contractor shall not use materials removed from Job Site, except as specifically identified or allowed by the drawings and specifications, or as directed by the Owner. Store any materials designated by the Owner for salvage by the Owner at a protected location on site or off-site, as designated by the Owner.
- 22.02 No existing material shall be disposed of without the approval of the Owner. All new materials shall be stored in a safe place, as approved by the Owner.
- 22.03 Use only those products that meet specified standards or description.
- 22.04 In all cases where a device or part of the products or equipment is herein referred, it shall apply to as many such items as are required to complete the installation.

PART 23 - TRANSPORTATION, HANDLING, STORAGE AND PROTECTION

- 23.01 Contractor shall transport, handle, store and protect products in accordance with manufacturer's instructions.

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23.02 Deliver products to the Job Site in unbroken rolls, bundles, sealed containers or bags, fully identified with the manufacturer's name, brand, type and grade.

PART 24 - CONTRACT INVOICING PROCEDURE – defined in Article 5 of the Contract.

PART 25 - PROJECT CLOSE-OUT

25.01 Contractor shall submit the following at Final Inspection:

- A. As-Built drawings and specifications, two paper-copy sets of full-size xeroxes, marked in red, and signed by the Contractor with a written certification stipulating that the conditions found and the work performed by the Contractor are correctly shown on the drawings.
 - 1. Owner will review the submitted paper-copy as-built documents and provide Contractor with any requested changes or edits (if appropriate).
 - 2. Update the as-built documents and submit an electronic copy of the as-built documents in PDF format to the Owner.
 - 3. This requirement also applies to all required documents noted in individual technical specification sections.
- B. Final Invoice, in accordance with Article 5 of the Contract.
- C. Warranty and Guaranty Statement, in accordance with Article 5 of the Contract.
- D. Lien Release, in accordance with Article 5 of the Contract.

25.02 Final Cleaning – Contractor shall:

- A. Perform a final cleaning prior to the Final Inspection.
- B. Clean debris from the site, and any areas affected by the work.
- C. Remove all work-related waste, surplus and demolished materials, rubbish, and construction facilities from the site.
- D. Thoroughly broom sweep all areas affected by the work.
- E. Thoroughly wipe (with a dry, clean cloth) all horizontal surfaces in areas affected by the work.
- F. Clean special items, such as glass, hardware, mortar stains, and other items affected by the work.

25.03 Spare Parts and Maintenance Materials: - not applicable, except as stipulated in individual

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technical sections of this Specification.

25.04 Testing/Operation of Equipment: - not applicable.

PART 26 – SPECIAL COVID-19 PROVISIONS

26.01 Refer to the Request for Proposals (RFP) document for COVID-19 requirements.

END OF SECTION 01001

SECTION 01010 – SCOPE OF WORK

In general, the scope of work includes, but is not limited to the following:

1. Install temporary local protection around each location where work is scheduled to take place so as to prevent uninvited persons from entering.
2. Perform utility searches in the vicinities of all work areas to identify possible buried active electrical conductors within the mortar sub-bed.
3. Carefully demolish existing floor tiles, mortar bed, welded wire mesh reinforcing, and cleavage membrane in accordance with the Drawings and Specifications, taking care not to damage any active electrical conductors.
4. Remove all demolished materials off site and place in dumpster located in east sub-basement.
5. Protect and retain all small 6” x 6” reddish “diamond” tiles in place:
 - a. The “diamond” tiles are no longer commercially available and the Owner does not possess an attic stock of replacement tiles. They must be protected and left intact.
 - b. The “diamond tiles left in place will ensure a proper fit of the new tiles.
6. Confirm adequacy of the existing concrete slab to accommodate the new floor tiles.
7. Install new cleavage membrane, welded wire mesh reinforcing, mortar bed, thin-set bed, and tile, taking care to align all edges and a perfectly level and smooth transition onto all adjacent existing tiles.
8. Remove temporary protection.
9. Clean and hone newly installed floor tiles.
10. Gradually clean and hone adjacent tiles in order to achieve a feathered appearance.

END OF SECTION 01010

SECTION 09385 – DIMENSION STONE TILE

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract Documents, including General and Supplementary Conditions and other Division 00 and 01 Specifications sections of the Project Manual, apply to Work of this Section.

1.02 DESCRIPTION OF WORK

- A. In general, the scope of work of this section includes, but is not limited to:
 - 1. Install temporary local protection around each location where work is scheduled to take place so as to:
 - a. Prevent uninvited persons from entering, and
 - b. Provide for the collection and filtration of all dust and debris created by the Work
 - 2. Perform utility searches in the vicinities of all work areas to identify possible buried active electrical conductors within the mortar sub-bed.
 - 3. Carefully demolish existing floor tiles, mortar bed, welded wire mesh reinforcing, and cleavage membrane in accordance with the Drawings and Specifications, taking care not to damage any active electrical conductors.
 - 4. Remove all demolished materials off site and place in dumpster located in east sub-basement.
 - 5. Protect and retain all small 6” x 6” reddish “diamond” tiles in place:
 - a. The “diamond” tiles are no longer commercially available and the Owner does not possess an attic stock of replacement tiles. They must be protected and left intact.
 - b. The “diamond tiles left in place will ensure a proper fit of the new tiles.
 - 6. Confirm adequacy of the existing concrete slab to accommodate the new floor tiles.

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7. Install new cleavage membrane, welded wire mesh reinforcing, mortar bed, thin-set bed and tile, taking care to align all edges and a perfectly level and smooth transition onto all adjacent existing tiles.
 8. Remove temporary protection.
 9. Clean and hone all newly installed floor tiles.
 10. Gradually clean and hone adjacent floor tiles in order to achieve a feathered appearance.
- B. The Contractor shall supply all material, labor, tools, air filtration/protection coverings and other equipment necessary to conduct and complete the Project in its entirety in an orderly, sequential, and uninterrupted manner.

1.03 QUALITY ASSURANCE

- A. Qualifications of the Contractor and the Contractor's technical and project-related personnel:
1. The Contractor shall demonstrate to the satisfaction of the Owner and Historical Architect that said Contractor is qualified to manage, administer and perform the work of the Project. The Contractor shall submit to the Historical Architect and Owner evidence that within the past five (5) years, he/she/they have performed a minimum of three (3) projects of comparable scope, size and complexity. Said completed projects shall demonstrate skill in the replacement of decorative marble floor tiles in a highly traveled, public setting. All noted projects shall be projects of landmark quality and historically significant.
 - a. Said person(s) shall not be permitted to work on site until documentation has been submitted to, and accepted by the Owner.

1.04 SUBMITTALS

- A. Prior to start of work, submit for approval by Owner a detailed work plan, identifying all activities to be performed, materials to be utilized, equipment to be employed, and described in detail.
1. Include a project timetable indicating dates work will commence and be completed, including milestones in between.
 2. Include an annotated floor plan clearly indicating the sequence of work (i.e. which tiles to be replaced first, then second, then third, and so on).

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- B. Samples, Manufacturer’s data and cut sheets, including:
1. Submit cut sheets for approval and compliance with intent of specification for all the products listed herein in this specification.
 2. Submit manufacturer’s data sheets detailing temporary local protection (i.e. tent coverings with localized HEPA air filtration).
 - a. Temporary local protection materials shall not contain any writing or advertising or signs.
 3. Submit samples of tile grout with color pack additives mixed in, to demonstrate exact match of new grout with existing grout on the floor.

PART 2 – PRODUCTS

2.01 CLEAVAGE MEMBRANE

- A. 8 mil thickness polyethylene construction sheeting
- B. Meet ASTM C171 “Standard Specification for Sheet Materials Used for Curing Concrete”
- C. Sheeting shall be equal to Husky Construction Sheeting, as manufactured by Poly-America (Grand Prairie, TX) www.poly-america.com

2.02 REINFORCING

- A. 16 gauge, 2” x 2” hot-dipped galvanized, low-carbon welded wire mesh
- B. PVC coating not appropriate
- C. Mesh shall be equal to comparable mesh listed by Grainger www.grainger.com

2.03 MORTAR MIX

- A. Portland Cement:
 1. Type I meeting ASTM C150 “Standard Specification for Portland Cement”
 2. Equal to “Type I” by Lehigh Heidelberg Cement Group (Allentown, PA) www.lehighcement.com
- B. Aggregate:

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1. Commercially river sand, washed and clean, free of all debris and contaminants.
 2. Equal to “Seaford” sand, also known as “Laurel” (Delaware) sand, as supplied by Vulcan Materials Company (Havre de Grace, MD) www.vulcanmaterials.com
- C. Latex Additive:
1. To be used in place of water
 2. Equal to Laticrete “3701” liquid latex additive, by Laticrete International, Inc. (Bethany, CT) www.laticrete.com
- D. Thin-set materials:
1. Polymer-fortified, adhesive mortar with non-sag performance and containing Portland Cement and sand
 2. Equal to “4XLT” thinset mortar, by Laticrete International, Inc. (Bethany, CT) www.laticrete.com
- E. Tile Grout:
1. High performance cement grout set within a dry pigment solution.
 2. Equal to “Permacolor Select” grout, by Laticrete International, Inc. (Bethany, CT) www.laticrete.com
 3. Use color packs to provide tint to match existing tile grout color exactly.

2.04 MARBLE TILES

- A. All marble tiles shall be provided by the Owner.
- B. The marble tiles shall be quarried at the Danby Quarry (Vermont Quarries Corporation), Danby, VT.
- C. Marble tiles shall be delivered from the quarry by the Owner and stored in the Sub-basement of Washington Union Station before any demolition for the Project commences.
- D. Contractor shall be responsible for bringing the tiles to the work area from the Sub-basement.
- E. Marble tiles (white) are approximately 24” x 24” x 3 cm in thickness. Contractor shall be responsible to clip the corners and slightly adjust the widths of the tiles to fit perfectly against the existing reddish “diamond” tiles and other new and existing marble tiles.

2.05 REDDISH “DIAMOND” TILES

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- A. 6” x 6” reddish “diamond” tiles are no longer commercially available.
- B. Owner does not possess an attic stock of spare reddish “diamond” tiles
- C. Take care to protect the reddish “diamond” tiles, and leave them intact.

2.06 FLOOR CLEANING MATERIALS

- A. Clean water, room temperature (not hot).
- B. Chemicals and/or detergents shall be prohibited.
- C. Steam cleaning shall be prohibited.
- D. Use of abrasives, sand or grit (except as part of the honing process) shall be prohibited.
- E. Sealing shall be prohibited.

PART 3 - EXECUTION

3.01 WORK START-UP

- A. Install protection materials.
 - 1. Install temporary local protection in all places where work is scheduled to take place.
 - a. Implement and carefully maintain a HEPA-level dust collection and air filtration system, particularly during time demolishing, drilling, cutting, sanding, removing and installing marble tiles is taking place in each location.
 - b. Maintain daily cleanliness of all horizontal surfaces (including the floor tiles) within a ten (10) foot radius of each work area.
 - c. There are numerous shops and restaurants in the Main Hall and West Hall that cannot tolerate the slightest amount of dust and debris arising from this Project. Take great care to control and prevent the migration of dust and dirt from leaving the work areas.
 - 2. Perform floor tile work only in locations containing temporary local protection.

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3. Do not install any anchors or attachments into the floor tiles.
 4. Install such supplemental protection as required to prevent scuff marks, scrapes, gouges or other damage in the finish of the floor tiles beneath the protection materials.
 5. Any electrical cords running on the floor between receptacles and the work area(s) shall be protected and covered to protect persons from tripping on them.
 6. Do not allow electrical cords to remain on the floor during times when work is not actually taking place in each location. Gather them up and store them within the protected area.
- B. Conduct utility searches to locate electrical lines embedded in the floor.
1. Coordinate all utility searches with station engineering personnel. They have maintained these electrical lines over the years and are familiar with the idiosyncrasies of their placement and operation.
 2. Station engineering personnel will provide the necessary electrical shutoffs in the areas where work is taking place.
 3. Do not make any markings onto the floor with permanent materials or markers.

3.02 SELECTIVE DEMOLITION

- A. Carefully demolish the existing floor materials within the area of the temporary protection.
- B. Remove demolished materials at the end of each work day. Do not allow demolished materials to remain in the work area afterward.
- C. Take care to utilize the least invasive demolition/removal equipment and methods possible (i.e. saws rather than hammer drills).
 1. Lay out the sequence of cutting and removing the existing marble tiles to preserve the reddish “diamond” tiles and bedding materials intact.
 2. During demolition and removal, take care to avoid impacting or damaging the existing embedded electrical conductors. Notify station engineering

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personnel when working in the vicinity of embedded utilities in order for them inspect and determine the condition of the wiring as work is underway.

- a. Electrical conductors found to be damaged or broken (and not through the fault of the Contractor) will be replaced by the Owner at Owner's expense as quickly as possible to avoid delay to the work.

3.03 NEW FLOOR INSTALLATION

- A. Confirm that all existing substrate materials are sound, fully intact, and clean, including the existing concrete slab and existing corrugated steel pans.
 1. Notify the Historical Architect of any discovered cracks, splits, or other anomalous conditions as soon as they are discovered.
- B. Coordinate the Contractor's delivery of all materials and equipment related to this work with station engineering personnel.
- C. Clip the corners off each of the marble tiles and trim the side faces of the marble tiles as required to fit within the confines of the existing floor tile pattern – especially at the joints with the existing reddish “diamond” tiles.
 1. **IMPORTANT NOTE:** Carefully cut and trim new tiles so that they fit against each other and against existing tiles such that no grout joints exceed 1/16” in width.
- D. Clean and vacuum all debris and trash from the existing materials, and lay the new cleavage membrane in place.
 1. Overlap any seams at least six [6] inches, and fully tape.
- E. Lay the new welded wire mesh on top of the cleavage membrane, using spacers to position the mesh the required height above the cleavage membrane.
 1. Overlap mesh sheets by at least four [4] inches.
- F. Thoroughly mix the Portland cement and the aggregate (1 part cement to 3 parts aggregate).
 1. Slowly add the latex additive and water to the cement/aggregate and slowly mix. Adjust the mixture to produce a semi-dry consistency.

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2. Spread the mortar mixture leaving no air spaces or gaps, especially in the area of the welded wire mesh.
 3. Float the finish to provide a level surface that aligns with the adjacent existing tiles – including the intact reddish “diamond” tiles.
 4. Allow the mortar to cure – at least overnight. Do not disturb or place any weight onto the mortar mix.
- G. Thoroughly mix the thin-set mortar materials.
1. Install the tiles into fully bedded thin-set mortar, taking care to set new tiles to be exactly flush with adjacent new and existing surfaces.
 2. Allow the tiles to set at least 24 hours. Do not disturb or place any weight onto the tiles.
 3. Install tile grout into joints between new tiles and into joints between new and existing tiles.
 4. Install caulk (matching color) to joints in locations where tiles abut dissimilar materials (i.e. receptacles and floor registers).

3.04 FINAL STEPS

- A. Perform final clean-up in work area and leave all materials, surfaces and finishes in the condition in which they were found at project start-up.
- B. Dismantle and relocate (or remove) temporary local protection, barriers and other miscellaneous protection materials.
- C. Thoroughly clean each newly-installed tile with warm water using stiff nylon bristles brushes. Do not use metal or wire brushes.
- D. Hone each newly installed tile and remove all gloss, sheen or shiny appearance. The tile shall have a matte finish.
- E. Clean and hone existing tiles surrounding each newly installed tile to a distance of approximately 10 feet in a gradually decreasing manner, so that the honed finish is feathered.
- F. Do not seal the newly installed tiles.

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- G. Submit as-built drawings and specifications, including the written certification specified elsewhere in this document.

END OF SECTION 09385